Dover/Kent County MPO Air Quality Conformity Analysis

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April 16, 2019 MPO TAC Meeting
May 1, 2019 MPO Council Meeting

SLIDE 1

This presentation provides a summary of Air Quality Conformity Analysis recently completed in support of three Transportation Improvement Projects listed in our FY20 TIP.

Air Conformity (what has occurred)

- 2017 D/KC MPO Metropolitan Transportation Plan (MTP)
  - 13 Regionally Significant and Exempt Projects
  - 3 Regionally Significant and Not Exempt Projects
- South Coast Air Quality Management District versus the EPA
- FHWA Interim Guidance on Air Conformity
- D/KC MPO Air Quality Conformity Analysis Report

SLIDE 2

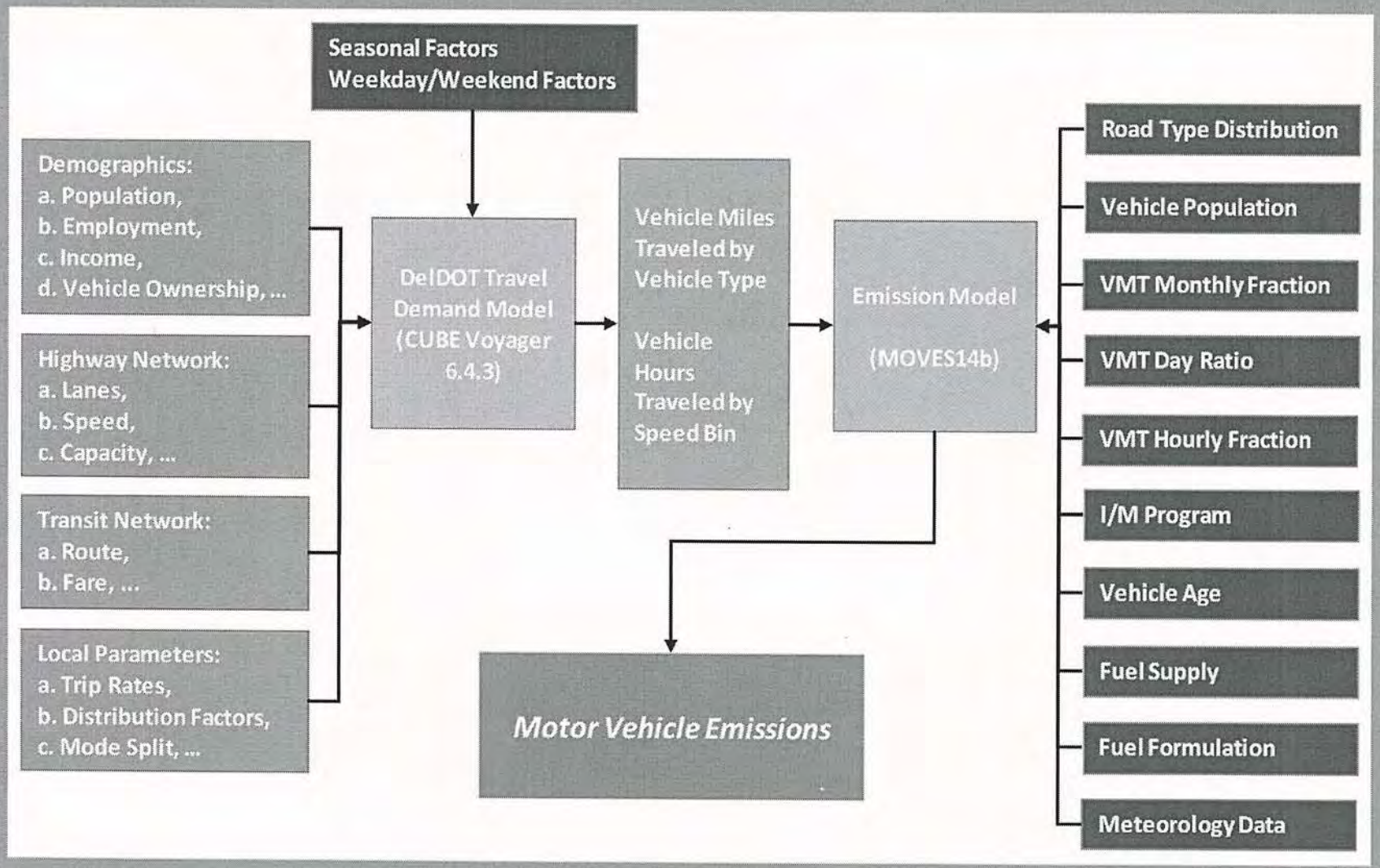
First point is that the 1990 Federal Clean Air Act requires MPOs to address air conformity within their Long Range Transportation Plans or MTP's for air quality non-attainment areas. Kent County, Delaware is part of the Philadelphia-Wilmington-Trenton non-attainment area for Ozone and was considered non-attainment under the 1997 standards but in-attainment under the 2008 standards. A "conformity determination" is a demonstration that an MPO's plans, programs, and projects are consistent with the State Implementation Plan (SIP) for attaining federal air quality standards (regarding Ozone in our case). The SIP is developed by DNREC and provides Delaware's air quality budget (air emission control measures) for the region. MTP's list proposed projects over a 20 year time frame which are categorized as being "regionally significant" (such as access to and from the area outside the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, or employment centers; or transportation terminals) and regionally significant projects considered to be "exempt" from air conformity (as defined in 40 CFR section 93.126- safety, mass transit, etc....). However, the MPOs must address how "non-exempt" regionally significant projects conform to the CAA. As such, our most recent MTP was adopted in January 2017 concluded among other things that we were considered to be "in-attainment" with CAA standards regarding Ozone.

Second point is that in February 2018 a US Court of Appeals issued a decision from a law suit filed by the South Coast Air Quality Management District against the EPA regarding the EPA's rule implementing the 2008 ozone (which was the standard used in determining our being "in-attainment"). Basically, reverting back to the 1997 Ozone standards which impacted 82 identified MPO areas (now known as orphan areas) and the D/KC MPO is part of these 82 areas due to our being considered not in attainment with the 1997 Ozone standards.

Third point is that on April 23, 2018 and again on October 1, 2018 the Federal Highway Administration (FHWA) issued Interim Guidance on Conformity requirements for the 1997 Ozone National Ambient Air Quality Standards (NAAQS). The most recent October 2018 guidance, "strongly encourages all impacted areas to make every effort to complete their 1997 ozone conformity determinations as soon as possible to prevent delays of transportation plans, programs, and non-exempt projects." Furthermore, conformity determinations for the 19967 Ozone NAAQS will be required on plan, TIP and project actions after February 15, 2019.

Lastly, to meet the FHWA Interim Guidance the MPO contracted with WRA to conduct air conformity determination on three Regionally Significant Non-Exempt projects listed in our current TIP and within the STIP (US Route 13 Widening Phase 1; US Route 13 Widening Phase 2; and US Route 13 Connector Road (Scarborough Road to Leipsic Road)). This way the three projects will comply with the Interim Guidance and continue to be funded while the EPA works on final implementation rules addressing the 1997 and 2008 Ozone Standards.

Air Quality Modeling Process (how it works)



SLIDE 3

This flowchart presents an overview of the process used to generate travel model and emission model data for the D/KC MPO conformity analysis.

The consultant (WRA) used a modeling process that integrates the DelDOT's travel demand model and the EPA's Motor Vehicle Emission Simulator (MOVES) model as applied to the emission estimating in Kent County. The travel model software, CUBE Voyager, was arranged by DelDOT staff with consultant assistance to include the DNREC "MOVES inventory method" for estimating mobile source emissions in Kent County. That process was incorporated, step-by-step, into the CUBE Voyager software so that conformity analysis process is based directly on the DNREC application of the MOVES inventory method. A series of quality-control checks were performed by DelDOT and the consulting firm staff ensuring the CUBE-model generated emissions data accurately replicated the DNREC spreadsheet method. Along with updated social-economic data and other travel behavior parameters, the regionally significant projects were coded to the network and input into the travel demand model to generate the VMT and speed distribution. Adjustment factors are then used to account for seasonal traffic variations and alignment of Delaware-based VMT estimates with the federally-required Highway Performance Management System (HPMS). The 2015 HPMS data are used to standardize the Delaware specific VMT data as required by the EPA so that direct comparisons can be made among different years and modeling scenarios.

The vehicle characteristics data was generated by DNREC based on the 2017 DelDOT DMV vehicle registration data. The fuel formulation and supply data that has been assigned to Kent County, Delaware by the EPA in the MOVES model was used in this analysis. The 2017 temperature data from the National Centers for Environmental Information from Dover Air Force Base was used for meteorological input. The model post-processor takes data produced by CUBE Voyager model output for Kent County and adjusts it for input into the MOVES mobile emissions process noted above. This process links the estimated roadway speeds and volumes generated by the travel demand model with emission trends derived from MOVES. The product of this process presented in this document is countywide emission estimates. Bottom line: The results of Air Quality modeling on the three Regionally Significant and Not Exempt Projects <u>demonstrates conformity</u> with the 1997 NAAQS for Ozone.

Recommendation

- MPO staff **recommend** the PAC and TAC:

  Recommend the MPO Council accept the D/KC MPO Air Quality Conformity Analysis Report which supports the D/KC MPO FY 20-23 Transportation Implementation Plan (TIP)

SLIDE 4

The results of the D/KC MPO Air Quality Conformity Analysis completed on the three identified regionally significant non-exempt projects listed in our TIP and the STIP DEMONSTRATE Conformity.

As such, the MPO staff recommends both PAC and TAC recommend to the MPO Council to accept the D/KC MPO Air Quality Conformity Analysis Report completed by WRA and coordinated with DNREC, DelDOT, and the Delaware Transportation Conformity Interagency Consultation Working Group.

Air Conformity Program

- The D/KC MPO area non-attainment for Ozone until further notice.
- The results of this study supports our FY20-23 TIP.
- Questions

SLIDE 5

In closing, until the EPA and Federal Courts make a final decision, we are considered to be in non-attainment with the 1997 Ozone standards. As such, we will continue to adhere to the three main points within the 2018 FHWA Interim Guidance. If no additional guidance is received, we will have to perform Air Quality Determination again when we update our MTP (beginning January 2020).

The results of our Air Quality Conformity Analysis support our FY20-23 TIP which Jim Galvin will describe to you all tonight under our second "Action Item".

That concludes my presentation, are there any questions?