

# APPENDIX I

## AIR QUALITY ANALYSIS

Air quality planning for transportation is focused on meeting the National Ambient Air Quality Standards (NAAQS) and deadlines set by the federal Environmental Protection Agency (EPA), and upon the state Department of Ecology (DOE) guidelines for meeting the standards. Specific federal and state air quality conformity requirements come from the integration of requirements in the Clean Air Act Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and are codified in 40 CFR Part 93.

These requirements were also included in MAP-21, and Washington State's Clean Air Act (RCW 70.94 & WAC 173-420-110). The requirements include:

- **Frequency of Conformity Determinations (40 CFR 93.104)**

YVCOG is responsible for completing the metropolitan transportation plan (MTP), and the metropolitan transportation improvement program (MTIP) for the Greater Yakima metropolitan area. Transportation plans and transportation improvement programs must be demonstrated to meet air quality standards at least every four years – or at any time when changes are proposed.

- **Latest Planning Assumptions (40 CFR 93.110)**

Nonattainment and maintenance areas must use the most recent planning assumptions in force at the time of the determination when making their conformity determination.

- **Interagency Consultation (40 CFR 93.105, 40 CFR 93.112)**

Under the approved limited maintenance plans (LMPs) for CO and PM<sub>10</sub> there are no motor vehicle emissions budgets. Therefore a regional emissions analysis is not required. The Environmental Protection Agency (EPA) assumes that VMT growth is not expected to create a violation of NAAQS. However, a conformity determination is still required via the interagency consultation process.

Transportation conformity rules require that YVCOG must demonstrate via the interagency consultation process that the projects included in the transportation plan and the transportation improvement program successfully demonstrate that either singly or taken together, they will not cause the region's air quality to deteriorate nor will they cause or contribute to any new violation of the federal air quality standards for CO or PM<sub>10</sub>.

- **Public Review and Comment (Section 5303(J)(4) of MAP-21)**

A public comment period must be provided prior to taking formal action and reasonable access to technical and policy information must be provided at the beginning of the public comment period.

### **YAKIMA VALLEY AND AIR QUALITY CONFORMITY: DISCUSSION**

The Environmental Protection Agency (EPA) re-designated both the Yakima carbon monoxide (CO) nonattainment area and the PM<sub>10</sub> nonattainment area to "attainment" for the National Ambient Air Quality Standards (NAAQS) and approved a limited maintenance plan (LMP) effective December 31, 2002 for CO and March 10, 2005 for PM<sub>10</sub>. Additionally, on March 9, 2005 an EPA approved boundary change to the PM<sub>10</sub> maintenance area to exclude lands belonging to the Confederated Tribes and Bands of the Yakama Nation went into effect.

Having an approved limited maintenance plan is a recognition that air quality has improved and the probability of future violations of the NAAQS is very low. Under limited maintenance plans, the motor vehicle emissions may be treated as essentially non-constraining because growth would need to exceed reasonable expectations to create a potential violation of the air quality standards for either PM<sub>10</sub> or CO. Under the limited maintenance plans, a region-wide emissions analysis is not required.

### Interagency Consultation and Conformity Determination Process

Conformity guidelines do not define how to make conformity determinations for every situation. It is up to each consultation team to arrive at consensus as how to best demonstrate conformity in a particular maintenance area. Because there are no motor vehicle emissions budgets in either the CO or PM<sub>10</sub> Limited Maintenance Plans (LMPs), the YVCOG, in consultation with WSDOT, FHWA, FTA, EPA, and the DOE, determined that reporting VMTs and annual growth rate is sufficient to demonstrate conformity for the Yakima Valley Metropolitan Transportation Improvement Program (MTIP). In order to reach this agreement, several assumptions were made:

- Population growth will follow historical trends,
- Land use changes within the maintenance areas will likewise follow historical trends, and
- The updated metropolitan model describes the most current land use and traffic network data available.

Neither the PM<sub>10</sub> nor CO LMPs contain transportation conformity emission budgets or maximum VMT growth rates that require regulatory action. This is because the EPA policy for limited maintenance plans does not require out-year emission inventories or transportation conformity budgets for transportation improvement programs.

Working with the DOE in the summer of 2008, YVCOG adopted a common sense approach in analyzing the VMTs that are extracted from the metropolitan area travel demand model. If the growth in VMTs is shown to exceed 2 percent per year, further analysis is needed through the interagency consultation process to determine the cause(s) and how to demonstrate conformity. A growth rate higher than 2 percent per year indicates extraordinarily large increases in population, vehicles and traffic, and the air quality impacts of these significant changes need to be studied more closely. The 2 percent annual VMT growth rate matches the VMT growth assumptions made in the approved PM<sub>10</sub> LMP.

Under the current limited maintenance plans, individual transportation projects may be required to undergo air quality conformity analysis in order to obtain project approval. Project level analysis will continue to be performed by the project sponsor in accordance with state and federal requirements and methodologies.

### Planning Assumptions

Assumptions about land use, including the location of jobs, housing and the demographic characteristics, are key elements in making the transportation air quality conformity determination. Using 2016 data as a base year and updated VISUM 14.0 land use inputs, the forecast year 2040 was analyzed for the 2016-2040 M/RTP.

### Public Review

The YVCOG made the announcement of the availability of viewing the M/RTP at several physical locations as part of the M/RTP public review process. The announcement was made in English and Spanish in the upper and lower Yakima Valley. The M/RTP was also made available on the YVCOG website.

YVCOG emailed electronic DRAFT copies of the M/RTP document and accompanying air quality conformity determination to those on the interagency consultation and all others requesting it. Additionally, YVCOG staff was available throughout the public comment period to answer questions.

Any comments received on the air quality conformity determination will be recorded. The MPO/RTPO Policy Board will consider the 2016-2040 air quality conformity determination for adoption on March 21, 2016.

## **THE METROPOLITAN TRANSPORTATION MODEL UPDATE**

In 2016 YVCOG is updating its transportation model for purposes of the. The model software is being updated to VISUM 15.0 with a new base year with updated land use and traffic volumes. The updated model will maintain consistency with the previous model as it employs the same underlying assumptions, the same gravity equations, and continues to simulate PM peak hour traffic. The anticipated enhancements include more stratified input data and inclusion of transit systems.

The VISUM platform allows YVCOG to continue to track vehicle miles of travel (VMT) based on updated information. This feature is particularly important since through the intergovernmental consultation process with WSDOT, FHWA, FTA, EPA, and the DOE it was determined that reporting VMTs and stating their annual growth rate is sufficient to demonstrate conformity for the Yakima Valley M/RTP.

## FINDINGS

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- The ADVMT conformity analysis did not change from the last update of the 2015-2018 MTIP performed last year. The YVCOG finds the following annual ADVMT growth rates in Table 11 below:

**Table 11: Percent Annual Growth Rate**

Period	Annual ADVMT Growth Rate
2016-2019	1.15%
2020-2040	1.1%

- YVCOG finds that the annual ADVMT growth rates are within the ranges described in the *Yakima PM<sub>10</sub> Nonattainment Area Limited Maintenance Plan* and the *Yakima CO Nonattainment Area Limited Maintenance Plan*.
- Therefore, the YVCOG finds that the projects included in the 2016-2040 M/RTP, singly or together, will not cause or contribute to any new violation of the federal air quality standards for CO or PM<sub>10</sub>.

## STATEMENT OF CONFORMITY

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The 2016-2040 Yakima Valley Metropolitan and Regional Transportation Plan (M/RTP) achieves and maintains the NAAQS as required by the Clean Air Act Amendments of 1990, meets the requirements set forth in WAC 173-420, and the current Yakima limited maintenance plans for both CO and PM<sub>10</sub>.