

Air Quality Conformity Determination

Between

**The 2040 Regional Transportation Plan,
The Fiscal Year 2012 to 2015 Transportation Improvement Program
and
The Indiana State Implementation Plan for Air Quality**

June 23, 2011

**Northwestern Indiana Regional Planning Commission
Portage, Indiana**

www.nirpc.org

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Purpose

The purpose of this report is to document compliance with section 176(c) of the Clean Air Act as amended (CAAA), and the related requirements of the Final Transportation Conformity Rule (40 CFR Part 51 and 40 CFR Part 93). The air quality conformity determination establishes the compatibility between the state implementation plan, the regional transportation plan and transportation improvement program. The transportation plan includes the region's guide for transportation system development over a twenty-year period. The transportation improvement program (TIP) includes the region's choices for Federal spending on expansion and preservation of the transportation system over a four to five year period. The State Implementation Plan (SIP) includes strategies for attainment and maintenance of the National Ambient Air Quality Standards (NAAQS). The conformity determination is based on a regional emissions analysis that demonstrates compatibility among these three planning documents. The regional emissions analysis uses the region's transportation network model and the USEPA's mobile-source emissions model to quantify the emissions from all vehicles on the future transportation system. For Lake and Porter Counties, annual emissions of fine particles and nitrogen oxides must not exceed their levels of 2002 and Summer day emissions of Volatile Organic Compounds and Nitrogen Oxides must not exceed Motor Vehicle Emission Budgets established in the State Implementation Plan. For LaPorte County, Summer day emissions of Volatile Organic Compounds and Nitrogen Oxides must not exceed the Motor Vehicle Emission Budgets in the State Implementation Plan. The system that was analyzed includes all regionally significant capacity expansion projects in the Lake, Porter and La Porte County area, and significant projects in northeastern Illinois, regardless of the funding sources.

Applicability

Action Applicability

This conformity determination is required for: adoption, acceptance, approval or support of the Regional Transportation Plan and the Transportation Improvement Program developed pursuant to 23 CFR Part 450 and 49 CFR Part 613.

Geographic Applicability

This conformity determination is required in the ozone non-attainment areas, including the Lake/Porter County maintenance area and the La Porte County maintenance area, with respect to the Summer day mobile-source emissions of VOCs and NO_x. Lake and Porter Counties are designated as maintenance of the National Ambient Air Quality Standard (NAAQS) for "8-hour" ozone. La Porte County is also designated as maintenance of the National Ambient Air Quality Standard for "8-hour" ozone. All three counties are currently meeting the standards.

This conformity determination is required in the PM_{2.5} non-attainment area, including the entire Chicago consolidated metropolitan statistical area, with respect to annual mobile source emissions of NO_x and direct PM_{2.5}. Lake and Porter Counties in Northwestern Indiana, as part of the Chicago consolidated metropolitan statistical area, are classified as non-attainment of the annual National Ambient Air Quality Standard (NAAQS) for PM_{2.5}. A request has been made by the State of Indiana to reclassify Lake and Porter Counties as maintenance of the PM_{2.5} standard. The request includes a maintenance plan with draft motor vehicle emissions budgets.

This conformity determination is based on the requirement of Section 93.118 of the Conformity Rule for the regional emissions analysis to indicate compliance with the emissions budgets established in the State Implementation Plan for VOC and NO_x emissions in Lake and Porter Counties and in LaPorte County. The regional transportation plan and transportation improvement program must not result in Summer day emissions of VOC and NO_x in 2016, 2020, 2030 and 2040 in excess of the applicable budgets.

This conformity determination is based on the requirement of Section 93.119 of the Conformity Rule for the regional emissions analysis to indicate interim reductions of the annual emissions of Nitrogen Oxides and direct $PM_{2.5}$ in the overall $PM_{2.5}$ nonattainment area, including Lake and Porter Counties and six counties in northeastern Illinois. The Indiana and Illinois State Implementation Plans for Air Quality have not established annual emissions budgets for highway mobile sources of direct $PM_{2.5}$ and NO_x . The regional transportation plan and transportation improvement program must not result in annual emissions of direct $PM_{2.5}$ and NO_x from mobile sources in 2016, 2020, 2030 and 2040 in excess of the 2002 emissions.

Priority

Transportation Control Measures (TCM) in the State Implementation Plan must be given funding priority in the FHWA/FTA approval of any action with air quality consequences. The State Implementation Plan for Lake and Porter Counties and for LaPorte County includes no transportation control measures. This conformity determination is not required to demonstrate priority for TCMs.

Consultation

This conformity determination has been conducted with the involvement of the United States Department of Transportation (USDOT) through the Federal Highway Administration Indiana Division (FHWA) and Federal Transit Administration Region 5 (FTA), United States Environmental Protection Agency Region 5 (USEPA), Indiana Department of Transportation (INDOT), Illinois Department of Transportation (IDOT), Indiana Department of Environmental Management (IDEM), Chicago Metropolitan Agency for Planning (CMAP) and Northwestern Indiana Regional Planning Commission (NIRPC).

The consultation process included the issues and procedures that are listed in section 93.105 of the final conformity rule and the August 2007 Interagency Consultation Guidance.

A consultation meeting was conducted on March 10, 2011. The meeting was attended by representatives of the Northwestern Indiana Regional Planning Commission, Chicago Metropolitan Agency for Planning, Indiana Department of Environmental Management, Indiana Department of Transportation, Federal Highway Administration, Federal Transit Administration and United States Environmental Protection Agency. The meeting included a discussion of the plan development schedule, the review schedule and discussions of the regional transportation plan elements and the congestion management process. The meeting also included a discussion of the results of the validation of the transportation network model to a new base year.

A consultation meeting was conducted on April 20, 2011. The meeting was attended by representatives of the Northwestern Indiana Regional Planning Commission, Indiana Department of Transportation and United States Environmental Protection Agency. The meeting included a discussion of the projects to be included in the analysis and a discussion of the applicable motor vehicle emissions budgets. A correction of the 2010 budget value for Volatile Organic Compounds emissions in Lake and Porter Counties was provided by the USEPA. The draft budgets for annual direct $PM_{2.5}$ and annual NO_x precursor emissions can be included for information purposes and it is not necessary to estimate 2025 emissions to compare with the draft 2025 budgets.

A consultation meeting was conducted on April 27, 2011. The meeting was attended by representatives of the Northwestern Indiana Regional Planning Commission, Chicago Metropolitan Agency for Planning, Indiana Department of Environmental Management, Indiana Department of Transportation, Federal Highway Administration, Federal Transit Administration and United States Environmental Protection Agency. The meeting included a discussion of the projects included in the analysis. The projects listed on Table 1 are revised to include projects from the old transportation improvement program that were included in the

analysis that are being carried over to the new program. Specific projects were discussed, with respect to their inclusion in the Major Moves program. One proposed TIP project was excluded from the networks for 2016, 2020 and 2030. In order to include the construction of that project in the TIP, an amendment of the conformity analysis will be needed to support plan and TIP amendments after the completion of the 2040 plan. Results of the analysis were discussed. All of the budget and interim reduction tests were passed. The analysis results were presented with two options for the SR-912 Bridge over the Indiana Harbor Canal. Prior to the adoption of the plan, a decision is expected on the selection of one of the options. The emissions analysis results that reflect that option will be included in the final plan. A discussion of the projects in the new TIP included potential rescission of funding for the SR-312 project in Hammond. The project is still alive, but has been downsized to include reconstruction with intersection improvements instead of a new alignment with new bridges over railroads. The documentation was discussed. Large tables of supporting data can be included in the appendix on the website, that do not also need to be included in the printed document. The process for determining the target population, households and employment forecasts and the procedure for analyzing and selecting alternative distributions need to be documented with greater transparency in the comprehensive regional plan. Data from the 2010 Census allowed NIRPC to adjust the forecasts for the Traffic Analysis Zones. Modifications of the forecasts were done to make the forecasts more realistic and more consistent with the new Census data. The review and comment process were also discussed. Public comments received will be addressed as soon as they arrive so that very soon after the end of the public comment period, responses to the comments could be provided to the reviewing agencies.

Public consultation

In compliance with the adopted NIRPC Public Involvement Procedure, an opportunity for public comment on the proposed conformity determination has been provided. A media release was issued on April 4, 2011 that established a comment period extending from the April 28, 2011 to June 3, 2011. This proposed conformity determination was made available to the public for review at the NIRPC offices, 6100 Southport Road, Portage, at 36 public library branches and on the web at www.nirpc.org. In addition, NIRPC conducted seven-teen open houses for presentation, comment and discussion of the proposed plan, program and conformity. One comment was received regarding the conformity analysis.

Comment:

Air Quality - It seems dishonest to use modeling data based on a better economy and more turnover to newer, less polluting vehicles to calculate the air pollution impact of the plan, when we know it gives us a false lower pollution result. Since reportedly the state would just respond to a more accurate higher level of air pollution by increasing the allowable amount of pollution in the air pollution budget, it seems the public doesn't have the option of less pollution. In the past, the Illiana was said to make it impossible to conform to our regional air pollution budget, but that is not discussed any more.

Response:

The Indiana Department of Transportation is working on an updated set of vehicle fleet data for use in emissions modeling. The preliminary, non-quality assured vehicle fleet data indicate that the vehicle fleet is aging because older and less efficient vehicles are not being replaced with newer and more efficient vehicles in the same frequency as in the past. Initial estimates of emissions based on this preliminary, non-quality assured data are higher than with the currently approved data. The air quality modeling of individual projects and the plan and program collectively were completed using the criteria, procedures and emission factor model established by the United States Environmental Protection Agency, under the guidance and regulations set forth by that agency. That guidance and regulation include the use of the latest quality-assured data. The new data have not been released for use in conformity analysis.

The Illiana project is in the initial stage of the environmental impact analysis. The study will proceed over the next four to five years and will generate information about the impact of the proposed facility on the region's air

quality and many other factors. Only after sufficient environmental impact information is known will NIRPC consider including this proposed facility in the plan. At that time, an air quality analysis will be conducted and the proposed facility will only be included in the plan if the conformity analysis is favorable and if the proposed facility is consistent with the other goals and objectives of the plan.

Content of the Transportation Plan

The transportation plan specifically describes the transportation system envisioned for the following horizon years: 2016, 2020, 2030 and 2040. These horizon years meet the requirements of Section 93.106 (a)(1) of the conformity rule.

The transportation plan quantifies and documents the demographic and employment factors influencing expected transportation demand. The future levels of population, households and employment imply the magnitude of development envisioned for each traffic analysis zone. These forecasts are based on the 2040 Growth and Revitalization Vision adopted by NIRPC on October 28, 2010.

The highway and transit systems are described in terms of the regionally significant additions or modifications to the existing transportation network, which the transportation plan envisions to be operational in the analysis years. The capacity-expansion projects in the 2040 Regional Transportation Plan are listed on Table 1.

Additions and modifications to the highway network are sufficiently identified to indicate intersections with existing regionally significant facilities, and to determine their effect on route options between transportation analysis zones. Each added or modified highway segment is sufficiently identified in terms of its design concept and design scope to allow modeling of travel times under various traffic volumes, consistent with the modeling methods for area-wide transportation analysis in use by NIRPC. The NIRPC transportation model includes network links representing road segments for all collector and higher functional classifications, with nodes representing all significant intersections.

Transit facilities, equipment, and services envisioned for the future are identified in terms of design concept. The design scope and operating policies for these transit projects have been assumed for the regional emissions analysis, based on local transit services. The NIRPC transportation model includes a mode choice model, and the transportation model is used to estimate transit ridership from the implementation of future transit facilities, equipment and services. Table 1 lists the projects, beginning with projects proposed for completion since 2010.

This table includes the Cline Avenue (SR-912) project with two options currently under consideration. INDOT is reviewing two solutions for Cline Ave: the ground route alternative utilizing Riley and Dickey roads, and a four-lane bridge alternative. The analysis includes both options.

Table 1. 2040 Capacity Expansion Projects Included in the Regional Emissions Analysis

2016 Network

ID	Agency	Cedar Lake	Completion before	2016
38a	Road	133rd Avenue	Concept	Principal Arterial Street
	From	US-41	Scope	Added Center Turn Lane
	To	Industrial Drive	Model Representation	Increase capacity by 10%
ID	Agency	Gary	Completion before	2016
38a	Road	Buffington Access 2A-3	Concept	Collector Street
	From	SR-912	Scope	Added Travel Lanes
	To	Casinos	Model Representation	Add 1 lane in each direction

Table 1 Continued (2016 Network)

ID	Agency	Hobart	Completion before	2016
226	Road	61st Avenue	Concept	Minor Arterial Street
	From	Colorado Street	Scope	Added Center Turn Lane
	To	SR-51	Model Representation	Increase capacity by 10%
ID	Agency	IDOT	Completion before	2016
232	Road	I-80	Concept	Interstate Highway
	From	US-30	Scope	Added travel Lanes
	To	US-45	Model Representation	Add 1 lane in each direction
ID	Agency	INDOT	Completion before	2016
121	Road	SR-2	Concept	Principal Arterial Highway
	From	one half mile West of I-65	Scope	Added Travel Lanes
	To	one half mile East of I-65	Model Representation	Add 1 travel lane in each direction
ID	Agency	INDOT	Completion before	2016
29	Road	SR-49	Concept	Principal Arterial Highway Interchange
	From	one half mile N. of CR-400N	Scope	New Interchange to Replace At-grade Intersection
	To	one half mile S. of CR-400N	Model Representation	New links, 1 travel lane in each direction, ramp attributes
ID	Agency	INDOT	Completion before	2016
85	Road	US-421	Concept	Principal Arterial Highway
	From	N. Jct SR-2	Scope	Added Travel Lanes
	To	S. Jct. SR—2	Model Representation	Add 1 travel lane in each direction
ID	Agency	INDOT	Completion before	2016
233	Road	US-20	Concept	Principal Arterial Street
	From	Woodland Avenue	Scope	Added Center Turn Lane
	To	Johnson Road	Model Representation	Increase capacity by 10%
ID	Agency	INDOT	Completion before	2016
234	Road	SR-912	Concept	Expressway
	From	Dickey Road	Scope	Two Options described above Table 1
	To	Riley Road	Model Representation	
ID	Agency	Lake County	Completion before	2016
235	Road	45th Avenue	Concept	Minor Arterial Street
	From	Colfax Street	Scope	Added Center Turn Lane
	To	Cleveland Street	Model Representation	Increase capacity by 10%
ID	Agency	Merrillville	Completion before	2016
105	Road	MississippiStreet	Concept	Minor Arterial Street
	From	US-30	Scope	Added Travel Lanes
	To	101st Avenue	Model Representation	Add 1 travel lane in each direction

Table 1 Continued (2016 Network)

ID	Agency	Munster	Completion before	2016
86	Road	Main Street	Concept	Minor Arterial Street
	From	Burnham Avenue	Scope	New Construction
	To	Columbia Avenue	Model Representation	New links, 2 travel lanes in each direction, Minor Arterial attributes

ID	Agency	Munster	Completion before	2016
217	Road	45th Avenue	Concept	Minor Arterial Street
	From	At Calumet Avenue	Scope	Intersection Realignment
	To		Model Representation	Reconfigure intersection links

ID	Agency	Valparaiso	Completion before	2016
214	Road	Vale Park Road East	Concept	Minor Arterial Street
	From	Calumet Avenue	Scope	Added Travel Lanes
	To	Silhavy Road	Model Representation	Add 1 travel lane in each direction

2020 Network

ID	Agency	Gary	Completion before	2020
38b	Road	Buffington Access 3	Concept	Collector Road
	From	SR-912	Scope	Added Travel Lanes
	To	Casinos	Model Representation	Add one travel lane in each direction

ID	Agency	IDOT	Completion before	2020
236	Road	I-57	Concept	Interstate
	From	At I-294	Scope	New Interchange
	To		Model Representation	New links, ramp attributes

ID	Agency	Merrillville	Completion before	2020
214	Road	101st Avenue	Concept	Minor Arterial Highway
	From	SR-53	Scope	Added Travel Lanes
	To	Mississippi Street	Model Representation	Add one travel lane in each direction

ID	Agency	Michigan City	Completion before	2020
88	Road	Springland Avenue	Concept	Collector Road
	From	Karwick Road	Scope	New Construction
	To	Royal Road	Model Representation	New links, 1 travel lane in each direction, Collector attributes

ID	Agency	St. John	Completion before	2020
218	Road	93rd Avenue	Concept	Minor Arterial Street
	From	White Oak Avenue	Scope	Added Center Turn Lane
	To	US-41	Model Representation	Increase capacity by 10%

Table 1 continued **2030 Network**

ID	Agency	Porter County	Completion before	2030
237	Road	Willowcreek Road	Concept	Minor Arterial Highway
	From	CR-700N	Scope	New Construction
	To	US-30	Model Representation	New links, 2 travel lanes in each direction, Minor Arterial attributes

2040 Network

ID	Agency	La Porte	Completion before	2040
238	Road	Economic Development Corridor Northeast	Concept	Collector Street
	From	SR-39	Scope	New Construction
	To	SR-2	Model Representation	New Links, 1 travel lane in each direction, collector attributes

ID	Agency	La Porte	Completion before	2020
115	Road	Boyd Boulevard	Concept	Minor Arterial Street
	From	US-35	Scope	Added Travel Lanes
	To	SR-2	Model Representation	Add 1 travel lane in each direction

ID	Agency	Schererville	Completion before	2020
96	Road	Kennedy Avenue	Concept	Minor Arterial Street
	From	Main Street	Scope	Added Travel Lanes
	To	US-30	Model Representation	Add 1 travel lane in each direction

ID	Agency	Valparaiso	Completion before	2020
239	Road	Division Road	Concept	Minor Arterial Street
	From	SR-2	Scope	Added Travel Lanes
	To	US-30	Model Representation	Add 1 travel lane in each direction

The NIRPC transportation modeling process does not include a land use model. The socioeconomic data for the traffic analysis zones reflect the 2040 Growth and Revitalization Vision for northwestern Indiana.

Relationship of Transportation Plan and TIP Conformity with the National Environmental Policy Act (NEPA) Process

The degree of specificity required in the transportation plan and the specific travel network assumed for air quality modeling do not preclude the consideration of alternatives in the NEPA process, including environmental assessment and preparation of environmental impact statements, or other project development studies. Should the NEPA process result in a project with design concept and scope significantly different from that in the transportation plan or transportation improvement program, the project must meet the tests for total annual system emissions equal to or below the level of the 2002 emissions or the applicable budgets for the analysis years, and provide for TCM priority, if applicable, before NEPA process completion.

During the congestion management system and other analyses for the capacity expansion projects in the 2040 Regional Transportation Plan, options other than the assumed design concept and design scope must be considered.

Fiscal Constraints for the Transportation Plan and TIP

The 2040 Regional Transportation Plan and Fiscal Year 2012 to 2015 Transportation Improvement Program are fiscally constrained consistent with DOT's metropolitan planning regulations in 23 CFR part 450. With the long term lease of the Indiana Toll Road, the Indiana Department of Transportation has achieved a funding mechanism, called Major Moves, to implement the projects in the statewide long range transportation plan.

Criteria and Procedures for the Conformity Determination

The Indiana State Implementation Plan for Air Quality establishes the criteria and procedures for the Conformity Determination. The Indiana SIP includes a duplicate of the original Federal transportation conformity rule. On August 15, 1997, after the establishment of the Indiana conformity rule as part of the SIP, the Federal conformity rule was amended to provide flexibility and streamlining. On June 1, 1998, the Indiana Department of Environmental Management issued a nonrule policy document that provides guidelines for conformity determination in light of Federal amendments. The nonrule policy document established the intent of IDEM to revise the SIP to mirror the new Federal amendments and to exercise its enforcement discretion to allow the features of the Federal amendments to be used.

The conformity determination for the 2040 Regional Transportation Plan and Fiscal Year 2012 to 2015 Transportation Improvement Program meets the requirements of sections 93.110 (latest planning assumptions), 93.111 (latest emissions model), and 93.112 (consultation) of the Federal conformity rule, for conformity determinations during all periods, and sections 93.113 (b and c) (transportation control measures), 93.118 (adherence to motor vehicle emissions budgets), and 93.119 (interim emissions reductions) of the conformity rule, for the transportation improvement program conformity determination with respect to Summer day VOC and NO_x emissions and the annual direct PM_{2.5} and NO_x emissions.

Latest Planning Assumptions

The conformity determination is based on the latest planning assumptions. The transportation model uses the assumptions derived from estimates of current and future population, households, employment, travel and congestion most recently developed by NIRPC and approved by NIRPC. The estimates include 2010 population estimates from the 2010 Census, and employment estimates from the Indiana Department of Workforce Development ES-202 file. Trip generation rates, trip length, mode choice and other model parameters are based on a 1995 Household Travel Survey in Northwestern Indiana and compared to nationwide data. The 2007-2008 Household Travel Survey has not been incorporated into the trip generation rates for the transportation network model due to the lack of funding for the proposed model overhaul. The travel demand model was validated with respect to the year 2008 Highway Performance Monitoring System. The 2016, 2020, 2030 and 2040 population, household and employment forecasts were prepared in March, 2011 by NIRPC, using the latest available information.

Since the previous conformity determination, the transit operating policies (including fares and service levels) have changed. The Regional Bus Authority began implementing several new fixed-route transit services, that replace and augment services previously provided by the Hammond Transit System. The new services have been incorporated into the model. Three routes provided by the Gary Public Transportation Corporation have been discontinued. These services have been eliminated from the model. Changes are assumed in existing transit fares within northwest Indiana over time. The model represents tolls on the Indiana Toll Road by links that correspond to tollbooths with a fixed travel time, based on the toll amount. The toll increases have been reflected in the transportation networks.

Planning Assumptions

1. Population forecasts have been prepared by NIRPC. For the first time, NIRPC has been allowed to use forecasts that are not constrained by the county control totals, which have tended to underestimate growth in the region. The population numbers show a large increase in Porter County, and a slight increase in LaPorte County and Lake County. The population, households and employment data are allocated to the traffic analysis zones and are used in the regional emissions analysis. The totals for the three-county area are included in Table 2.

Table 2. Socioeconomic Totals

	Population	Households	Employment
2000	741,468	277,324	303,850
2010	755,677	287,854	314,733
2016	776,834	291,921	281,122
2020	801,957	301,589	292,380
2030	861,956	325,047	320,155
2040	938,683	426,678	353,315

2. The Highway Performance Monitoring System (HPMS) data provided the basis for an analysis of the growth in Vehicle-Miles of Travel. Based on this data, the actual annual rate of growth of travel can be determined. For the three-county area, the rates range from -.88% per year to 2.84% per year between 1993 and 2008. Over this period, the annual rate of growth is 0.98% per year.

Table 3. Vehicle-Miles of Travel
data from the Highway Performance Monitoring System (HPMS)

Year	VMT Estimate (HPMS)	Annual Rate of Growth Since 1993
1993	18,829,591	
1994	18,663,552	-0.88%
1995	19,847,112	2.67%
1996	19,842,716	1.76%
1997	21,058,741	2.84%

Table 3 Continued

1998	21,638,065	2.82%
1999	21,249,847	2.04%
2000	21,527,000	1.93%
2001	21,987,000	1.96%
2002	22,147,635	1.82%
2003	22,201,000	1.66%
2004	22,154,000	1.49%
2005	22,216,000	1.39%
2006	22,305,000	1.31%
2007	22,397,000	1.25%
2008	21,792,000	0.98%

3. Adjustment factors have been produced to relate the vehicle-miles of travel produced by the transportation network model to the Highway Performance Monitoring System estimates for 2008.

Overall the model's estimate of VMT is approximately 4% higher than the HPMS. These adjustment factors have been applied to model-generated estimates on a link by link basis.

Table 4. Model Calibration (Year 2008)

Lake County			HPMS vmt	Model vmt	M/H
11	Urban	Interstate	3,566,000	3,570,560	1.00
12	Urban	Other Expressway	564,000	563,015	1.00
14	Urban	Principal Arterial	2,870,000	2,867,692	1.00
16	Urban	Minor Arterial	1,955,000	1,964,341	1.00
17	Urban	Collector	785,000	772,360	0.98
18	Urban	Local	2,182,000	2,174,895	1.00
1	Rural	Interstate	481,000	484,476	1.01
2	Rural	Principal Arterial	135,000	136,512	1.01
6	Rural	Minor Arterial	85,000	85,010	1.00
7	Rural	Major Collector	314,000	316,261	1.01
8	Rural	Minor Collector & Local	80,000	193,965	2.42
Porter County					
11	Urban	Interstate	1,118,000	1,114,514	1.00
14	Urban	Principal Arterial	1,232,000	1,233,414	1.00
16	Urban	Minor Arterial	436,000	440,380	1.01
17	Urban	Collector	205,000	205,021	1.00

Table 4 Continued

18	Urban	Local	550,000	550,399	1.00
1	Rural	Interstate	144,000	446,582	3.10
2	Rural	Principal Arterial	180,000	192,123	1.07
6	Rural	Minor Arterial	143,000	145,355	1.02
7	Rural	Major Collector	644,000	681,285	1.06
8	Rural	Minor Collector & Local	167,000	305,186	1.83
LaPorte County					
11	Urban	Interstate	271,000	451,462	1.67
14	Urban	Principal Arterial	577,000	590,997	1.02
16	Urban	Minor Arterial	317,000	317,676	1.00
17	Urban	Collector	105,000	106,180	1.01
18	Urban	Local	300,000	296,267	0.99
1	Rural	Interstate	884,000	815,149	0.92
2	Rural	Principal Arterial	327,000	324,222	0.99
6	Rural	Minor Arterial	428,000	424,438	0.99
7	Rural	Major Collector	504,000	507,378	1.01
8	Rural	Minor Collector & Local	243,000	431,718	1.78
		TOTAL	21,792,000	22,708,830	1.04

4. Vehicle registration data have been received from the Indiana Bureau of Motor Vehicles. These data are split by vehicle type, and have an associated date of approximately January 1, 2004. The Indiana Department of Environmental Management provided vehicle age information for cars and light trucks, from the application of a vehicle identification number (VIN) decoder. This vehicle registration data have been used in the Mobile 6.2 input file, reflecting vehicle fleet age by vehicle type for smaller vehicles. For larger vehicle types, default data have been determined to be the best available fleet age information. An updated set of vehicle registration data is being prepared by the Indiana Department of Transportation. The draft data have been found to be problematic for the conformity process, because the vehicle fleet is seen as older and less efficient than the fleet reflected in the current data. Updated motor vehicle emissions budgets are necessary prior to the next conformity determination once the new data are officially released.
5. There have been recent changes to transit fares in northwest Indiana. The Gary Public Transportation Corporation, Regional Bus Authority and Northern Indiana Commuter Transportation District have increased fares in 2010 and 2011.

Exempt Projects

The reconstruction and two-way left turn lane projects are now treated as nonexempt, with the network modified to represent such continuous two way left turn lane projects with a 10% increase in the per hour per lane capacity. Other exempt projects are listed in the Transportation Improvement Program.

Project Changes

Some of the local projects that were originally proposed have not made sufficient progress to achieve the originally planned 2010 network, and have been delayed and/or removed from the plan. Some of these projects are included in later year networks in the transportation network model used for the regional emissions analysis. The Cline Avenue Bridge (SR-912) over the Indiana Harbor Canal was closed to traffic in November, 2009 after serious structural deficiencies were found. The preferred alternative is the detour route on Dickey Road and Riley Road. These two collector roads would provide a short link on an expressway corridor. While the NEPA process is underway, INDOT is considering various options for the routing of this highway.

Horizon Year

The horizon year is 2040. The 2040 Comprehensive Regional Plan provides a policy-oriented distribution of population and households. This distribution is reflected in the project selection system for the plan, giving significant weight to projects in the revitalization areas in Gary, Hammond, East Chicago and Michigan City, as well as livable centers that provide for mixed land uses and greater transportation options.

The methods and assumptions for the transportation network model in the regional emissions analysis are included in The Transportation Model Documentation Report. KPMG, the consultants for the major investment study of the INDOT facilities in northwestern Indiana, concluded that the NIRPC model is in agreement with acceptable professional practice. The 2009 certification review concluded that the model meets or exceeds the standards of travel demand models in use at small and medium sized Metropolitan Planning Organizations (MPOs).

Latest Emissions Model

On January 23, 2002 the USEPA officially released the Mobile6 Emission Factor model. The emission factor model has been used in the regional emissions analyses for this transportation conformity determination. Discussions with the IDEM staff on the parameters and inputs for Mobile6 have been extensive.

The Mobile 6.2 descriptive output file provided emissions rates for composite types of vehicles. These rates were imported into a Microsoft Excel spreadsheet and applied to the output from the Emme transportation network model. In a Microsoft Access

database, the output from the Emme transportation network model for three vehicle types (Personal Vehicles, Non-Heavy Commercial Trucks, and Heavy Duty Vehicles) were split to twenty-eight vehicle types using factors based on a factoring process provided by IDEM and analyzed by NIRPC. The 12-class assignment was also used to identify VMT from vehicles from external trip ends, so that their start and evaporative emissions could be excluded from the analysis as appropriate. The emissions from transit vehicles used the emissions rates for transit buses, as well. The Mobile 6.2 input files are included in Appendix G.

On March 2, 2010 the USEPA officially released the MOVES model, with a two year grace period. The MOVES model must be used instead of Mobile 6.2 beginning on March 2, 2012. As with the vehicle registration data, the motor vehicle emissions budgets will need to be revised prior to the conformity process in 2012 due to the increases in the emissions estimates generated by the new model.

TCM Implementation

The 2040 Regional Transportation Plan and Fiscal Year 2012 to 2015 Transportation Improvement Program are not required to provide for timely implementation of TCMs from the SIP, since the SIP currently contains no TCMs.

Consistency with the Motor Vehicle Emission Budgets in the SIP

The regional emissions analysis has estimated emissions of VOC and NO_x as ozone precursors. The regional emissions analysis includes estimates of emissions from the entire transportation system, including all regionally significant projects contained in the transportation plan and all other regionally significant highway and transit projects expected in the nonattainment area in the time frame of the transportation plan.

The emissions analysis methodology meets the requirements of Section 93.122(b) of the Federal Conformity Rule, for conformity determinations based on estimates of regional transportation-related emissions completed after January 1, 1997.

Implementation of the Lake and Porter County projects and the La Porte County projects in the regional transportation plan results in motor vehicle emissions that are below the levels of the applicable Motor Vehicle Emissions Budgets, as shown in Table 5. This table also indicates that the implementation of the Lake and Porter County projects in the regional transportation plan result in motor vehicle emissions that are below the level of the proposed Motor Vehicle Emissions Budgets in the proposed Maintenance Plans for the PM_{2.5} nonattainment area, which is under review for redesignation as a maintenance area.

Emission Reductions in Areas Without Motor Vehicle Emissions Budgets

The 2040 Regional Transportation Plan and Fiscal Year 2012 to 2015 Transportation Improvement Program contribute to emissions reductions. Annual Direct PM_{2.5} emissions and annual NO_x PM_{2.5} precursor emissions in the action scenario for each analysis year are less than or equal to the 2002 emissions estimates for the PM_{2.5} nonattainment area, as indicated in Table 5.

Procedures for Determining Regional Transportation-related Emissions

The regional emissions analysis for the transportation plan includes calculations of vehicle emissions at the aggregate level for the entire transportation system, including all regionally significant expansion projects expected in the nonattainment area. The analysis includes FHWA/FTA-funded projects proposed in the transportation plan, all Indiana Toll Road projects and all other regionally significant projects which are disclosed to NIRPC. Vehicle miles traveled (VMT) from projects which are not regionally significant are estimated in accordance with reasonable professional practice, using the regional travel demand model and the procedure for projects that are regionally significant.

The regional emissions analysis does not include any TCMs for emissions reduction credit. The regional emissions analysis does not include emissions reduction credit from projects, programs, activities, or control measures which require a regulatory action in order to be implemented.

Draft Budgets		5,697.86	5,697.86	2,915.19	2,915.19
NO _x Precursor Emissions	30,397.97	3,929.58	2,734.46	1,963.33	2,110.97
Northeastern Illinois					
Direct PM Emissions	3,070.78	1,110.19	1,008.72	990.33	1,029.20
NO _x Precursor Emissions	167,630.81	42,230.54	28,841.04	20,093.84	20,257.31
Nonattainment Area Total					
Direct PM Emissions	3,633.42	1,222.47	1,113.45	1,099.86	1,151.72
NO _x Precursor Emissions	198,028.78	46,160.12	31,575.50	22,057.17	22,368.28

Conclusion

The Summer day on-road mobile source emissions of the precursors of ozone (VOC and NO_x) in Lake and Porter Counties that result from the implementation of the projects in the 2040 Regional Transportation Plan and the Fiscal Year 2012 to 2015 Transportation Improvement Program, as defined by the action scenarios for 2016, 2020, 2030 and 2040 are less than the Motor Vehicle Emission Budgets established in the Maintenance State Implementation Plan for Lake and Porter Counties. The Summer day on-road mobile source emissions of the precursors of ozone (VOC and NO_x) in La Porte County that result from the implementation of the projects in the 2040 Regional Transportation Plan and the Fiscal Year 2012 to 2015 Transportation Improvement Program, as defined by the action scenarios for 2016, 2020, 2030 and 2040 are less than the Motor Vehicle Emission Budgets in the Maintenance State Implementation Plan for La Porte County. The on-road mobile source emissions of annual direct PM_{2.5} and annual nitrogen oxide in the bi-state PM_{2.5} nonattainment area that result from the implementation of the projects in the 2040 Regional Transportation Plan and the Fiscal Year 2012 to 2015 Transportation Improvement Program as defined by the action scenarios for 2016, 2020, 2030 and 2040 are no greater than the 2002 emissions. Therefore, **the 2040 Regional Transportation Plan and the Fiscal Year 2012 to 2015 Transportation Improvement Program have been found to conform to the requirements of section 176(c) of the Clean Air Act Amendment and the related requirements of the Final Transportation Conformity Rule (40 CFR Part 51 and 40 CFR Part 93) with respect to ozone and PM_{2.5}.**