

Air Quality Conformity Determination



*Central Lane MPO
FY06-09 Metropolitan Transportation Improvement Program*

DRAFT

November 10, 2005

**Air Quality Conformity Determination
for
Central Lane MPO
FY06-09 Metropolitan
Transportation Improvement Program**

November 10, 2005

This report was financed in part by the Oregon Department of Transportation,
the Federal Highway Administration, and the Federal Transit Administration.

<Insert signed resolution MPC adopting tip conformity>

<insert letter from USDOT approving conformity>

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1.0 Overview

This document is prepared by the Central Lane Metropolitan Planning Organization (MPO) in response to federal and state requirements to demonstrate conformity with the Clean Air Act of the FY06-09 Metropolitan Transportation Improvement Program as required by 40 CFR 93.102(a)(1)(ii) and OAR 340-252-0020(1)(b).

Federal air quality conformity requirements are described in 40 CFR Part 93. Oregon's Conformity SIP, adopted by the Oregon Environmental Quality Commission under OAR 340-200-0040 and approved by EPA, establishes rules and standards for determining air quality conformity of transportation plans, programs and projects within Oregon (specifically, OAR 340 Division 252). This conformity determination meets all Federal and State conformity regulations.

1.1 Organizational Structure

Lane Council of Governments (LCOG) serves as the MPO for central Lane County, Oregon, an area that includes the Eugene-Springfield metropolitan area. The Governor of Oregon designated LCOG as the MPO for this area in 1974.

As MPO, LCOG must ensure that the transportation planning process is conducted in accordance with federal transportation planning regulations (23 CFR 450). In addition, transportation planning must be consistent with the Statewide Transportation Planning Rule (TPR, OAR 660 Division 12), the Oregon Transportation Plan, and the Lane County, Eugene-Springfield and Coburg Transportation System Plans. Further, LCOG is responsible for preparation of the regional long range transportation plan (RTP) (23 CFR 450.322) and the metropolitan transportation improvement program (MTIP) (23 CFR 450.324), and for making corresponding conformity determinations. LCOG provides technical modeling of the transportation system, prepares financial analyses and project programming, provides opportunities for public involvement, and manages the analysis and process for ensuring compliance of the RTP and MTIP with the federal (40 CFR 93) and state (OAR 340-252) requirements of the Clean Air Act.

The decision-making body of the Central Lane MPO is the Metropolitan Policy Committee (MPC) which was created by Eugene, Springfield and Lane County for ensuring cooperation on issues of metro-wide importance. When considering transportation issues, MPC is currently comprised of elected officials from Lane County and the cities of Springfield, Eugene, and Coburg. Lane Transit District (LTD); and the Oregon Department of Transportation (ODOT) are also represented.

The Transportation Planning Committee (TPC) is comprised primarily of technical staff from the public works and planning departments of local agencies. TPC advises MPC on technical transportation issues, reviews all of the transportation documents produced by LCOG, and recommends plans and actions to MPC for review and adoption. TPC is specifically designated by OAR 340-252-0060(2)(b)(A)(i) as the standing committee for purposes of consultation required under the Oregon transportation conformity rules for air quality planning.

Interagency consultation must be conducted with Federal Highways Administration (FHWA), Federal Transit Agency (FTA), US Environmental Protection Agency (USEPA), Lane Regional Air Pollution Authority (LRAPA), and Oregon Department of Transportation (ODOT).

1.2 Status of Air Pollutants

The Environmental Protection Agency (EPA) has established health-based National Ambient Air Quality Standards (NAAQS) for six air pollutants (carbon monoxide (CO), particulate matter (PM₁₀ and PM_{2.5}), ozone (O₃), sulphur dioxide (SO₂), nitrogen dioxide (NO₂) and lead (Pb)). Areas that fail to meet the standards are designated “non-attainment” and are required to develop plans to come into compliance with the standards. Once compliance is achieved, a maintenance plan is developed to ensure that air quality will not be compromised in the future. These plans are codified in the State Implementation Plan (SIP). The Eugene/Springfield area is currently classified as maintenance for CO and as non-attainment for particulate matter of less than 10 microns (PM₁₀). EPA has determined that transportation is a significant source for CO but not for PM₁₀. Air quality for all other criteria pollutants meets the NAAQS and demonstration of conformity for these pollutants is not required. Thus, CO is the only criteria pollutant which must be addressed for regional air quality conformity determinations.

LCOG, as the area’s MPO, was designated by the Governor in 1978 as the lead agency for air quality planning for transportation pollutants, and thus has responsibilities for CO air quality planning. Lane Regional Air Pollution Authority (LRAPA) is the lead agency for air quality planning for all other pollutants, and in particular, for PM₁₀.

Status of CO

On February 4, 1994, the Eugene-Springfield region reached a significant milestone in its transportation planning efforts. Effective on that date, the area was officially redesignated by EPA as being in attainment of the NAAQS for CO. The region’s maintenance plan was approved by EPA as part of the same action that approved the region’s redesignation request (see the Federal Register Notice, 58 FR 64161 in Appendix F). The maintenance plan is currently being updated to carry the region through the required 20 year maintenance period.

There has not been a violation of the CO NAAQS in the maintenance area since 1980. While monitored air quality data (Figure 1) show that CO levels are in compliance with the NAAQS and are steadily declining, demonstration of conformity relies upon compliance with the regulations in 40 CFR Part 93 and equivalently, OAR Chapter 340 Division 252, to which this document responds.

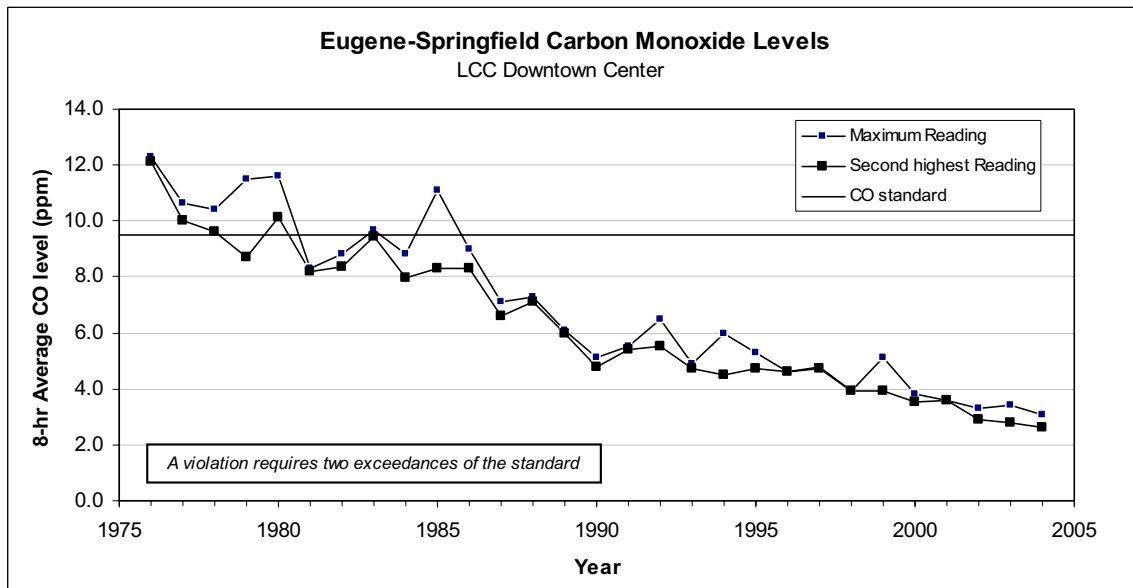


Figure 1. Trends in carbon monoxide levels from 1976 through 2004. The last violation of the National Ambient Air Quality Standards for 8-hour average CO concentration was in 1980. The last exceedance of the standard was in 1985

Status of PM₁₀

On August 7, 1987, the Eugene-Springfield region was designated as a non-attainment area for PM₁₀. LRAPA is in the process of applying to the federal Environmental Protection Agency for a redesignation to attainment status for PM₁₀. The formal application to Oregon Department of Environmental Quality, the Oregon Environmental Quality Commission, and, finally, to EPA, is expected to be submitted in March 2006. Redesignation by EPA would then place the region into a maintenance period for PM₁₀.

The Eugene-Springfield PM₁₀ State Implementation Program (SIP), approved by EPA in 1994, established that emissions from motor vehicles are not a significant contributing factor to overall PM₁₀ emissions and concluded that control of emissions from motor vehicles is not necessary to demonstrate attainment of the PM₁₀ standards. As indicated by EPA's letter of October 3, 1994 (see Appendix A), the Agency concurred that transportation conformity determinations for PM₁₀ are not required. Therefore, **no additional analysis of PM₁₀ is presented here.**

1.3 Status of Transportation Plans

The Central Lane MPO Regional Transportation Plan was adopted on December 9, 2004 and was conformed on December 13, 2004 (see approval letter in Appendix A). It covers the time period 2004-2025. Since the initial adoption, two amendments have been approved: the

I5/Coburg interchange project and the Middle Fork Path project were moved from the illustrative to the fiscally constrained list of the RTP.

The prior Central Lane MPO MTIP was adopted on December 30, 2004 and was conformed on March 23, 2005 (see approval letter in Appendix A). It covers the time period FY05-FY07.

1.4 Purpose of this Determination

The purpose of the FY06-09 MTIP update addressed by this conformity determination is to bring the MTIP into alignment with that of the FY06-09 Oregon Statewide Transportation Improvement Program (STIP) which was adopted by the Oregon Transportation Commission in August 2005. The new MTIP will also allow programming of projects in the FY06 through FY09 time frame.

2.0 Demonstration of Conformity for CO

The December 6, 1993, Federal Register notice of Approval and Promulgation of Redesignation (58 FR 64161, Appendix F) recognizes the nature of the CO emissions problem in the Eugene-Springfield region to be within the Central Area Transportation Study (CATS) boundary. It reads:

Due to the nature of Eugene's CO violation, (i.e., hot spots only) LRAPA's emission inventory contains only on-road mobile and home wood heating emissions within the Central Area Transportation Study boundary. All point sources within the Eugene AQMA are located at a sufficient distance away as to not contribute significantly to the violations.

In a letter dated October 3, 1994, attached in Appendix A, EPA approved and concurred that, for the purposes of conformity, regional emissions tests for CO apply only to projects within the CATS boundary of downtown Eugene (Maps 1 and 2). However, should the area not be able to demonstrate conformity, projects within the entire AQMA could be affected. Projects outside the CATS area but within the Air Quality Maintenance Area (Map 1) are subject to project-level hot spot analysis for CO.

All regionally significant and/or Federally funded projects in the MTIP were modeled based on the most recent coordinated populations (adopted February 2005 by the coordinating body), employment (issued October 2003 by Oregon Employment Department), travel and congestion estimates, as required by EPA conformity guidance. The CATS area was evaluated for CO emissions. The forecasts were reviewed by TPC, acting as the region's Standing Committee on Air Quality, and also by air quality specialists from USDOT, EPA, and ODOT, consistent with requirements for interagency consultation.

Map 3 indicates the location of Central Lane MPO projects programmed in the FY06-09 MTIP (see Appendix B for project list). Map 4 shows the financially constrained projects planned as capital investment actions within the CATS area during the planning period of the 2025 RTP (see Appendix C for the project lists and for project maps covering the entire TMA).

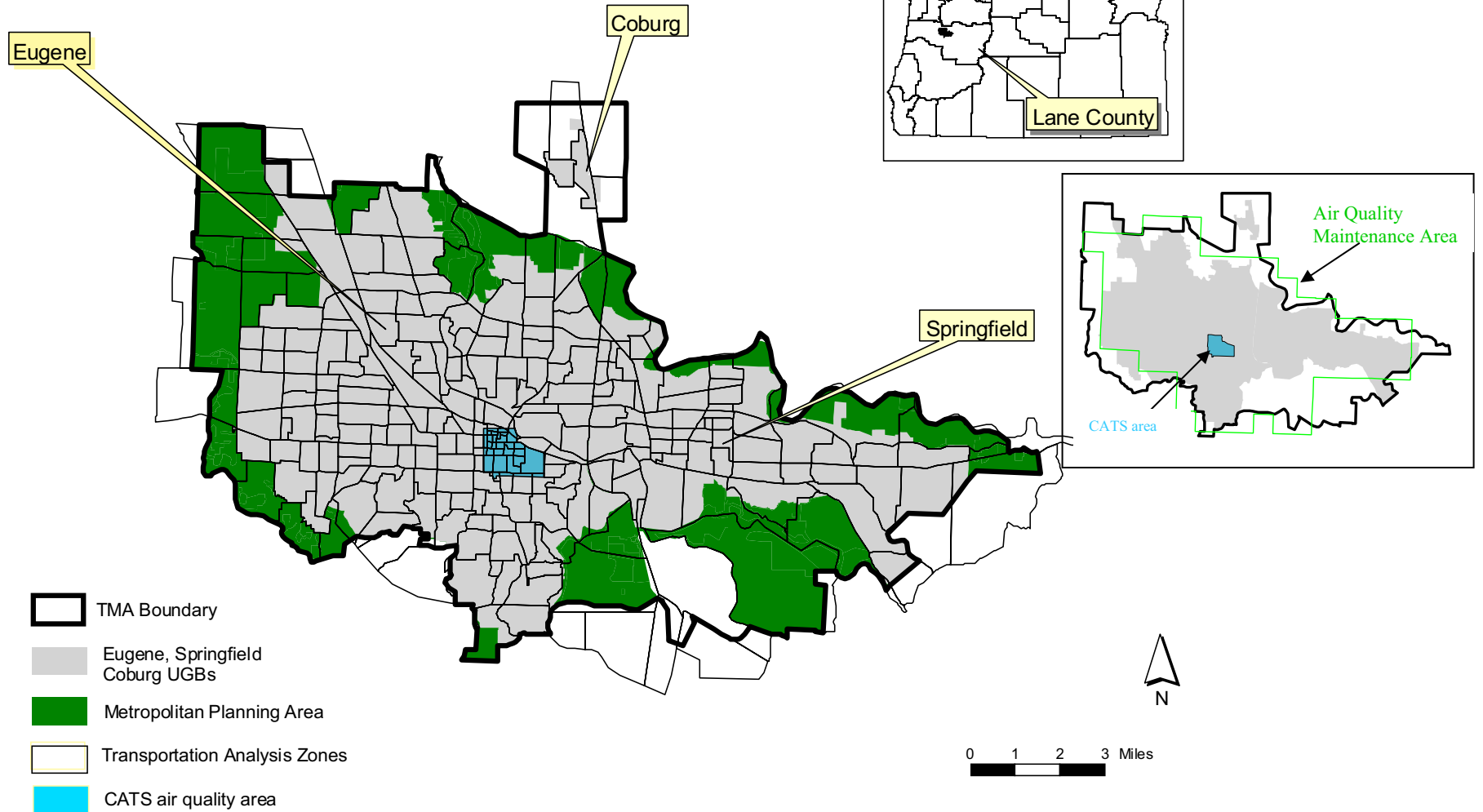
2.1 General Requirements

OAR 340-252-0050 and 40 CFR 93.104: Frequency of Conformity Determinations

This conformity determination conforms the Central Lane MPO FY06-09 MTIP.

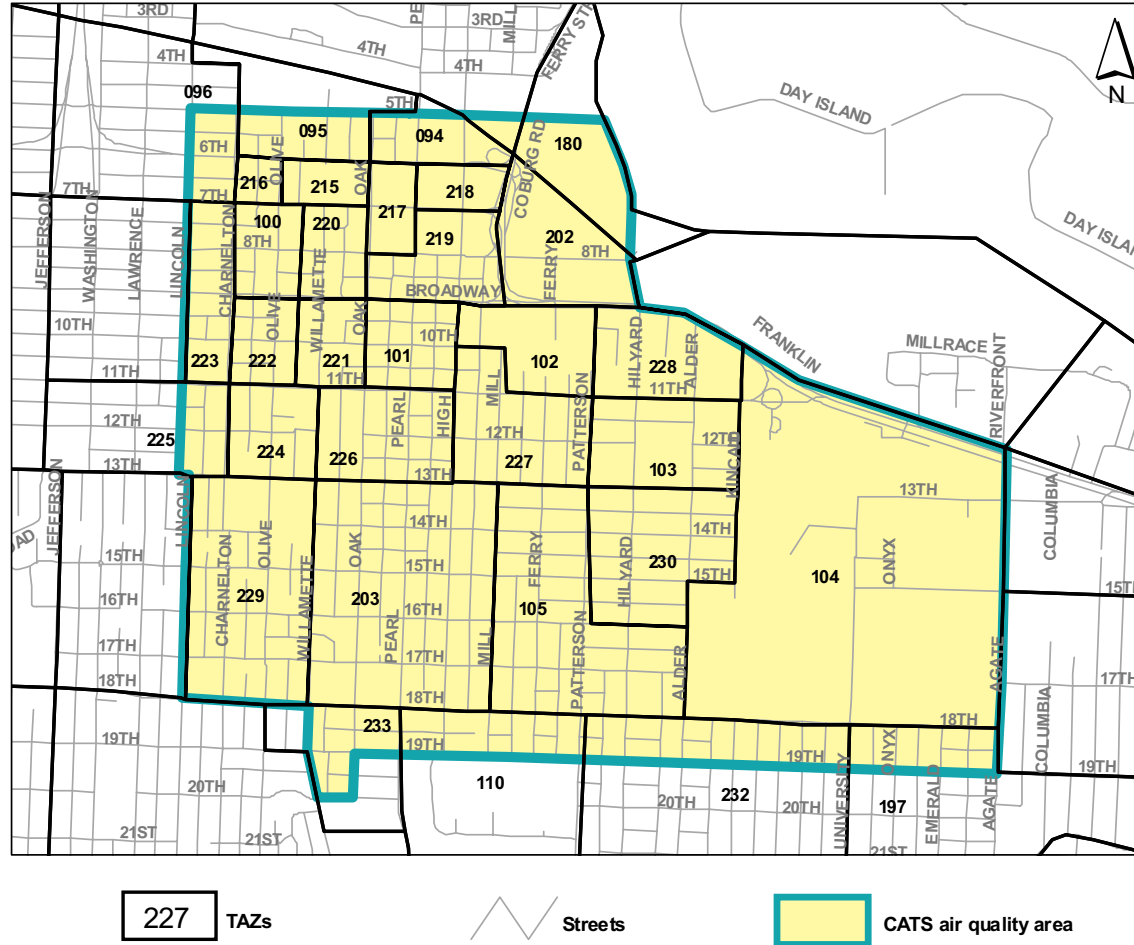
The MTIP must be updated no less frequently than every two years (23 CFR 450.324(b)). The FY05-07 MTIP was conformed by USDOT on March 23, 2005 (see letter in Appendix A).

Map 1. Planning Boundaries



Map 2. Central Area Transportation Study (CATS) Area

as specified in the Carbon Monoxide State Implementation Plan (CO SIP) for Eugene-Springfield
 (Note: see Map 1 for the context of this area in relation to the entire TMA.)



Map 3. FY06-09 MTIP - Programmed Capital Investment Actions
3a: Entire TMA; 3b: CATS Area Detail

MAP KEY		
Jurisdiction	Map Key	Project Name
Eugene	F	Fern Ridge Path Resurfacing
Eugene	198	Courthouse District Transportation Improvements
Eugene	654	Game Farm Road Improvements to Urban Standards
Eugene	254	Glenwood Blvd @ Judkins Point I5 Interchange
Eugene	435	Legacy Extension, Avalon to Royal
Eugene	680	Chad Drive Extension
Eugene	172, 251	Monroe Street/Friendly Street Bikeway
Eugene	M	North Bank Trail Resurfacing
Eugene	K	Garden Way Path Resurfacing
Eugene	499	Airport Rd realignment
Eugene	199	Patterson St. Underpass
Eugene	637	Delta Ponds multiuse path and bridge
Eugene	O	Eugene Train Depot improvements
Springfield	Q	21st Street Preservation and Reconstruction
Springfield	799	126 at 42nd Street Ramp Signal
Springfield	L	Pioneer Parkway Pavement Preservation
Springfield	A	OR126B: Glenwood Blvd to McVay sidewalks and bikelanes
Springfield	954	42nd Street, McKenzie Hwy to Mt Vernon Rd
Springfield	15	69th Street Upgrade to Urban Standards
Springfield	789	Gateway/Beltline
Lane County	66	Jasper Road Extension, 57th to Jasper
Lane County	638	Delta/Beltline Interchange
Lane County	E	Delta Highway pavement preservation
Lane County	454, 485	Greenhill Rd upgrade shoulders, curbs and gutters
Willamalane	21	Middle Fork Willamette River Loop Path
LTD	Blue Line/1115	Bus Rapid Transit Phase 1 - Franklin EmX Corridor
LTD	Orange Line/1115	Bus Rapid Transit Phase 2 - Pioneer Parkway
LTD	Yellow Line/1115	BRT Progressive Corridor Enhancement (River Rd – LCC)
LTD	768	MLK Jr. Parkway – right of way acquisition
ODOT	D	Region 2 Variable Message Signs
ODOT	S	OR99W @ Fairfield and Royal – hazard elimination
ODOT	C	Springfield-Creswell Hwy Safety Project
ODOT	606	I-5 @ Beltline interchange
ODOT	622	Beltline Hwy @ Coburg Road Interchange
ODOT	336	West Eugene Parkway Unit 1 Part A Seneca- Rd to Beltline Highway
ODOT	J	OR99: Barger to Washington/Jefferson, overlay and safety improvements
ODOT	T	I-5: McKenzie R-Goshen Grade Bridge repairs/replacement
ODOT	W	I-5: Willamette River Bridge replacement
ODOT	555	Beltline Hwy: River Rd – Coburg Rd project development

<insert MTIP map>.

Insert MTIP blowup map

Map 4. 2025 RTP Financially Constrained Projects within the CATS area.
Roadway, Transit and Bikeways.

Maps showing the entire TMA area and all financially constrained roadway, transit and bikeway projects from the 2025 RTP can be found in Appendix C

<insert RTP blowup map>

A new MTIP must be demonstrated to conform before it is approved by the MPO or accepted by USDOT. Conformity must be determined no less frequently than every three years.

The new FY06-09 MTIP and its corresponding conformity determination are scheduled to be adopted by MPC on November 10, 2005. Federal action to approve this conformity determination will begin the three year cycle for the required conformity update, and the two year cycle for the MTIP update.

OAR 340-252-0060 and 40 CFR 93.105 : Consultation

Federal, State, and local interagency consultation are required before making conformity determinations; MPO public involvement procedures must also be followed, as specified in 40 CFR 93.105, 40 CFR 93.112, and 23 CFR Part 450.

The Central Lane MPO is the lead agency responsible for making the conformity determination for the MTIP, performing transportation modeling, regional emissions analyses, and preparing and distributing the draft and final documents.

TPC is designated under this regulation as the Standing Committee for the purposes of consultation on air quality. Members include representatives of the local jurisdictions of Eugene, Springfield, and Lane County; Lane Transit District; Lane Regional Air Pollution Authority; Oregon Department of Transportation; and FHWA. This committee currently meets monthly. The meetings are open to the public and are advertised by emails to interested parties, web postings, and media notice. A 30-day comment period is required for review of the draft conformity determination by TPC. In accordance with this requirement, a draft document was provided to TPC on October 4. On October 27, TPC recommended MPC adoption of the MTIP and the conformity determination.

The MPO must also consult with FHWA, FTA, USEPA, LRAPA and ODOT during development of the conformity determination. Two interagency consultations were held. On September 7 the analysis process and parameters to be used in the emissions analysis were discussed. On October 11, the completed analysis and draft conformity document were reviewed.

Common practice of the MPO is to provide the public with at least 30 days for comment on the air quality conformity determination. On October 8, a legal notice was placed in the Register-Guard newspaper announcing the opening of the public comment period, the availability of the preliminary draft documents on the LCOG web-site (<http://www.CentralLaneMPO.org>), and the public hearing on October 20 at the scheduled MPC meeting. A second notice was placed on October 15 to notice the availability of updated information. (See Appendix G). Comments were due by November 7, 2005.

Responses to substantive written comments and verbal comments concerning this conformity determination are provided in Appendix H.

A summary of the relevant public involvement and interagency consultation dates associated with this conformity determination is provided in the Table 1.

Table 1. Summary Schedule of Public Outreach and Consultation

<i>Date</i>	<i>Action</i>
September 15, 2005	MPC reviews TPC and CAC recommendations for FY07-09 STP-U funding of new projects in FY06-09 MTIP
	MPC opens public comment period on STP-U funding recommendations.
October 4, 2005	Draft air quality conformity determination document distributed to TPC, USEPA, USDOT, LRAPA, ODOT
October 8, 2005	Legal notice in Register-Guard announcing public comment period for MTIP and air quality conformity determination
	Draft conformity determination and MTIP documents posted to MPO website for public access
October 11, 2005	Interagency consultation
October 12, 2005	Notice of draft documents availability sent to list of interested parties by email
October 15, 2005	Legal notice in Register-Guard announcing public review period for MTIP and conformity determination and the availability of updated materials
October 20, 2005	MPC holds public hearing on FY07-09 STP-U funding allocations, MTIP and conformity determination
October 27, 2005	TPC approves MTIP and conformity determination
November 2, 2005	CAC reviews MTIP and conformity determination
November 7, 2005	Public comment periods close
November 7-9, 2005	Staff prepare written responses to public comments
November 10, 2005	MPC reviews comments and documents.
	MPC adopts FY06-09 MTIP and air quality conformity determination.
November 17, 2005	Adopting resolutions, final conformity determination and MTIP distributed to TPC, FHWA, FTA, EPA, ODOT, and LRAPA.
December, 2005	USDOT approves conformity determination

As part of the ongoing planning and development of the MTIP, the MPO, USDOT and TPC evaluate proposed MTIP amendments to determine whether a new conformity determination would be triggered by adoption of the amendment.

OAR 340-252-0070 and 40 CFR 93.106: Content of Transportation Plans

Since 1994, the Eugene-Springfield area has been classified as in attainment of CO air quality standards. It has not been the previous practice of the MPO to prepare plans which have multiple intermediate horizon years: the 2025 RTP contains a single horizon year of 2025, the end of the forecast period of the RTP.

The FY06-09 MTIP is consistent with the 2025 RTP.

OAR 340-252-0090 and 40 CFR 93.108: Fiscal Constraint for Transportation Plans and TIPs

Table 2 provides a summary of the 2025 RTP (as amended through October 2005) and FY06-09 MTIP financial analyses and demonstrates financial constraint. Appendices B and C provide tabular listings of all projects included in the FY06-09 MTIP and the financially constrained projects of the 2025 RTP, respectively. All revenue sources listed in the MTIP table are current sources.

Table 2: Financial Constraint Assessment

	2025 RTP (\$Millions)	FY06-09 MTIP (\$)				Total
Description	FY05-26	FY06	FY07	FY08	FY09	FY06 - FY09
Total Revenue	\$2,071-\$2,096	\$125,383,510	\$124,861,811	\$15,740,632	\$97,539,923	\$363,525,876
Total Expenditures	\$2,070	\$125,383,510	\$124,861,811	\$15,740,632	\$97,539,923	\$363,525,876
Difference Between Revenues & Expenditures	\$0	\$0	\$0	\$0	\$0	\$0

Statement of Financial Constraint: Each project included in the financially constrained list of the Central Lane MPO 2025 RTP and programmed in the FY06-09 MTIP has an identified funding source or combination of sources reasonably expected to be available over the planning period. Funds for FY06-07 projects are available or committed.

2.2 Criteria and Procedures for Determining Conformity

OAR 340-252-0100 and 40 CFR 93.109: General

In order to demonstrate conformity of a transportation plan and MTIP, specific criteria listed in OAR 340-252-0110 through 340-252-0190 (40 CFR 93.110 through 93.118) must be addressed. These criteria include using the latest planning assumptions and the latest emissions model, and undertaking interagency consultation and public involvement. Responses to the criteria are listed below. Since the Eugene-Springfield area has been designated by EPA as a CO maintenance area and the CO SIP was

approved by EPA in 1994, the conformity test applied is that of the motor vehicle budget test, OAR 340-252-0190 (equivalently 40 CFR 93.118).

OAR 340-252-0110 and 40 CFR 93.110: Latest Planning Assumptions

The conformity determination must be based upon the most recent planning assumptions in force at the time the conformity determination is made by the MPO and USDOT. Some of these assumptions have been updated since the analysis for the last conformity determination of the 2025 RTP and of the FY05-07 MTIP made in December 2005 – see below.

Key assumptions are based on population and employment forecasts for the 306 transportation analysis zones (TAZs) over which the transportation network is defined (Map 1). The TAZs cover the area within the urban growth boundaries of Eugene, Springfield and Coburg, and a small portion of rural Lane County. Table 3 summarizes the population, employment and estimated vehicle miles traveled (VMT) for the base year of the model, 2002, and the analysis years of 2015 and 2025.

**Table 3: Population and Covered Employment
within TMA Transportation Analysis Zones.**

Estimated Vehicle Miles Traveled (VMT) for the TMA and the CATS area are also shown.

<i>Analysis Year</i>	<i>Population¹</i>	<i>Employment</i>	<i>Daily Vehicle Miles Traveled²</i>	
			<i>TMA</i>	<i>CATS</i>
2002	232,730	117,340	4,660,500	172,500
2015	266,975	139,730	5,825,500	224,000
2025	305,350	159,350	6,662,000	239,000

¹ Includes group quarters; ² All trips including commercial vehicles, through trips, external to internal, internal to external, and internal to internal trips.

Population

This conformity analysis used the 2025 Lane County coordinated population projections for the areas within the urban growth boundaries of Eugene/Springfield and Coburg. These projections were adopted on 24 February 2005 by the coordinating body, Lane Council of Governments Board of Directors. They were prepared using the 2025 county population projection received in May 2004 from the State Office of Economic Analysis, the 2004 county population estimated by the Population Research Center at Portland State University, and for each city, Census2000 data, historic population trends, comprehensive plans and transportation system plans. Based on this projection, the estimated 2025 population is slightly higher from that used in the last conformity determination: 305,350 versus 303,550.

The projections of the population in the rural portions of the TAZs outside the urban growth boundaries were unchanged from those used in the prior conformity

determination. 3940 persons were estimated to live in the rural area in 2002. Due to land use regulations and the very small number of vacant rural residential lots, it was assumed that few new dwelling units could be constructed through 2025, and thus rural population growth would be small. It was estimated that the rural population would increase to 4600 by 2025, accompanying a net increase of about 400 dwelling units.

Overall, the 2025 population estimate increased by 1800 persons above that used in the prior modeling for the 2025 RTP and FY05-07 MTIP. The number of dwelling units increased by 669. The 2015 population projection for this conformity determination was unchanged from the prior conformity determination: there is no adopted coordinated population for 2015, and all assumptions of population growth remained unchanged for the 2002-2015 period.

Employment

The employment projections were unchanged from the prior conformity determination of December 2004. These were based on 2002-2012 county-level, employment sector forecasts received from the Oregon Employment Department in October 2003, and the 1980 to 2002 trend of employment in the Eugene/Springfield market area as a proportion of the Lane County covered employment. The employment growth assumptions from the Coburg Urbanization Study of April 2004 were used for the Coburg UGB. Employment by sector in the rural areas of the TAZs was assumed to be unchanged.

Population and employment allocations were made to transportation analysis zones using the land use allocation model of the 2025 RTP. Allocations reflect existing local development, the availability of vacant, buildable land by current plan designation, redevelopment and infill plans for mixed-use nodes, and known projects currently in the planning process.

For 2015 analysis, employment in each TAZ was linearly interpolated between the numbers for 2002 and the numbers estimated for 2025, with several significant exceptions which are based on major developments currently underway. The PeaceHealth-River Bend hospital development is scheduled for completion by 2008. Associated development in the RiverBend complex is expected to proceed so that, by 2015, 90% of the total increase in employment over the period 2002-2025 in the TAZ containing RiverBend is assumed to occur. Correspondingly, the existing downtown Eugene Sacred Heart Medical Center is assumed to meet its reduced employment level by 2015 (the hospital having moved to RiverBend). By 2015, the McKenzie-Gateway area is assumed to reach 80% of its projected 2002-2025 employment increase due to the development of the Royal Caribbean call center, the expansion of the Symantec call center, and increased employment at Oregon Medical Labs.

Land Use

The adopted 2015 Eugene-Springfield Metropolitan Area General Plan was used to describe land use within the Eugene-Springfield urban growth boundary. Metropolitan housing and employment growth was restricted to within the Eugene-Springfield urban growth boundary. The Coburg Urbanization Study, approved by the Coburg City Council

in April 2004, was used to guide growth in the vicinity of Coburg. Land use designations in these plans were assumed to be in place through 2025.

Eugene and Springfield staff reviewed planned nodal development areas within each city during the development of the 2025 RTP and indicated the subset which are expected to be fully functional by 2025. With the policies of the 2025 RTP, the State Transportation Planning Rule (OAR 660-012-0060(5)(a)) permits the reduction of vehicle trips by 10% in mixed use nodal areas when estimating VMT. However, this assumption was NOT made in the analysis of this conformity determination. Thus, VMT estimated in this conformity analysis will be higher than that expected if all nodes were fully developed by 2025. Map 5 shows existing and planned nodal areas.

Transit

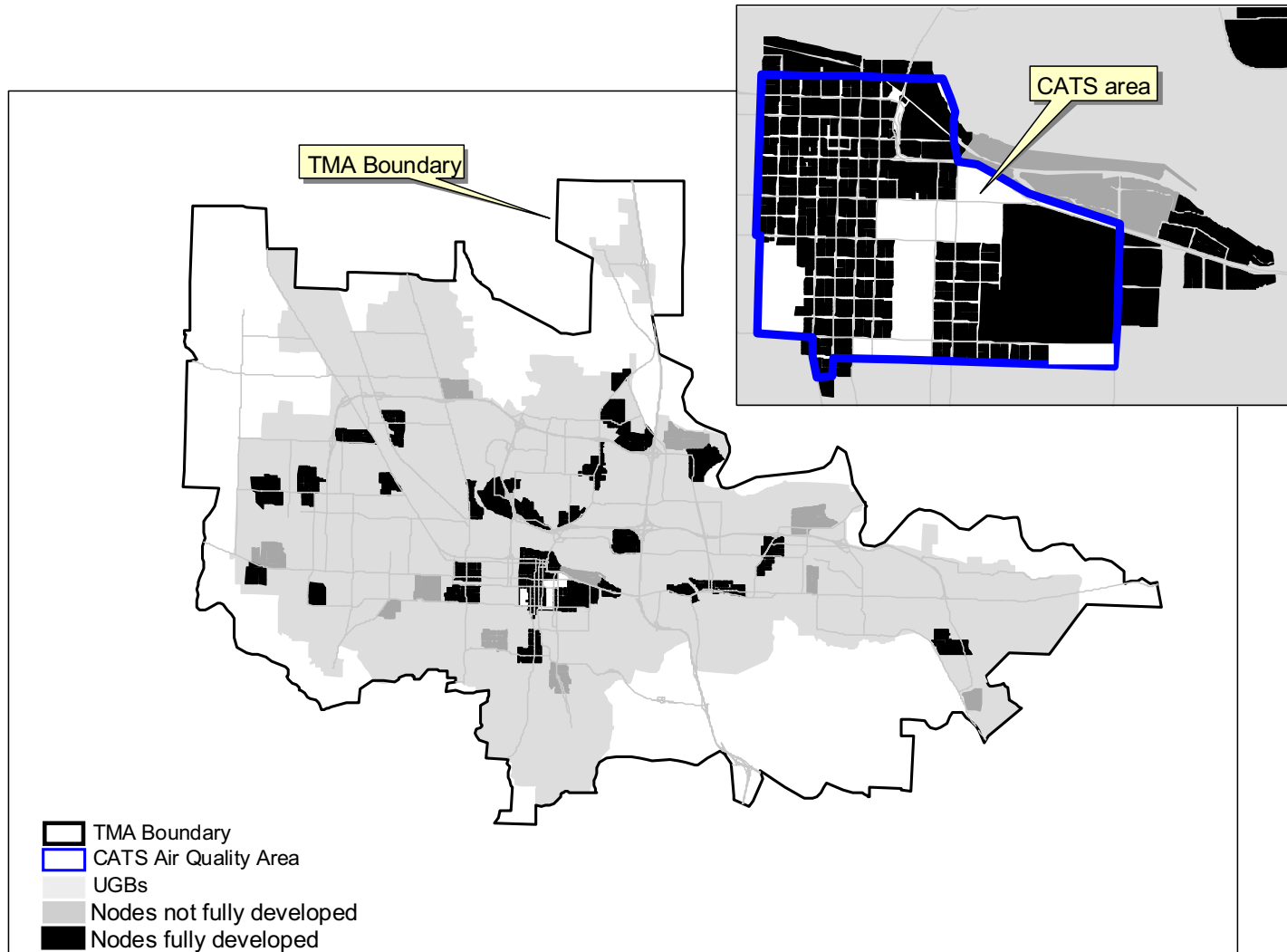
Non-auto travel is estimated by use of a mode choice model. This model, which includes transit assumptions and policies, was recently recalibrated for ridership in the base year of 2002 following an update in the mode choice model transit fare coefficient.

Transit operating policies are assumed to remain unchanged from the prior conformity for the FY05-07 MTIP and 2025 RTP. Transit operations continue with approximately the same service hours. Basic fares are assumed to remain constant with inflation over the period 2002 to 2025 while automobile operating costs, exclusive of fuel costs, are assumed to increase by 33% from 4.5 cents/mi to 6.0 cents/mi (in 1995 dollars). Fuel costs are assumed to rise from 7.5 cents/mi to 10 cents/mile (in 1995 dollars) over the period 2002-2025. Mode choice modeling for 2015 assumes a total auto operating cost of 14 cents/mile (in 1995 dollars). (Note that for a fleet fuel economy of 27 mpg, and using the Consumer Price Index for 1995 through 2002 and an inflation rate of 3.1% thereafter, 10 cents/mile in 1995 dollars translates into a fuel cost of \$6.43 per gallon in 2025.)

Bus Rapid Transit (BRT) Phase 1 is assumed to be operational by late 2006; Phase II is assumed to be operational by 2015. An additional express route from River Rd Park and Ride to PeaceHealth River Bend is assumed by 2015. Portions of the entire BRT system are assumed to be fully developed by 2025 with separate guideways and intersection/signal priority. The remaining parts of the BRT corridors are assumed to have intersection priority treatments by 2025, but buses would otherwise operate in mixed traffic mode. The progressive enhancement of transit services is expected to begin between 2006 and 2015, but the details as to the rate of progress, the location and extent of enhancements are not yet known. Non-BRT buses are assumed to continue to operate in mixed traffic. Dwell time is assumed to be 1 minute/mile on standard bus routes; 0.5 minutes/mile on BRT routes for which stops are not yet located; and 0.3 minutes/stop on the Phase I (Franklin Blvd.) and Phase II (Pioneer Parkway) BRT routes. Also, for BRT, unique transit travel time functions, derived from LTD studies, are used for buses operating with intersection and/or signal priority treatment, and for those operating in separate guideways. Shorter headways than those on most standard bus routes are

Map 5. Nodal Development Areas within the TMA.

Nodes are identified as to whether they are assumed fully functional by 2025.
The inset shows the details in the CATS area.



assumed. No special transfer conditions are assumed for BRT – the average wait is half the combined headway services, as for standard bus service. The same mode specific bias constants are used for BRT as for the standard bus service.

By 2025, all major employers with more than 150 employees in 2002 are assumed to provide group passes to their workers, resulting in a slight reduction in the average fare in travel zones with large employers. (Note that in 2002, employers with a minimum of 10 employees became eligible for enrollment in the LTD Commuter Solutions group pass program, and, as of 2005, 44,000 employees receive group passes). In other zones, fares are assumed to remain constant with inflation. (Cash fare prices are in fact unchanged since FY02 at an adult fare of \$1.25; fare discounts on 3 month passes (estimated at 37%) and some wholesale discount changes became effective July 1, 2004). Perceived parking costs (actual costs adjusted by employer payments) in downtown Eugene are assumed to continue to outstrip inflation based on the observed increase from 1995 to 2004 of 50% above inflation. Parking costs (which vary by TAZ based on the proportion of free spaces to paid spaces) are assumed to undergo an additional 50% increase between 2002 and 2025. The paid-parking area of the downtown / university district is assumed to expand into the adjoining courthouse district.

Transit ridership is forecast to increase from 24,400/average weekday in 2002 to 42,500/day in 2025, an average growth rate of 2.5% per year. Service boundaries are assumed to remain constant and have, in fact, not changed since 2001.

LTD reports that, between July 2001 and June 2004, ridership decreased by 6.2 percent.

This ridership decrease was caused by a reduction in bus service hours of 13 percent since June 2001. Ridership increased by 1.8 percent in FY 2004-05. Bus operations are primarily funded by a payroll tax within the LTD district, and an economic downturn forced the service reduction in 2001-2004. A stabilizing of the economy allowed service to recover in 2004-05 and led to the ridership increase. Bus service hours should be maintained in FY2005-2006 as reflected in the LTD Board adopted 2004-2005 Capital Improvement Program, 2003 Strategic Plan, and Long Range Financial Plan.

LTD's revenues increased by 8.8% in 2004-2005. Fare revenue growth is expected to level out at 4% per year following implementation of BRT phase 1.

These transit policy assumptions are considered reasonable by LTD staff and by FTA.

Tolls

There are no road and bridge tolls in the Eugene-Springfield Metro Area and none are expected in the future.

Transportation Control Measures

No transportation control measures (TCMs) are required by the Eugene-Springfield CO SIP.

OAD 340-252-0120 and 40 CFR 93.111: Latest Emissions Model

The latest emission estimation model available, MOBILE 6 (Version 6.2.03), was used in the computation of CO emission factors. Table 4 shows the parameter values that were discussed and agreed upon during interagency consultations.

Table 4. MOBILE 6 Assigned Parameter Values

Parameter	Value	Source
Pollutants Reported	CO	SIP
Analysis Years	2015, 2025	EPA regulations
Emission Month	January	LRAPA
Time Period	24 hours	
Vehicle Class	MOBILE 6 default fleet mix	
Speeds – freeways, arterials	1 to 65 mph	
Speeds – local roads, ramps	Not/applicable	MOBILE 6 assigns single speed
Min/Max temperatures	33.6/46.2 dgF	LRAPA
Fuel RVP	15	LRAPA
Absolute humidity	26.9 grains/lb	LRAPA

There are no programs for mandated fuel mixes or vehicle inspection/maintenance in this area. LCOG staff used these local values to run MOBILE 6 to compute air quality emissions per VMT by speed range and by facility type. These CO emission factors are listed in Appendix D-1 with sample input and output files shown in Appendices D-2 and D-3, respectively.

OAD 340-252-0130 and 40 CFR 93.112: Consultation

See responses to OAD 340-252-0060 and 40 CFR 93.105.

OAD 340-252-0140 and 40 CFR 93.113: Timely Implementation of TCMs

There are no TCM requirements in the CO SIP.

OAD 340-252-0150 and 40 CFR 93.114: Currently conforming transportation plan and TIP

The current 2025 RTP was conformed on December 13, 2004 (see USDOT letter included in Appendix A). The prior FY05-07 MTIP was conformed on March 23, 2005 (see Appendix A).

OAR 340-252-0160 and 40 CFR 93.115: Projects from a Plan and TIP

The projects included in the FY06-09 MTIP are either included in the 2025 RTP, or, are consistent with the policies and purpose of the plan and will not interfere with other projects specifically within the plan. Appendix B identifies, for each project in the MTIP, the project ID from the RTP or the consistent policy. Typically, MTIP projects *not* in the RTP are pavement rehabilitation/resurfacing projects or exempt planning projects..

As modelable projects in the RTP and the MTIP are developed, the related emissions modeling fully accounts for their scope

OAR 340-252-0190 and 40 CFR 93.118: Motor Vehicle Emissions Budget

Since the Eugene-Springfield area has an approved CO SIP and is currently a maintenance area for CO, the motor vehicle budget test must be satisfied to demonstrate conformity. On May 5, 2004, EPA verbally and by email (see Appendix A) confirmed that the only motor vehicle budget specified in the CO SIP is that of 6,021 tons/yr for 1990. No specific budget was established in the SIP for the last year of the maintenance plan.

Consistency with the emissions budget must be demonstrated for the last year of the transportation plan's forecast period and for any intermediate years as necessary so that the demonstrations of consistency are no more than 10 years apart. Two analysis years were chosen for the conformity determination

- 2015 (an intermediate date to ensure analyses are at least as frequent as 10 years),
- 2025 (the last year of the transportation plan's forecast period)

The entire travel network was analyzed, and emissions computed for travel within the CATS area. All regionally significant projects contained in the RTP and MTIP and all other known regionally significant highway and transit projects expected in the maintenance area were included in the analysis based on the current description of their scope.

The regional emissions analysis meets the requirements of OAR 340-252-0230 (equivalently 40 CFR 93.122), as described below in Section 2.3.

To demonstrate conformity, emissions must be less than or equal to the emissions budget established for the last year of the maintenance plan (no such budget exists in the SIP), and for the years in which a motor vehicle emissions budget is established (1990). Thus, emissions for all analysis years in this conformity determination must be less than or equal to the maintenance plan's budget of 6,021 tons/yr for the CATS area.

Table 5 presents the results of the regional emissions analysis. Projected emissions are shown to be less than 6,021 tons/yr, and thus the FY06-09 MTIP is shown to be consistent with the motor vehicle budget in the CO SIP and to meet the budget test.

**Table 5: Carbon Monoxide Emissions Analysis
within the CATS boundary**

Analysis Year	Tons/Year of Carbon Monoxide	
	SIP motor vehicle budget	Projected Emissions
		All facilities
1990	6,021*	
2002**		2,024
2015		1,052
2025		965

* Federal Register, Vol. 58, No. 232, Page 64163, December 6, 1993.

** Base year; provided for reference only

2.3 Regional Emissions Analysis & Methodology

OAR 340-252-0230 and 40 CFR 93.122: Procedures for Determining Regional Transportation-Related Emissions

VMT estimates

The transportation model is a four-step model of trip generation, trip distribution, mode choice and vehicle assignment. The traffic forecasting software package, EMME/2 (Version 9.5), was used to determine traffic estimates and forecasts for the entire TMA region consistent with the estimated trips within the TAZs for each analysis year. Specific data obtained from the model included speed, volumes and vehicle miles traveled as well as facility types. A link-by-link analysis was carried out. Since roadway capacity and speed are included in the model, the effects of congestion are also included.

The model base year is 2002, the year for which land use data, population and employment data, and traffic counts at the extended cordon stations were all available. See also previous section OAR 340-252-0110.

Transportation Networks

All regionally significant projects expected in the maintenance area were included in the regional analysis as required by the conformity test. These included all FHWA and FTA-funded capital projects proposed in the fiscally constrained transportation plan and the MTIP. The tables in Appendices B and C list the fiscally constrained projects considered in this conformity determination. Maps 3 and 4 show their location within the region. Criteria for projects required to be included in the regional emissions analysis were derived from OAR 340-252-0270 and OAR 340-252-0280 (equivalently, 40 CFR 93.126 and 40 CFR 93.127) (Appendix F).

As a usual and continuing practice, all new facilities and all road projects that affect the capacity or speed of existing facilities are included for the appropriate year in the transportation networks developed and maintained at LCOG. Regionally significant projects outside the CATS area are thus included in this analysis. The 2015 network was comprised of the 2002 network plus road improvements completed or currently underway with completion dates no later than 2015, and all projects from the FY06-09 MTIP which are expected to be in operation by 2015. All roadway and transit projects from the RTP that affected capacity or speed of travel were included in the fiscally constrained 2025 network.

LTD supplied LCOG with future year transit networks for 2025 which included BRT as well as other conventional transit routes. It is assumed that by 2025, five BRT corridors will be fully developed with separate guideways and priority treatment at intersections. The remaining BRT corridors will be partially developed, with intersection priority treatment, but no guideways. Total dwell time in BRT corridors will be less than non-BRT routes due to automated fare collection, boarding through multiple doors, and limited stops. These effects influence travel demand, and are thus included through the mode choice component of the transportation system model.

Off-network roadways within the TMA consist of local roads that are not explicitly included in the transportation network as links. Interzonal travel is included by computation of VMT on centroid connectors. Intrazonal distances used in VMT calculations are assumed to be 7/10ths of the distance to the nearest neighboring zone. All centroid connector and intrazonal travel is assumed to take place on local streets, and thus MOBILE 6 emissions factors for local streets are used in computing the emissions effects of travel on these streets. Through trips and trips having an origin or destination outside the TMA are represented within the model based on a cordon origin and destination survey and a modeled growth rate. Thus, all local and through trips that traverse the CATS area are included in the VMT and emissions summaries.

For each analysis year, travel demand was estimated and trips were distributed across the road network based on land use and transportation changes. The link speeds within the transportation network model reflect travel under congested conditions and are a function of both travel and capacity limitations of the road system for each analysis year.

Total Emissions

In order to compute CO emissions per link MOBILE 6 emissions factors were applied to the estimates of vehicle miles traveled (VMT) by facility type for each analysis year. In addition to local roads explicitly included in the travel network, travel on local roads that are not represented by links in the network was also included through the application of emission factors to interzonal VMT (through centroid connectors), and intrazonal VMT (see “Transportation networks” above). CO emissions on the facilities within the CATS area were then totaled to estimate the CATS area-wide CO emissions in tons/year for each analysis year. The results are listed in Table 5.

Note that since emission factors pertaining to “winter” (January) conditions are applied to VMT over the entire year and the lower emission factors of the summer season are not used, the computed yearly CO load is a conservative estimate.

Credits

No emissions reduction credits are included in the analysis.

Ambient temperatures

The ambient temperatures used for the regional emissions analysis are consistent with those used to establish the emissions budget in the CO SIP.

OAR 340-252-0270 and 40 CFR 93.126: Exempt Projects

Certain air quality projects within the financially constrained plan are exempt from the requirement that a conformity determination be made (see OAR 340-252-0270 and 40 CFR 93.126 Tables 2 and 3, Appendix E). These projects are defined by EPA as projects which will not affect the outcome of any area-wide air quality analysis.

Although these projects are exempt from emissions analysis, the Central Lane MPO system-wide traffic-forecasting model reflects all capital investment projects, including those designated as exempt, to the extent possible (e.g. in approach capacities and link speeds) in the assignment of traffic and calculation of VMT.

Projects designated as exempt from the requirement to determine conformity included planning and technical studies including bike facilities; pedestrian facilities, construction of passenger shelters, purchase of operating equipment, and planning projects which do not lead directly to construction. Interagency consultation clarified that urban standards projects are also exempt based on the implementation of safety improvements, widening narrow pavements (no additional travel lanes), pavement rehabilitation, and landscaping..

The lists of projects in Appendices B and C were reviewed during interagency consultation. Exempt projects are annotated as to the reason for this classification.

OAR 340-252-0280 and 40 CFR 93.127: Projects Exempt from Regional Emissions Analyses

While certain highway and transit projects are exempt from regional emissions analysis requirements (Appendix F), it is LCOG-practice that the system-wide traffic-forecasting model reflect these projects to the extent possible (e.g. in approach capacities and link speeds) in the assignment of traffic and calculation of VMT.

The lists of projects in Appendices B and C were reviewed during interagency consultation. Exempt projects are annotated as to the reason for this classification.

OAR 340-252-0290 and 40 CFR 93.128: Traffic Signal Synchronization Projects

The status of all completed projects has been included in the emissions analysis: signal progressions have been taken into consideration by developing intersection approach capacities on the links. Regionally significant signal synchronization projects operating on a 24 hr basis are located on:

- 6thAvenue/7th Avenue couplet
- Oak St (between 19th and 7th Avenues)
- Main/South A St couplet

During interagency consultation, it was concluded that the BRT Progressive Corridor Enhancement (PCE) Project, which will involve an unknown number (at this time) of transit signal priority treatments, can be treated in the same way as “traffic signal synchronization projects.” Thus, this regional emissions analysis modeling will not anticipate the extent and location of the PCE improvements but their effect must be assessed at the time of the next conformity analysis.

3.0 Summary

As shown above in response to OAR 340-252-0190 (and equivalently, 40 CFR 93.118), the FY06-09 MTIP is shown to be consistent with the motor vehicle budget in the CO SIP and to meet the budget test.

As shown in Figure 1, CO levels in the maintenance area have continued to decline since 1990. In 2004, the CO design value for the AQMA fell to 3.4 ppm. The observed trends in the data and the modeled results thus engender confidence that the policies and projects in the RTP and MTIP will not endanger the achievement of the NAAQS for CO in the Eugene-Springfield maintenance area.

