

NASTO Air Quality Committee
Memorandum of Record
April 11, 2011
Meeting Held at Offices of the
Delaware Valley Regional Planning Commission

Meeting Attendees:

Michael Baker, PennDOT	Maurice Keyes, DDOT
Michael Boyer, DVRPVC	Elisabeth Kolb, NYSDOT (P)
Cindy Burbank, Parsons Brinkerhoff	Martin Kotsch, US EPA Reg. 3
Gina Campoli, VTrans (P)	Bob Kaiser, Michael Baker Jr., Inc.
Austina Casey, DDOT	Jim Ponticello, VDOT
Jamie DeRose, NJDOT	Gail McFadden-Roberts, FTA Region 3
Bob Gaff, DVRPC	Dan Szekeres, Michael Baker Jr., Inc.
Sean Greene, DVRPC	Howard Simons, MDOT
Jackie Koons-Felion, PennDOT	Dan Szekeres, Michael Baker Jr., Inc.
Shengxin Jin, NYSDOT (P)	

(P) = linked by teleconference

Meeting Summary:

I. Welcome and Introductions

Mike Baker, Chair, called the meeting to order at 9:35 A.M., welcomed members and guests, and thanked DVRPC for hosting the meeting. Each attendee introduced themselves.

II. Two Minute State Reports

Chairman Baker asked each state/province to briefly report on key issues and developments. A summary follows:

Delaware

Mike DuRoss provided a summary via email to the Chairman. It included:

- PM_{2.5} redesignation for New Castle County, possible redesignation to attainment / maintenance.
- PM_{2.5} new budget using MOVES for New Castle County, submitted to EPA.
- Still working to fully understand the MOVES model and emission impacts under various scenarios. MOVES is fully integrated with our travel model for PM and ozone; still working on getting GHG process set up.
- Awaiting MOVES2013 and possible conformity grace period.
- Monitoring Kent County status. It is one of the counties subject to EPA's proposed Phase I implementation rule to withdraw the 1997 8-hour ozone standard for transportation conformity purposes 1 year following final designations for the 2008 8-

- hr ozone standard. Kent County is one of the areas which have attained the 1997 NAAQS and is in attainment of the 2008 ozone NAAQS would therefore would no longer be subject to ozone conformity requirements.
- Just received 2010 Census urbanized area boundaries and urban clusters. No major changes for New Castle (northernmost) County, but Kent & Sussex urbanized population proportions are much different than 2000 Census. Awaiting possible changes to conformity process for Sussex County due to increases urbanized area population and new urban boundaries.

District of Columbia

Austina Casey reported the following:

- Capital Bikeshare Program
 - Expanded to 1200 bikes and 140 stations from 10 bikes and 10 stations. Now has 17,000 members and has provided over 1 million rides. Originally established in September 1988.
 - National Park Service allowed 2 stations on the National Mall, March 2012.
 - Bank On DC Partnership Program (with DC United Bank) allows low income residents to participate.
- Climate Action Plan
 - Released September 2011. Focus is on government operations to focus on specific actions of agencies to reduce GHG from 2006 baseline.
 - Inventory to be updated in 2012. Targets (from 2006 baseline) are 20% reduction by 2012, 30% reduction by 2020, and 80% reduction by 2050.
- Sustainable DC
 - Announced and launched July 2011 by Mayor Gray. Goal is to make DC the greenest, healthiest and most walkable city in USA.
 - Draws on expertise of residents, local businesses and institutions, as well as local and federal government, to develop plans, ideas and implementation.
 - Seeks community input in 9 areas (built environment, climate, energy, food, nature, transportation, water, waste, green economy).
- DDOT Climate Change Adaptation Plan
 - Focus on DDOT's operations, activities and projects. Includes buildings, fleets, commutes and projects/activities.
 - Initial draft plan due in Spring 2012.
- Engine Anti-Idling Law and Compliance Campaign.
 - In cooperation with MD and VA. No idling signs erected.
 - Targets gasoline and diesel powered motor vehicles.
 - In DC, cannot idle for > 3 minutes while parked, stopped or standing in a public space. Fine: \$1,000.
 - Includes driver Recognition Program for good behavior.
- DC Streetcar
 - Commence operations soon on H-Street / Benning Road line.
 - NEPA study in process for Anacostia line.
 - Union Station -- Washington Circle line in alternatives analysis phase.
- DC region achieved clean data status for the 1997 PM_{2.5} NAAQS. Preparing

redesignation request and maintenance plan.

Maryland

Howard Simons reported on a variety of efforts, including:

- Maryland Department of Environment (MDE) is proposing to create GHG reduction targets by MPO or region, similar to CA HB 375.
 - Targets would be beyond those reductions generated by criteria pollutant and other GHG reduction efforts, and require that the MPO report progress toward these targets.
 - The report would be similar to the analysis performed for federal regional transportation conformity, and also tied to TIP and long range plan approval process through a change in Maryland's conformity regulations.
- 2008 Ozone NAAQS
 - Baltimore is one of the 6 worst areas for ozone pollution in US, and is anticipated to be classified as a moderate nonattainment area under the 2008 ozone NAAQS.
 - Other areas (Washington DC area, Cecil County) are anticipated to be classified as marginal under this NAAQS.
 - NO_x is the main concern, including transport from upwind sources (several states and adjacent nonattainment areas).
- GHG Report
 - Several year effort by MDOT and other agencies, led by MDE, to identify and quantify strategies to reduce state GHG 25% below 2006 levels by 2020. Approximately 32% of base year emissions are attributed to transportation.
 - Examined projects in TIP and LRP which are financially viable, and considered existing and proposed federal regulations, and Transportation Emissions Reduction Measures (TERMs).
 - The above measures would achieve 14.3 MMtCO₂e, versus goal of 18 MMtCO₂e.
 - Approximately \$3.7 billion additional funds, unidentified, would be necessary to achieve the additional 2.7 MMtCO₂e to achieve the target by 2020. However, if this expenditure was not made, the target would be reached in 2025.
- Carbon Neutral Corridor
 - Study of corridor along US 40, north of Baltimore beltway, approximately 12 miles long and 10 miles wide, paralleling I-95.
 - Examined all sectors for potential GHG reductions. 2006 start year emissions estimated at 4.24 MMtCO₂e.
 - Estimated 2035 business as usual emissions 4.86 MMtCO₂e.
 - Action scenario accounted for TERMS, smart growth, energy efficient designs, alternative power sources (solar, wind, geothermal), pilot industrial sector energy consumption efficiencies, and new federal standards.
 - 2035 action scenario yielded a 43% reduction from 2035 business as usual scenario (2.41 MMtCO₂e).
- Electric Vehicle Charging Stations
 - Study commenced February 2012. Committee comprised of state elected officials, air agency, utility companies in response to legislative request (SB 176).
 - Law requires an interim report (Dec. 2011); final report in December 2012.

- Actions include:
 - Develop action plan to integrate EVs into state transportation network.
 - Develop statewide standards for EV chargers/charging stations.
 - Increase consumer awareness of EV programs and charging stations.
 - Examine how to install EV chargers at multi-unit dwellings.
 - Pricing.
 - Signage.
- Studied, recommended and had legislation passed (2012) that exempts EV chargers, owners and operators from Public Service Commission regulation. (CA and Md only two states known with legislation of this type).
- Bike Share Program
 - \$2 million from CMAQ funds allocated to purchase bikes and establish parking locations. First hour of bike use is free, billing after that in ½ hour increments.
- Bikeways
 - \$2.5 million allocated to study and expand bikeways statewide.

New Jersey

Jamie DeRose reported the following:

- DVRPC will be the only NJ MPO performing a conformity analysis this cycle, as the other 2 MPOs do not have new, changed, or rescheduled regionally significant, non-exempt projects. DVRPC will use MOBILE for this analysis.
- NJDOT, NJDEP and MPOs are working to finalize all updated input files and modeling protocols, and create PM_{2.5} SIPs with MOVES.
- NJDOT will use CMAQ funds to retrofit NJDOT diesel equipment.
- A life-cycle carbon footprint tool is under development. Phase I is completed, Phase II has commenced, and includes a maintenance manual.
- FHWA's Climate Change Vulnerability and Risk Assessment Model is being exercised by NJDOT, NJDEP, NJTransit and MPOs.
 - Data can be inadequate (example, elevation data for transportation infrastructure).
 - NJTPA has started a mitigation plan.
 - NJDOT has a mitigation and adaptation plan pending, with a goal of accomplishing a statewide risk assessment and adaptation plan.
- NJDOT continues to participate in the TCI's activities.

New York

Jin Shengixin reported on the following items:

- Conformity cycle has started; MPOs using MOBILE.
- NYMTC is completing its new post-processor for MOVES. It will be presented to the ICG on May 3rd.
- CMAQ database, called "CMAQ Track", is currently based on MOBILE and will be updated to MOVES.
- NYSDOT staff need MOVES training, particularly regarding project level analyses. Travel restrictions limited NYSDOT from attending prior EPA/FHWA training sessions.

- Clean Air NY Program continues into its 5th year. It is merging with the 511 program to better distribute information and reach additional users.

Elisabeth Kolb reported on the following items:

- New UZA boundaries added Watertown, NY as a metropolitan area with a population >50K.
- The NY State 2013 Energy Plan is being developed and a final plan will be released by first quarter of 2013. Transportation is a major energy consumer and therefore of particular interest. This plan is on a 4 year cycle.
- Climate Change Issues
 - The NYS Climate Action Plan calls for 80% reduction in GHG emissions by 2050, from a 1990 base year.
 - Freight efficiency remains a major focus.
 - NYSDOT is participating in the Eco Driving website with the I-95 Corridor Coalition.
 - A recent study released by NRDC report on climate change adaptation progress named NY as a leading state, but there remains much work to be done.
 - NYSDOT is seeking to integrate climate change adaptation considerations into its decision processes. NYSDOT is part of a NYS interagency effort to collaborate on adaptation action including developing guidance for adaptation to sea level rise, coastal hazards and riverine flooding.

Adaptation research projects include a NYSERDA led study to model projected % increase of rainfall intensity in multiple climate regions in NYS to calculate projected design flows for culverts and bridges.

- New UZA boundaries add Watertown, NY to the NYC metropolitan area.
- NY State energy plan is being updated by first quarter of 2013. Transportation is a major energy consumer and therefore of particular interest. This plan is on a 4 year update cycle.
- Climate Change Issues
 - The NYS Climate Change Plan calls for 80% reduction in GHG emissions by 2050, from a 1990 base year.
 - Freight efficiency remains a major focus.
 - NYSDOT is participating in the Eco Driving website with the I-95 Corridor Coalition.
 - A recent study by NAS on climate change adaptation progress named NY as a leading state, but there remains much work to be done.
 - NYSDOT is integrating climate change into the decision processes for adaptation, mitigation, and all state agencies. This includes assumptions and inputs, criteria, action plans, etc.
 - Research projects include a study of rain intensity impacts on transportation infrastructure.

Pennsylvania

Mike Baker reported on PA activities, including:

- Conformity of FY 2013 Program
 - Biennial update of Twelve Year Plan (required by Act 120) in progress. Involves 19 nonattainment/maintenance areas (ozone/PM_{2.5}), but in many areas there are no new, changed or rescheduled AQ significant projects. Consequently, will likely have to re-conform about half of TIPs/LRPs.
 - Using MOBILE6.2 for this round.
- PAQ-ONE Off-model tool being updated
 - New project types and revised methodologies per DOT and MPO input.
 - MOVES integrated into tool. Implement by end of summer.
- MOVES
 - Had planned on using MOVES for this round of conformity, but due to 1-year extension and revised emissions budgets not being ready, stayed with MOBILE6.2.
 - Did not want to try to conform budgets developed with MOBILE to MOVES conformity runs – many areas would have failed (NO_x portion of ozone budgets; there are currently no PM_{2.5} MVEBs).
 - MOVES fully operational. Ozone budget replacements for 23 MVEBs now in state review process. Requires EPA approval prior to use for conformity.
- PM_{2.5} Maintenance Plans
 - New SIPs with MOVES emissions budgets being established now for all 9 nonattainment areas (11 separate MVEBs).
 - Most likely to be submitted to EPA later this Spring/Summer, however, not ready for this round of conformity
- Climate Change/GHG
 - Limited activity in last year.
 - Major cut backs in PaDEP energy section.
 - Climate Change Action Plan (required by Legislature) scheduled to be updated this year. PennDOT is an active participant in Transportation-Land Use Subcommittee.
- Vehicle Fuels
 - Researching when Stage II vapor controls no longer necessary, as on-board refueling technologies penetrate the fleet.
 - Researching impact of higher ethanol content in gasoline, partly as a result of increasing ethanol content in state, and partly due to recent EPA rule allowing up to 15% ethanol content in fuels for newer vehicles. Higher ethanol content raises RVP and therefore at least VOC emissions, which may impact maintenance plans and other out-year analyses.

Legislative Activities

- Inspection/Maintenance - Bill was introduced to discontinue all aspects of the I/M program. Cited reason was that newer cars are cleaner and OBD. I/M is a component of all 19 ozone SIPs.
- Senate Bill 1386 passed. This bill allows removal of Stage II refueling controls from both Philadelphia and Pittsburgh ozone SIPs, and low RVP (or RFG)

gasoline from 4-county Pittsburgh area ozone SIP. If implemented, may require revision of SIP, MVEBs, and addition of additional control measures to compensate for emissions increases. The impacts for various analysis years are under research by PennDOT and PaDEP. Stage II vapor controls emissions benefits are considered an area source, thus no impact on conformity (not withstanding potential federal sanctions if control measure is unilaterally discontinued). Low RVP and RFG fuel impacts are in MVEB and therefore would impact ability to find conformity absent a SIP MVEB revision (in addition to potential sanctions).

Vermont

Gina Campoli noted the following:

- Focused on 5 year update of Climate Change and Energy Plans.
- Energy Plan
 - Includes fuel, technologies, potential efficiencies.
 - Inter-agency approach being used.
 - Studying potential incentives.
 - VT Climate Change Cabinet will oversee implementation of Energy Plan.
- Climate Change Plan
 - Update of 2006 Plan commencing.
 - Risk assessment and vulnerability are now focus areas.
 - Performance measures, including VMT metrics, are being investigated.
- All of Vermont remains in attainment for ozone and PM_{2.5}.

Virginia

Jim Ponticello provided the following update:

- Conformity
 - Fredericksburg's MVEB was revised to enable conformity. The change was necessitated by update to new planning assumptions, which included a much older fleet age than was originally used in the SIP.
 - Richmond-Tri Cities and Hampton Roads conformity processes are proceeding.
 - Greater Washington, DC area process is commencing now.
- Latest Planning Assumption Update Impacts
 - Updated on triennial cycle.
 - Updated age distribution significantly influences results, particularly regarding NO_x for both ozone and PM_{2.5} (2006 NAAQS). The fleet has been aging since all SIP MVEBs were assembled, and these original documents reflected a much newer fleet (reflecting the economic cycle at the time). In the DC area, NO_x increased about 19% due to fleet age change alone (all other inputs held constant). As a result, the conformity analysis "buffer" in all areas has declined significantly, or disappeared (i.e., Fredericksburg).
 - The above accentuates the need for careful analyses using appropriate data and creation of MVEBs, and safety margins if used, to accommodate large potential changes in the mobile emissions results due to factors totally outside the control

of transportation agencies.

- MOVES
 - Largely ready to implement, pending revision of MVEBs originally created with MOBILE. MOVES outputs elevated NO_x and PM_{2.5} results compared to MOBILE. These are not new emissions, simply a new model to forecast existing and future conditions.
- 2008 Ozone NAAQS Implementation
 - Design values for the 2008 ozone NAAQS (0.075 ppm) included 2009-10-11 data. 2009 was a favorable year with low monitor readings.
 - There is concern that some areas (particularly those now in maintenance of the 1997 ozone NAAQS of 0.08 ppm), may be designated attainment for the 2008 NAAQS, but a hot, humid 2012 summer could result in a recalculated design value above the NAAQS. This would result in a formal designation process by EPA, potentially putting some areas back into ozone nonattainment in 2013 or 2014. If EPA's proposal to withdraw the 1997 ozone standard for purposes of conformity 1 year following designations for the 2008 NAAQS is finalized, then some areas might be run the cycle of attainment/maintenance → attainment (no conformity requirement) → nonattainment and resultant conformity requirement re-instated.
 - VDOT will be monitoring closely and working with DEQ to determine the best approach to minimize risks and resource expenditures for such areas.
- Project Level Analyses
 - These requirements remain resource intensive and potentially complicated due to MOVES implementation. Includes CO₂, PM_{2.5} and potentially (see EPA report), NO₂.

Delaware Valley Regional Transportation Commission

- Sean Green noted that the Philadelphia area (<http://www.idlefreephilly.org/>) which allows citizens to report excessive idling. Results are plotted on a map, and will be used to enhance public information dissemination and target enforcement activities. This is a joint effort of the City of Philadelphia (Air Management Services) and the Clean Air Council.

III. EPA Briefing

Martin Kotsch of EPA Region III provided the group with a summary on the following issues:

- MOVES Model
 - Grace period extended through March 2, 2013. Note that there is still time for a filing to ask the court to stop this, but time is running out. The final rule was published 2-27-12.
 - New MOVES2010b is scheduled for release April 13, 2012; guidance is planned to accompany the release. Changes include addition of a converter for diesel retrofits, and various other internalized refinements. No new training is planned, and emissions results are anticipated to not change from MOVES2010a.

- New MOVES2013 is on schedule for release next year. It will add the calculation of off-road emissions to the model, and additionally other changes may change the emissions results compared to those from MOVES2010a. EPA will consider a grace period for this model's implementation for conformity.
- The MOVES2010a hotspot grace period expires 12-20-12. New hotspot analyses commencing after this date must use MOVES.
- NO₂ NAAQS was finalized at 100 ppb (1-hour) and 53 ppb (annual mean) in February 10, 2010. The implementation rule included the installation of roadside monitors in certain areas and along certain high-volume roadways. Monitors are required to be operational in 2013, and will monitor both NO₂ and CO. Three years of data will be collected (2013-5) and then analyzed and any appropriate nonattainment designations made, likely in 2016. It is not known if regional or project level analyses, or both, may be required in nonattainment areas, if any.
- PM_{2.5}
 - Northeastern US has largely attained the 1997 (annual) PM_{2.5} NAAQS. Clean data findings have been published in the Federal Register for many areas.
 - SIPs are due in 2013 for the 2006 PM_{2.5} (daily) NAAQS.
- Guidance on conformity in multi-jurisdictional areas is being updated.
- The overall conformity rule is being updated to incorporate changes since March 2010, the last time a consolidated, updated rule was published. Look for it on EPA's website.
- 2008 ozone NAAQS.
 - Final designations (and classifications) are expected in late May 2012.
 - Designations will be effective 60 days after being published in the Federal Register (i.e., late July).
 - A 1-year grace period for regional conformity applies. Areas must demonstrate conformity under the new NAAQS or face an immediate lapse at end of grace period.
 - Most areas will be classified as marginal, with a few moderate classifications expected (i.e., Baltimore).
 - Marginal areas (attainment year will be 2015) are not required to submit a new SIP, and therefore MVEBs from the prior ozone SIP (if any) will continue to apply. Check those MVEBs, as they may be constructed with outdated planning assumptions or with MOBILE, each of which, when updated for conformity analyses, could be troublesome.
 - Moderate areas (attainment year 2018) will be required to submit a new attainment plan with new MVEBs.
 - EPA is proposing to revoke the 1997 ozone NAAQS for conformity purposes one year following the effective date of the 2008 ozone NAAQS designations. If finalized, conformity will no longer be required in areas attaining the both the 1997 and 2008 ozone NAAQS. If an area is subsequently designated nonattainment (i.e., in 2013 after the ozone design value is recalculated with 2010-11-12 data), then conformity would be performed using the interim conformity tests (a prior ozone MVEB for the 1997 NAAQS would not apply) pending a new SIP with MVEBs.

As such, some areas may choose to submit a new SIP (or update the prior MVEB and SIP as such a submittal) to [a] ensure that conformity in multi-jurisdictional areas is not unnecessarily complicated by interagency consultation and timing requirements prior to a MVEB use, and [b] use the conformity budget test, potentially with safety margins in SIP, to avoid the likely more stringent interim conformity tests.

- Note that the recent conformity rule updates formulized the selection of a base year for conformity purposes, and new attainment years, which become required analysis years for regional conformity.
- **Census Data**
 - New UZA boundaries are released and may complicate modeling and MPO approval processes (see multi-jurisdictional guidance for conformity) if the new ozone nonattainment areas differ from the present ones.
- **Greenhouse Gases**
 - There have been no new regulatory requirements affecting transportation, except the proposed fuel economy and CO₂ emissions standards.
- EPA has begun addressing, and approving, 1997 PM_{2.5} and any outstanding ozone (i.e., 2008 ROP) SIPs.
- The Northern Transportation-Air Quality Summit will be held at Lowes Hotel in Philadelphia, PA on August 7-8, 2012. It is possible that a 1-day MOVES training session for non-modelers will be added to the agenda. A low (~ \$100) registration fee is anticipated. The venue is located in the heart of Philadelphia (1200 Market Street), close to the Old City, City Hall, Avenue of the Arts, SEPTA rail stations, and multiple entertainment, museum and historic locations. Volunteers to participate on the program agenda should contact Mr. Kotsch.

IV. FHWA and FTA Reports

Mr. Walton and Ms. McFadden-Roberts did not have a report.

V. Working Lunch – Presentation by Cindy Burbank

Courtesy of AASHTO, Ms. Cindy Burbank provided a presentation on greenhouse gas and climate change issues. A copy of her presentation is attached.

VI. TCI Update

Attendees recounted that this effort is entering the third year of the 3-year TCI commitment. Four committees (fuels and vehicles, freight, communications and information technology, and sustainable communities) have been working since June 2010. Accomplishments to-date include implementation of network of EV charging stations on the I-95 corridor and selected adjacent highways, creation of sustainability principles for communities, and joint efforts with the I-95 corridor coalition regarding freight initiatives.

Challenges have included funding shortages (especially for implementation), and accommodating alternative vehicle fuels other than electricity.

The NASTO Annual Meeting is June 10-12, 2012 in Baltimore, MD. The TCI meeting

is June 12-13, also in Baltimore.

See the following website for additional information:

<http://www.georgetownclimate.org/state-action/transportation-and-climate-initiative>.

VII. Open Discussion

Two topics were suggested for discussion, conformity safety margins and large, multi-state nonattainment areas. Chairman Baker had discussions points prepared for each (attached). Participants discussed each of these issues in some depth, though the challenges described by some participants were not being experienced in several other jurisdictions. Bob Kaiser moderated the discussion at the request of Chairman Baker.

VIII. Action Items for NASTO Board

The Committee will explore the drafting of briefings on two topics for presentation to the NASTO Board. They are:

1. Upcoming air quality and climate change challenges, and potential implications for attainment of revised NAAQS.
2. Update on state climate change plans and strategies.

IX. Final Thoughts / Adjourn

The meeting was adjourned by Chairman Baker at 2:55 pm.