

RESOLUTION 16-13

A RESOLUTION OF THE NORTHWESTERN INDIANA REGIONAL PLANNING COMMISSION MAKING THE AIR QUALITY CONFORMITY DETERMINATION FOR THE 2040 COMPREHENSIVE REGIONAL PLAN COMPANION UPDATE AND FISCAL YEAR 2016 to 2019 TRANSPORTATION IMPROVEMENT PROGRAM AS AMENDED WITH RESPECT TO OZONE AND FINE PARTICLES

May 19, 2016

WHEREAS, the citizens of Northwest Indiana require a safe, efficient and effective regional transportation system that maintains and enhances regional mobility and contributes to improving the quality of life in northwest Indiana; and

WHEREAS, the implementation of the Clean Air Act Amendments of 1990 has established National Ambient Air Quality Standards for ozone and fine particles; and

WHEREAS, Lake and Porter Counties have been designated as a non-attainment area with respect to the "8-hour" standard for ozone and Lake and Porter Counties have been designated as a maintenance area of the 1997 annual standard for fine particles; and

WHEREAS, The Clean Air Act Amendments of 1990 requires that a Metropolitan Planning Organization's Long Range Transportation Plans and Transportation Improvement Programs conform to the State Implementation Plan for Air Quality by causing the Summer day emissions of Volatile Organic Compounds and Nitrous Oxides from highway mobile sources to be at or below the Motor Vehicle Emissions Budgets in the State Implementation Plan for the ozone non-attainment area and by causing annual direct emissions of PM_{2.5} and annual PM_{2.5} precursor emissions of Nitrogen Oxides from highway mobile sources in Lake and Porter Counties to be at or below the Motor Vehicle Emissions Budgets in the State Implementation Plan for the PM_{2.5} maintenance area; and

WHEREAS, the Northwestern Indiana Regional Planning Commission, hereafter referred to as "The Commission," being designated the Metropolitan Planning Organization for the Lake, Porter and La Porte County Region, has established a regional, cooperative, and comprehensive planning program to develop the unified planning work program, long-range transportation plan and transportation improvement program; to annually endorse the plans and programs; to facilitate federal transportation funding for the Indiana Department of Transportation, regional communities and transit operators, and to provide technical assistance and expertise to regional transportation interests; and

WHEREAS, the Commission performs the above mentioned activities to satisfy regional requirements under the Fixing America's Surface Transportation (FAST) Act, as well as other federal, state and local legislation mandating cooperative, comprehensive and continuing regional transportation planning activities; and

WHEREAS, the 2040 Comprehensive Regional Plan Companion Update and Fiscal Year 2016 to 2019 Transportation Improvement Program are the products of a multi-modal, continuous, cooperative, and comprehensive transportation planning process; and

WHEREAS, the implementation of the projects in the 2040 Comprehensive Regional Plan Companion Update as amended and the Fiscal Year 2016 to 2019 Transportation Improvement Program as amended will result in Summer day highway mobile source emissions of Volatile Organic Compounds and Nitrogen Oxides in 2015, 2020, 2025, 2030, 2035, 2040 and 2045 that will be below the motor vehicle emissions budgets in the State Implementation Plan for the ozone non-attainment area and will result in annual highway mobile source emissions of direct PM_{2.5} and Nitrogen Oxides in 2015, 2020, 2025, 2030, 2035, 2040 and 2045 that will be below the motor vehicle emission budgets in the PM_{2.5} maintenance area; and

WHEREAS, the Commission has solicited public comment on the Air Quality Conformity Analysis between March 15, 2016 and April 15, 2016; and

WHEREAS, the Commission's Transportation Policy Committee approved the Air Quality Conformity Analysis on March 15, 2016

NOW, THEREFORE, BE IT RESOLVED that Commission officially makes the Air Quality Conformity Determination for the 2040 Comprehensive Regional Plan Companion Update as amended and Fiscal Year 2016 to 2019 Transportation Improvement Program as amended with respect to ozone and fine particles.

Duly adopted by the Northwestern Indiana Regional Planning Commission this nineteenth day of May 2016.


James G. Ton
Chairman

ATTEST:


Geof R. Benson
Secretary

Air Quality Conformity Determination

Between

The **2040 Comprehensive Regional Plan** as updated and amended
The **Fiscal Year 2016 to 2019 Transportation Improvement Program**

and

The **Indiana State Implementation Plan for Air Quality**

May 19, 2016

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 minimum 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 MOVES emissions simulator to quantify the emissions from all vehicles on the future transportation system. For Lake and Porter Counties, annual emissions of nitrogen oxides, volatile organic compounds and fine particles must not exceed Motor Vehicle Emissions Budgets as established in the State Implementation Plan. The system that was analyzed includes, regardless of funding sources, all regionally significant capacity expansion projects in the Lake, Porter and LaPorte County area, all significant projects in northeastern Illinois, and a portion of Newton and Jasper Counties in order to satisfy the logical termini consistency with the NEPA process 23 CFR 771.

Applicability

Action Applicability

This conformity determination is required for: adoption, acceptance, approval or support of the Regional Transportation Plan (2040 Comprehensive Regional Plan as updated and amended) and the Transportation Improvement Program (Fiscal Year 2016 to 2019 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 area, including the Lake/Porter County non-attainment area with respect to the Summer day mobile-source emissions of VOCs and NO_x. Lake and Porter Counties are designated as non-attainment of the 1997 National Ambient Air Quality Standard (NAAQS) for "8-hour" ozone. Lake and Porter Counties are designated nonattainment for the 2008 Ozone NAAQS, but since no approved SIP exists for this NAAQS, conformity is only required for the 1997 Ozone SIP. This analysis examines parts of Newton and Jasper Counties in order to be consistent with the logical termini requirement for the NEPA process. LaPorte County is in attainment of NAAQS.

This conformity determination is not required in the PM_{2.5} unclassifiable area, with respect to annual mobile source emissions of NO_x and direct PM_{2.5}. Lake and Porter Counties in Northwestern Indiana are classified as unclassifiable of the 2012 annual National Ambient Air Quality Standard (NAAQS). However, the Interagency Consultation Group decided the 1997 annual National Ambient Air Quality Standard (NAAQS) for PM_{2.5} applies. Lake and Porter Counties are maintenance areas for the 1997 PM_{2.5} NAAQS. Also, this analysis examines parts of Newton and Jasper Counties in order to be consistent with the logical termini requirement in the NEPA process.

This conformity determination is based on the requirement of 40 CFR 93.118 (Federal Transportation 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. The regional transportation plan and transportation improvement program must not result in Summer day

emissions of VOC and NOx in 2020, 2025, 2030, 2035 and 2040 in excess of the applicable budgets. 2045 is added as an analysis year in order to satisfy the desires of the Interagency Consultation Group on Air Quality.

This conformity determination is based on 40 CFR 93.119 for the regional emissions analysis to indicate interim reductions of the annual emissions of Nitrogen Oxides and direct PM_{2.5} in the PM_{2.5} maintenance area, including Lake and Porter Counties. The regional transportation plan and transportation improvement program must not result in annual emissions of direct PM_{2.5} and NOx from mobile sources in 2015, 2020, 2025, 2030, 2035 and 2040 in excess of the applicable budgets.

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), Indiana Department of Environmental Management (IDEM), and Northwestern Indiana Regional Planning Commission (NIRPC).

The consultation process included the issues and procedures that are listed in 40.CFR 93.105 of the final conformity rule and the August 2007 Interagency Consultation Guidance.

An Interagency Consultation Group (ICG) meeting was conducted on January 14, 2016 at 1:00 p.m. Eastern Time by teleconference. The meeting was attended by Scott Weber, of NIRPC, Frank Baukert, Jay Mitchell, and Jim Earl of INDOT, Joyce Newland of FHWA, Tony Maietta of USEPA, and Shawn Seals of IDEM. David Cleveland and Johnny Hahn of the Corradino Group, under contract with INDOT to update the MOVES post-processor, also joined the call. The teleconference included an overview of the I-65 Added Travel Lanes project from US-30 to SR-10, with the portion from SR-2 to SR-10 still needing to be amended into NIRPC's 2040 CRP and FY 2016 to 2019 TIP by first demonstrating conformity. Scott Weber informed the ICG that NIRPC planned on having the amendment to include the I-65 Added Travel Lane Project by the April 2016 NIRPC Commission meeting, which would mean having the Conformity Determination draft completed by the March 15, 2016 Transportation Policy Committee Meeting. This would enable NIRPC to circulate a draft of the document out for public view and comment between March 16, 2016 and April 15, 2016, satisfying the NIRPC 30-day public comment period.

Scott Weber updated the group on the Latest Planning Assumptions, stating that NIRPC intends to use the forecasts as originally adopted as the growth and revitalization hybrid scenario in the 2040 CRP. This is consistent with past Conformity Determinations. The ICG concurred.

Scott then asked to clarify that the emissions that need to be modeled as part of the Regional Emissions Analysis are VOC and NOx for Ozone, and Direct PM and NOx precursor emissions for PM_{2.5}. Shawn Seals said that indeed these were the emissions that need to be modeled and the ICG agreed. Scott wanted to clarify that USEPA's plans to revoke the 1997 PM_{2.5} NAAQS would not take effect soon enough, and Shawn Seals confirmed that the revocation would likely be around May 2016, too late for the timeline

to forego having to make a conformity determination in regards to PM2.5 Motor Vehicle Emissions Budgets.

An Interagency Consultation Group (ICG) teleconference call was held March 7, 2016 at 10:00 a.m. Central Time. Scott Weber of NIRPC, Jim Earl, Julie Ritzler, Lindsay Quist, Michael Ready, and Frank Baukert of INDOT, Shawn Seals of IDEM, Tony Maietta of USEPA, and Joyce Newland of FHWA participated. David Cleveland and Johnny Hahn of the Corradino Group joined in. Scott Weber shared the results from the modeling that showed the emissions at or below the Motor Vehicle Emissions budgets, and the ICG agreed.

Public consultation

In compliance with the adopted NIRPC Public Participation Plan, an opportunity for public comment on the proposed conformity determination has been provided. A media release was issued on March 15, 2016 that established a comment period extending from March 16, 2016 to April 15, 2016. This proposed conformity determination is available to the public for review at the NIRPC offices, 6100 Southport Road, Portage and on the web at www.nirpc.org. A public meeting was held March 31, 2016 at the Lowell Public Library to gather public input. The comments and responses will be inserted here at the end of the public comment period.

Content of the Transportation Plan

The transportation plan specifically describes the transportation system envisioned for the following horizon years: 2020, 2025, 2030, and 2040. An additional horizon year of 2045 was agreed to by the ICG. These horizon years meet the USEPA's requirements of 40 CFR 93.106 (a)(1) of the conformity rule.

The 2040 Comprehensive Regional 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 NIRPC 2040 Comprehensive Regional Plan was formally adopted on June 23, 2011 and updated on May 21, 2015. This conformity determination applies adjustments from the 2010 Census to the forecasts, a directive agreed to by the ICG.

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.

Table 1. 2040 Comprehensive Regional Plan as Update and FY 2016 to 2019 Transportation Improvement Program Capacity Expansion Projects in the Regional Emissions Analysis

2020 Network (includes the following projects)

ID	Agency	INDOT	Completion before	2020
242	Road	I-65	Concept	Interstate Highway
	From	SR-2	Scope	Added Travel Lanes
	To	SR-10	Model Representation	Add 1 NB & 1 SB travel lane
ID	Agency	INDOT	Completion before	2020
243	Road	I-65	Concept	Interstate Highway
	From	US-231	Scope	Added Travel Lanes
	To	SR-2	Model Representation	Add 1 NB & 1 SB travel lane
ID	Agency	INDOT	Completion before	2020
244	Road	SR-912	Concept	Other Expressway
	From	Riley Rd Interchange	Scope	New Construction
	To	0.6 miles West of Michigan Avenue Interchange	Model Representation	New links, 2 travel lanes in each direction, other expressway attributes, \$2.50 tollbooth
ID	Agency	INDOT/IDOT	Completion before	2020
233	Road	Illiana	Concept	Limited access toll road
	From	I-65	Scope	New facility
	To	I-55 (IL)	Model Representation	New 4-lane limited access toll road, \$0.11 per mile
ID	Agency	INDOT	Completion before	2020
234	Road	I-65	Concept	Interstate Highway
	From	US-30	Scope	Added Travel Lanes
	To	US-231	Model Representation	Add 1 NB & 1 SB travel lane
ID	Agency	INDOT	Completion before	2020
250	Road	US-41	Concept	Principal Arterial Highway
	From	93 rd Ave	Scope	Added Center Turn Lane
	To	US-231	Model Representation	Increase Capacity by 10%
ID	Agency	Lake County	Completion before	2020
235a	Road	45th Avenue	Concept	Minor Arterial Street
	From	Whitcomb Street	Scope	Added Center Turn Lane
	To	Grant Street	Model Representation	Increase Capacity by 10%
ID	Agency	Merrillville	Completion before	2020
105a	Road	Mississippi Street	Concept	Minor Arterial Street
	From	US-30	Scope	Added Travel Lanes
	To	93 rd Ave	Model Representation	Add 1 travel lane in each direction

ID	Agency	Munster	Completion before	2020
217	Road	45th Avenue	Concept	Minor Arterial Street
	From	At Calumet Avenue	Scope	Intersection Realignment
	To		Model Representation	Reconfigure intersection links

ID	Agency	Hobart	Completion before	2020
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	Gary Public Transp. Corp.	Completion before	2020
248	Service	Lakeshore North	Concept	New Fixed Route Bus Service
	From	Hammond	Scope	Added Fixed Route Transit Service
	To	Loop via Horseshoe Casino	Model Representation	Add Transit Line on Road Links

ID	Agency	Gary Public Transp. Corp.	Completion before	2020
249	Service	Livable Broadway	Concept	Enhanced Fixed Route Bus Service
	From	Gary Metro Center	Scope	Added Fixed Route Transit Service
	To	Crown Point	Model Representation	Add Transit Line on Road Links

2025 Network (includes the 2020 network, plus the following projects)

ID	Agency	Hammond	Completion before	2025
240	Road	Gostlin/Sheffield/Chicago	Concept	Minor Arterial Street
	From	Illinois State Line	Scope	Added Travel Lanes
	To	US-41	Model Representation	Add 1 travel lane in each direction

ID	Agency	Lake County	Completion before	2025
235b	Road	45th Avenue	Concept	Minor Arterial Street
	From	Colfax Street	Scope	Added Center Turn Lane
	To	Whitcomb Street	Model Representation	Increase Capacity by 10%

ID	Agency	Merrillville	Completion before	2025
105b	Road	Mississippi Street	Concept	Minor Arterial Street
	From	93 rd Ave	Scope	Added Travel Lanes
	To	101 st Ave	Model Representation	Add 1 travel lane in each direction

ID	Agency	Merrillville	Completion before	2025
214	Road	101st Avenue	Concept	Minor Arterial Highway
	From	SR-53	Scope	Added Travel Lanes
	To	Mississippi Street	Model Representation	Add 1 travel lane in each direction

ID	Agency	Schererville	Completion before	2025
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	St. John	Completion before	2025
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%

2030 Network (includes the 2025 network, plus the following projects)

ID	Agency	Munster	Completion before	2030
86	Road	Main Street	Concept	Minor Arterial Street
	From	Burnham Avenue	Scope	New Construction and added travel lanes
	To	Calumet Avenue	Model Representation	New links, 2 travel lanes in each direction, Minor Arterial attributes, add 1 lane / direction in existing segment

ID	Agency	Valparaiso	Completion before	2030
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

ID	Agency	Porter County	Completion before	2030
237	Road	Willowcreek Road	Concept	Minor Arterial Highway
	From	CR-700N	Scope	New Construction
	To	CR-100S	Model Representation	New links, 2 travel lanes in each direction, Minor Arterial attributes

2040 Network (includes the 2030 network, plus the following projects)

ID	Agency	Valparaiso	Completion before	2040
238	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 process 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

NIRPC has reviewed all of the projects in the 2040 Comprehensive Regional Plan as updated to determine through project sponsor interviews and the Transportation Policy Committee that the projects meet requirements for fiscal constraint. INDOT has submitted under separate cover a document that describes how the proposed Statewide Transportation Improvement Program (STIP), including those projects in the FY 2016 to 2019 Transportation Improvement Program, meets fiscal constraint requirements. The Transit Operators Roundtable has thoroughly vetted the transit projects in the 2040 Comprehensive Regional Plan as updated to determine that they meet fiscal constraint requirements.

Criteria and Procedures for the Conformity Determination

The Interagency Consultation Group Conformity Consultation Guidance 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, IDEM 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 Comprehensive Regional Plan as updated and amended and Fiscal Year 2016 to 2019 Transportation Improvement Program meets the requirements of 40 CFR 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 40 CFR 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 in time for this Conformity Determination, although this is consistent with prior conformity determinations. The travel demand model was validated with respect to the year 2012 Highway Performance Monitoring System. The 2020, 2025, 2030, 2035 and 2040 population, household and employment forecasts were prepared in March 2011 and intermediate years updated to take into account the 2010 Census in January 2015 by NIRPC, using the latest available information.

The transit operating policies (including fares and service levels) were changed for the previous conformity determination and are reflected in this conformity determination. Changes are assumed in existing transit fares within northwest Indiana over time. The model represents tolls on the Indiana Toll Road, the Illiana Expressway, and Cline Avenue Bridge 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 development of the 2040 CRP, 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

Year	Population	Households	Employment
2000	741,468	277,324	303,850
2010	771,815	292,477	277,584
2015	775,200	291,315	280,147
2020	827,438	337,211	302,828
2025	855,249	359,578	315,450
2030	883,060	381,944	328,071
2035	910,872	404,311	340,693
2040	938,683	426,678	353,315
2045	966,497	449,046	365,937

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 -0.88% per year to 2.84% per year between 1993 and 2008. Over this period, the annual rate of growth is 1.85% per year.

Table 3. Vehicle-Miles of Travel

Data from the Highway Performance Monitoring System (HPMS)

Year	VMT Estimate (HPMS)	Annual Rate of Growth
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%
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%
2009	26,507,000	2.55%
2010	20,359,000	0.48%

2011	26,545,000	2.28%
2012	25,461,000	1.85%

3. 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 December 31, 2014. 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 as well as registrations by vehicle type directly from the Bureau of Motor Vehicles. This vehicle registration data have been used in MOVES, 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.

Horizon Year

The horizon year is 2040. An extra horizon year of 2045 was added by consultation with the ICG. 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.

Latest Emissions Model

On March 2, 2010 the USEPA officially released the MOVES model, with a two year grace period. The MOVES model was updated in July 2014. INDOT has provided a utility that prepares the output of a TransCAD model for use with MOVES. INDOT has also run the MOVES model and provided emissions factors to all metropolitan areas in the state for use in conformity analysis. The MOVES2014a model has been used for this conformity analysis. The motor vehicle emissions budgets have been revised to use the MOVES emissions rates.

TCM Implementation

The 2040 Regional Transportation Plan and Fiscal Year 2016 to 2019 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. Table 4 shows that regional emissions for the ozone precursors fall at or below the budgets in the State Implementation Plan for the 1997 Ozone Summer Day 8-hour standard (used in lieu of an applicable 2008 Ozone Summer Day 8-hour standard because Indiana has yet to adopt a State Implementation Plan for that standard).

The emissions analysis methodology meets the requirements of 40 CFR 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 in the regional transportation plan results in motor vehicle emissions that are at or below the levels of the applicable Motor Vehicle Emissions Budgets, as shown in Table 4. 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 at or below the level of the proposed Motor Vehicle Emissions Budgets in the State Implementation Plan for the PM2.5 unclassifiable area.

Emission Reductions in Areas Without Motor Vehicle Emissions Budgets

The establishment of Motor Vehicle Emissions Budgets that cover ozone and fine particles and their precursor emissions eliminates the requirements to demonstrate emissions reductions.

Procedures for Determining Regional Transportation-Related Emissions

The regional emissions analysis for the transportation projects 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.

Ambient temperatures used for the regional emissions analysis are consistent with those used to estimate the emissions in 2002. All other factors, for example the fraction of travel in a hot stabilized engine mode, are consistently applied.

Reasonable methods have been used to estimate nonattainment area VMT on off-network roadways within the urban transportation planning area, and on roadways outside the urban transportation planning area. For 2020, 2025, 2030, 2035, 2040 and 2045, estimates of regional transportation-related emissions used to support the conformity determination have been made using the MOVES2014a post-processor updated with the latest vehicle registration data.

Land use, population, employment, and other network-based travel model assumptions have been documented based on the best available information. The land development and use in the 2040 Growth and Revitalization Vision adopted by NIRPC and underpinning the 2040 Regional Transportation Plan are consistent with the future transportation system alternatives for which emissions have been estimated. The distribution of employment and residences are reasonable.

A capacity-sensitive assignment methodology has been used, and emissions estimates are based on a methodology, which differentiates between peak and off peak link volumes and speeds, and uses speeds based on final assigned volumes, post-processed in the database. Zone-to-zone travel impedances used to distribute trips between origin and destination pairs are in reasonable agreement with the travel times that are estimated from final assigned traffic volumes, using a feedback procedure iterated five times. These times have also been used for modeling mode splits. The network-based travel model is reasonably sensitive to changes in the time(s), cost(s), and other factors affecting travel choices. Reasonable methods in accordance with good practice have been used to estimate traffic speeds and delays in a manner that is sensitive to the

estimated volume of travel on each roadway segment represented in the network-based travel model. Highway Performance Monitoring System (HPMS) estimates of vehicle miles traveled (VMT) are considered the primary measure of VMT within the portion of the nonattainment area and for the functional classes of roadways included in the nonattainment area.

Regional Transportation-Related Emissions Results

Table 4 presents the results of the regional transportation emissions analysis for the 2040 Comprehensive Regional Plan as updated and amended, and the FY 2016 to 2019 Transportation Improvement Program including the projects as specified in Table 1. As seen in this table, the emissions are at or lower than the budgets in all cases.

Table 4. Regional Emissions Analysis Results

Ozone Emissions in U.S. Tons per Day Lake and Porter Counties

	2020	2025	2030	2035	2040	2045
VOC Budget	5.99	5.99	5.99	5.99	5.99	5.99
VOC Emission	5.99	5.20	4.02	3.15	2.81	2.72
NOx Budget	16.69	16.69	16.69	16.69	16.69	16.69
NOx Emissions	14.91	9.86	7.80	6.62	6.39	6.39

PM2.5 Emissions in U.S. Tons per Year Lake and Porter Counties

	2020	2025	2030	2035	2040	2045
Direct PM Budget	374.30	188.73	188.73	188.73	188.73	188.73
Direct PM Emission	198.25	143.45	123.87	115.74	115.71	116.43
NOx Precursor Budget	10,486.08	5,472.34	5,472.34	5,472.34	5,472.34	5,472.34
NOx Precursor Emissions	6,085.26	4,045.18	3,185.78	2,756.22	2,677.08	2,684.65

Conclusion

The Summer day on-road mobile source emissions of the precursors of ozone (VOC and NOx) in Lake and Porter Counties that result from the implementation of the projects in the 2040 Regional Transportation Plan as updated and the Fiscal Year 2016 to 2019 Transportation Improvement Program in the years 2020, 2025, 2030, 2035, 2040 and 2045 are at or less than the Motor Vehicle Emission Budgets established in the Maintenance Plan included in the U.S. EPA approved State Implementation Plan for Lake and Porter Counties. The on-road mobile source emissions of annual direct PM2.5 and annual nitrogen oxide in the PM2.5 maintenance area that result from the implementation of the projects in the 2040 Regional Transportation Plan as updated and the Fiscal Year 2016 to 2019 Transportation Improvement Program in the years 2020, 2025, 2030, 2035, 2040 and 2045 are less than the Motor Vehicle Emissions Budgets established in the Maintenance Plan included in the U.S. EPA approved State Implementation Plan for Lake and Porter Counties. Therefore, the 2040 Regional Transportation Plan as updated and the Fiscal Year 2016 to 2019 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 Federal Transportation Conformity Rule (40 CFR Part 51 and 40 CFR Part 93) with respect to ozone and PM2.5.