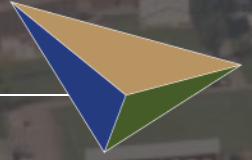
An aerial photograph of a town, likely Windsor, showing a mix of residential and commercial buildings, a large green park area, and a river in the foreground. A road runs through the center of the town. The image is used as a background for the title page.

Appendix B

Air Quality Conformity



Appendix B: Air Quality Conformity

A. Overview

The North Front Range Metropolitan Planning Organization (NFRMPO) is required to conduct an air quality conformity determination on the fiscally constrained 2040 Regional Transportation Plan (RTP) to determine conformance with the State Implementation Plan (SIP) for the following maintenance and nonattainment areas:

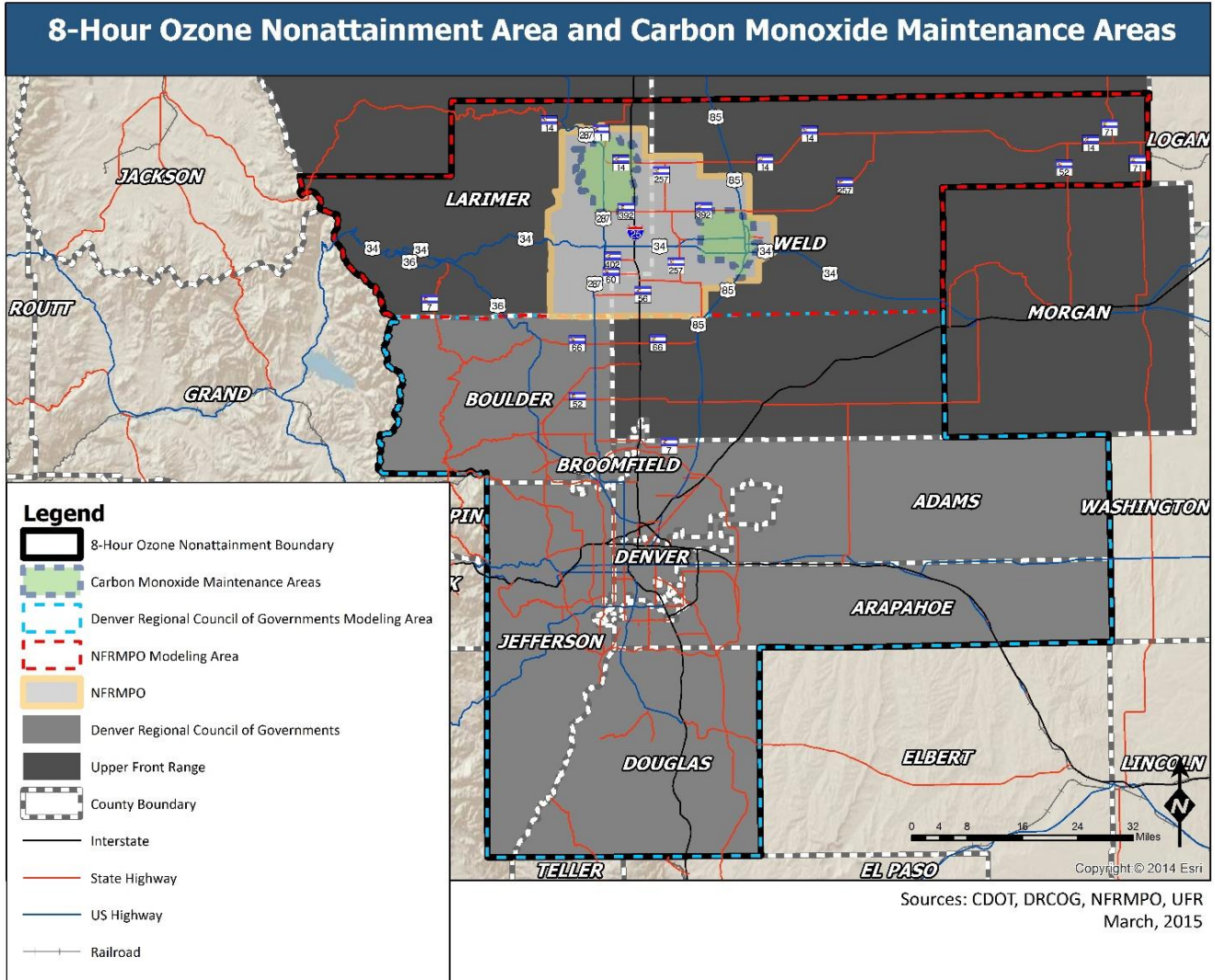
- ▶ Denver-North Front Range (Northern Subarea) 8-Hour Ozone Nonattainment Area;
- ▶ Fort Collins Carbon Monoxide (CO) Maintenance Area; and
- ▶ Greeley CO Maintenance Area.

Conformity determinations are performed through the use of the latest mobile emissions model released by the Environmental Protection Agency (EPA). For this analysis the Motor Vehicle Emissions Simulator 2014 (MOVES2014) was used. The NFRMPO Regional Travel Demand Model provides the necessary inputs of vehicle miles of travel (VMT), travel speed by area type and time of day, and roadway function class.

The Colorado Department of Public Health and Environment (CDPHE) runs MOVES2014 and prepares emissions tables for CO and ozone. The emissions are compared with the allowable motor vehicle emissions budgets to determine if the NFRMPO passes conformity for the two pollutants.

Based on the quantitative conformity analyses, the NFRMPO 2040 RTP demonstrates conformity with the SIP, as described in the next sections for CO and ozone.

Figure B-1: 8-Hour Ozone Nonattainment Area and Carbon Monoxide Maintenance Areas



B. 8-Hour Ozone Conformity

The CO conformity determination for Fort Collins and Greeley can be found in the document entitled: “**Denver-North Front Range (Northern Subarea) 8-Hour Ozone Conformity Determination for the North Front Range Metropolitan Planning Area 2040 Fiscally Constrained Regional Transportation Plan and the FY 2016-2019 Transportation Improvement Program and for the Northern Subarea of the Upper Front Range Transportation Planning Region 2040 Regional Transportation Plan and for the Northern Subarea of the Upper Front Range Transportation Planning Region portion of the Colorado FY 2016-2019 State Transportation Improvement Program,**” adopted on July 9, 2015. The conformity determination document is available on the NFRMPO website at: <http://www.nfrmpo.org/AirQuality.aspx>.

Based on the quantitative conformity analysis, the NFRMPO 2040 RTP demonstrates conformity for the 8-hour ozone standard using the 8-hour ozone emissions budgets for the Northern Subarea.

Table B-1: 8-Hour Ozone Conformity for Denver-North Front Range (Northern Subarea) (Emission Tons per Day)					
	SIP Budgets	2015	2025	2035	2040
Volatile Organic Compounds (VOC)	19.5	9.99	7.08	4.45	4.10
Oxides of Nitrogen (NOx)	20.5	16.95	8.61	4.39	3.89
Pass/Fail		Pass	Pass	Pass	Pass

C. Fort Collins and Greeley Carbon Monoxide Conformity

The CO conformity determination for Fort Collins and Greeley can be found in the document entitled: “**Fort Collins and Greeley Carbon Monoxide Maintenance Areas Conformity Determination for the North Front Range Metropolitan Planning Area 2040 Fiscally Constrained Regional Transportation Plan and FY 2016-2019 Transportation Improvement Program,**” adopted on July 9, 2015. The conformity determination document is available on the NFRMPO website at: <http://www.nfrmpo.org/AirQuality.aspx>

The emissions tests show the budgets for Fort Collins and Greeley from the most current approved SIP (as described in 40 CFR 93.118) for the horizon years and the results of the conformity tests, which passed in all years.

Table B-2: Fort Collins Emissions Test (Tons per Day)						
	SIP Budget	2015	2023	2025	2035	2040
Carbon Monoxide (CO)	94	36.91	31.65	13	28	12.77
Pass/Fail		Pass	Pass	Pass	Pass	Pass

Table B-3: Greeley Emissions Test (Tons per Day)						
	SIP Budget	2015	2019	2025	2035	2040
Carbon Monoxide (CO)	60	22.79	20.24	14.27	9.25	9.32
Pass/Fail		Pass	Pass	Pass	Pass	Pass