# National Capital Region Transportation Planning Board

777 North Capitol Street, N.E., Suite 300, Washington, D.C. 20002-4290 (202) 962-3310 Fax: (202) 962-3202

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To:            MOVES Task Force

From:        Daivamani Sivasailam
               Principal Transportation Engineer

Subject:     Update on MOVES Model Work Program

**Background**

　　　The region has been working on testing and implementing EPA's MOVES model under the guidance of the MOVES Task Force since August 2009.  This memorandum provides a status report on tasks that have been completed and implemented as well as remaining tasks.

**Work Program Tasks Completed**

Default Tests
- Staff sucessfully tested the MOVES2010 using default values for analysis years 2005 and 2030.

Custom Domain versus County Level
- Staff investigated the use of custom domain at the state level versus county level analysis and the Task Force decided to pursue analysis at the county level.

Local Input Data at the County Level
- Development of local inputs - Methods were developed, and the impact of the local inputs in place of MOVES default values were tested and the Task Force signed-off on the following:
    - Vehicle population, vehicle age distribution, vehicle miles of travel (annual), VMT fractions by facility type, and vehicle hours of travel by 16 speed bins.
    - Meterology (Temperature and Humidity) files were created based on 2007, 2008 and 2009 for future SIP work, as well as existing ozone and PM 2.5 SIP and CO Maintenance Plan meteorology data were converted for their use in conformity analysis with MOVES model and tested.
    - State air agencies created new Fuel data and Inspection and maintenance data in MOVES format for analysis years 2010 and 2030 and tested.

Emissions Rate
- Emissions rates were successfully developed using the MOVES model even though it takes about 64 hours to develop rates for VOC, NOx, CO, and PM2.5 for all twelve

months for an annual analysis for one county.  After considering all the issues associated with the emissions rate approach it was decided not to pursue the emissions rate approach at this time.

**Remaining Tasks**

- Test the newly released MOVES2010a model for analysis year 2010 and 2030 and compare with the results of MOVES2010 model.
- Apply meterology data, fuel, and I&M data for analysis years 2011, 2020, 2030, and 2040 obtained from DEP and the air agencies.
- Develop emissions inventories (VOC and NOx for the ozone season, annual PM2.5 and pre-cursor NOx, Winter CO, and $CO_2$) based on the 2010 CLRP and FY 2011-2016 TIP travel demand estimates for the years 2011, 2020, 2030, and 2040.