

ITEM 9 - Action
December 21, 2005

Review of Comments Received,
Acceptance of Recommended Responses, and
Approval of the Fine Particles (PM2.5) Air Quality Conformity
Assessment of the 2005 Constrained Long Range Plan (CLRP) and
FY 2006-2011 Transportation Improvement Program (TIP)

Staff

Recommendation:

- Receive briefing on the public comments received and the recommended responses
- Adopt Resolution R9-2006 to accept the recommended responses for inclusion in the documentation, and to find that the 2005 CLRP and FY 2006-2011 TIP conform with the PM 2.5 requirements of the Clean Air Act Amendments of 1990.

Issues: None

Background: The draft results of the PM2.5 conformity assessment analysis of the 2005 CLRP and FY 2006-2011 TIP were released for public comment at the November 16 TPB meeting. The 30-day public comment period on these results ended on December 16, 2005.

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TPB R9-2006
December 21, 2005

**NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD
777 North Capitol Street, N.E.
Washington, D.C. 20002**

**RESOLUTION FINDING THAT
THE 2005 CONSTRAINED LONG RANGE PLAN AND
THE TRANSPORTATION IMPROVEMENT PROGRAM FOR FY 2006-2011
CONFORM WITH THE FINE PARTICLES (PM 2.5) REQUIREMENTS OF THE
CLEAN AIR ACT AMENDMENTS OF 1990**

WHEREAS, the National Capital Region Transportation Planning Board (TPB) has been designated by the Governors of Maryland and Virginia and the Mayor of the District of Columbia as the Metropolitan Planning Organization (MPO) for the Washington Metropolitan Area; and

WHEREAS, the U.S. Environmental Protection Agency (EPA), in conjunction with the U.S. Department of Transportation (DOT), under the Clean Air Act Amendments of 1990 (CAAA), issued on November 24, 1993 "Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded or Approved Under Title 23 U.S.C. or the Federal Transit Act," and, over the years, subsequently amended this guidance, most recently on July 1, 2004 and on April 5, 2005, which taken together provide the specific criteria for TPB to make a determination of conformity of its financially Constrained Long Range Transportation Plan (CLRP) and Transportation Improvement Program (TIP) with the air quality requirements in the Metropolitan Washington PM2.5 non-attainment area; and

WHEREAS, TPB staff developed a work program to address all procedures and requirements, including public and interagency consultation, and use of EPA's evaluation criterion in the interim period before state implementation plan (SIP) emissions budgets are available for use in conformity requiring that emissions predicted in the "Action" scenario are not greater than 2002 emissions, and the work program was released for public comment on June 15, 2005 and approved by the TPB at its July 20, 2005 meeting; and

WHEREAS, staff executed the work program and documented the results in the draft PM2.5 conformity report, *Fine Particles (PM 2.5) Standards Air Quality Conformity Assessment, Supplement to the Air Quality Conformity Determination of the 2005 Constrained Long Range Plan and the FY 2006-2011 Transportation Improvement Program for the Washington Metropolitan Region*, dated November 16, 2005, which was released on that date for a 30-day public comment period and interagency review, and the comments and staff responses to them were reviewed and accepted for inclusion in the CLRP and TIP by the TPB on December 21, 2005; and

WHEREAS, the analysis in the PM2.5 report demonstrates adherence to EPA's evaluation criterion that emissions estimated for the "Action" scenario of each forecast year are not greater than 2002 emissions, meets all regulatory, planning and interagency consultation requirements, and therefore provides the basis for a finding of conformity of the plan and program with the requirements of the CAAA; and

WHEREAS, in the attached letter of December 14, 2005, MWAQC has provided favorable comments on the PM2.5 conformity report, urging "... the States and local governments to maintain their commitments to TERMS and other emission reduction measures, regardless of whether implementation of these measures is necessary for conformity", and also urging continued consultation between TPB and MWAQC in the future regarding use of interim emissions tests and the potential inclusion of other pollutants as precursors to PM2.5;

NOW, THEREFORE, BE IT RESOLVED THAT THE NATIONAL CAPITAL REGION TRANSPORTATION PLANNING BOARD determines that the 2005 Constrained Long Range Plan and the Transportation Improvement Program for FY 2006-2011 conform with the PM 2.5 requirements of the Clean Air Act Amendments of 1990.

Metropolitan Washington Air Quality Committee

Suite 300, 777 North Capitol Street, N.E. Washington, D.C. 20002-4239 202-962-3358 Fax: 202-962-3203

December 14, 2005

Honorable Phil Mendelson, Chair
National Capital Region Transportation Planning Board
777 North Capitol Street, NE
Washington, D.C. 20002

Dear Chair Mendelson:

The Metropolitan Washington Air Quality Committee (MWAQC) has reviewed the November 16, 2005 (and December 2, 2005 supplement) draft *Fine Particles (PM_{2.5}) Standards Air Quality Conformity Assessment: Supplement to the Air Quality Conformity Assessment of the 2005 Constrained Long Range Plan Amendments and FY2006-2011 Transportation Improvement Program* for the Washington Metropolitan Region. We are pleased the proposed transportation plan meets the interim emissions test.

As agreed, the region selected the build no greater than 2002 interim emissions test in this year's conformity analysis. The conformity analysis indicates significant reductions in transportation emissions occurring by 2010 and beyond. Analysis indicates that emissions in 2010 are significantly below the 2002 emission levels. The magnitude of the difference may be temporary since the interim test will be replaced by new emissions budgets once the PM_{2.5} SIP has been formally submitted to EPA and the new emissions budgets found adequate.

For any PM_{2.5} conformity analysis in the coming years of the interim period, MWAQC continues to urge TPB and the state air agencies to work together to determine which option is most appropriate for conformity analysis. For the current PM_{2.5} conformity cycle, we also supported the TPB proposed approach of emissions analysis and conformity determination only for direct PM_{2.5} and for precursor NO_x. If in the coming year, the state air agencies and/or EPA determine that other components, namely VOCs, SO₂, and/or ammonia contribute significantly to the fine particle problem in the Washington, DC region, those pollutants should be included in future conformity analyses.

Meeting the PM_{2.5} standard is expected to require continuation of all mobile and non-mobile emission reduction commitments, and possibly new ones in the near future. States and local governments are urged to maintain their commitments to TERMS and other emission reduction measures, regardless of whether implementation of these measures is currently critical for conformity determination during the interim period.

Thank you for the opportunity to comment on the draft conformity analysis. We look forward to working closely with you on making further improvements to the region's air quality for attaining the new air quality standards and to integrate our new 8-hour and PM_{2.5} standard planning efforts.

Sincerely,



Hon. T. Dana Kauffman, Chair
Metropolitan Washington Air Quality Committee

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

Memorandum

December 14, 2005

To: Transportation Planning Board

From: Michael J. Clifford
Systems Planning Applications Director

Subject: Air Quality Conformity Assessment of the 2005 Constrained Long Range Plan (CLRP) and the FY2006-2011 Transportation Improvement Program (TIP) with Respect to Fine Particles (PM2.5) Standards: Comments, and Responses to Comments

Introduction

This memo transmits: (1) draft final summary results of the fine particles (PM2.5) air quality conformity assessment of the 2005 CLRP and the FY2006-2011 TIP; (2) comments received to date on the draft report which was released for public comment on November 16, 2005; and (3) responses to those comments. The comment period extends through December 16th; should additional comments be received following this mailout for the December TPB meeting, we will provide such comments, and responses to the comments, to the Board prior to the December 21st meeting. The attached exhibits contain minor updates to summary tables contained in the draft report; the full report is on the COG website.

Background

While the 2005 CLRP and FY2006 – 11 TIP were subject to an air quality conformity assessment which was approved by the TPB on October 19, 2005, that assessment reflected requirements associated with the 8-hour ozone and Wintertime carbon monoxide standards. On December 17, 2004 EPA designated the Washington, DC-MD-VA area as nonattainment for the PM2.5 standards. On April 5, 2005 EPA published the final set of rules for transportation conformity associated with the new standards (complementing an initial set of conformity rule amendments published on July 1, 2004). EPA requirements include that the TPB demonstrate conformity to the new rule by April 5, 2006 or face a conformity lapse, i.e., limitations on transportation projects which may proceed toward implementation. These additional requirements, which became effective while the 8-hour conformity assessment was in progress, led to this supplemental air quality analysis of the plan and program.

Methods

The scope of work for this analysis, approved by the TPB at its July 20, 2005 meeting, identified methods to address the new PM2.5 requirements which are consistent with the 8-hour air quality assessment. Work tasks utilize the latest models and methods, i.e., COG's Round 7.0 Cooperative Forecasts, TPB's Version 2.1D #50 travel demand model, and EPA's Mobile6.2 emissions factor model.

Conformity assessment criteria for the PM2.5 standards provided in EPA's July 1, 2004 transportation conformity rule amendments include a demonstration that PM2.5 emissions (including both direct PM2.5 and NOx emissions as a precursor to fine particles) for each analysis year of the CLRP and TIP are not greater than base year 2002 emissions. EPA has provided these criteria for use during an interim period which will continue only until state air quality implementation plan (SIP) activities determine emissions reduction requirements to attain the fine particles standards, and establish new mobile emissions budgets for inclusion in the air quality plans for meeting the standards.

Results

The PM2.5 conformity assessment includes the estimation of direct PM2.5 and precursor NOx emissions for the 2002, 2010, 2020 and 2030 analysis years. Attached exhibits 1 – 3 present these emissions for each milestone year. Exhibits 1 and 2 present daily and seasonal emissions by travel component; exhibit 3 presents a bar chart (note the separate Y-axes) of the summary results for each pollutant. These exhibits have been updated slightly since the draft report was released for comment to provide additional detail and to reflect some minor corrections. The exhibits show that mobile emissions are well below the 2002 base year levels for each pollutant.

Comments / Responses

The Metropolitan Washington Air Quality Committee (MWAQC) provided written comments in its December 14, 2005 letter (attached) to the TPB.

Comments:

Their letter notes that the transportation plan meets the relevant emissions test during this interim period until emissions budgets are established, and urges transportation agencies to maintain their commitment to transportation emissions reduction measures.

The letter also urges continued consultation between TPB and MWAQC in the future, as regards use of interim emissions tests and the potential inclusion of other pollutants, such as volatile organic compounds, sulfur dioxide, and / or ammonia, as precursors to PM2.5.

Response:

The TPB appreciates the favorable comments and looks forward to continuing its close working relationship with MWAQC.

Summary

The analytical results described in this air quality assessment provide a basis for a determination by the TPB of conformity of the 2005 CLRP and the FY2006-2011 TIP with respect to fine particles standards. TPB approval action is scheduled for December 21, 2005. This schedule has been established to provide federal agencies with sufficient time to conduct their review and approval process in advance of the conformity lapse deadline of April 5, 2006.

Attached:

12/14/5 MWAQC letter
Exhibits 1 - 3

EXHIBIT 1
AIR QUALITY CONFORMITY SUMMARY TABLE
Direct PM2.5 Emissions
Mobile Source Emissions Inventories
for 2005 CLRP and FY 2006-2011 TIP
(Tons)

| | | Days | Direct PM2.5 | | | | | | | |
|---------------------|----------------------|------|--------------|----------|-------|----------|-------|----------|-------|----------|
| | | | 2002 | | 2010 | | 2020 | | 2030 | |
| | | | Daily | seasonal | Daily | seasonal | Daily | seasonal | Daily | seasonal |
| WINTER | Major Roads | 90 | 3.93 | 353.34 | 2.30 | 206.55 | 1.83 | 164.88 | 1.91 | 172.08 |
| | Local Roads | 90 | 0.17 | 15.66 | 0.12 | 11.16 | 0.12 | 11.16 | 0.13 | 12.06 |
| | School Buses | 58 | 0.34 | 19.64 | 0.06 | 3.60 | 0.02 | 1.37 | 0.02 | 1.13 |
| | Transit Buses | 90 | 0.27 | 23.87 | 0.04 | 3.80 | 0.02 | 1.92 | 0.02 | 1.57 |
| | Auto Access | 65 | 0.01 | 0.84 | 0.01 | 0.68 | 0.01 | 0.78 | 0.01 | 0.85 |
| | Total (Daily) | | 4.72 | | 2.53 | | 2.01 | | 2.10 | |
| | SEASON TOTAL | | | 413.35 | | 225.78 | | 180.11 | | 187.69 |
| SPRING | Major Roads | 92 | 3.84 | 353.37 | 2.37 | 217.58 | 1.93 | 177.56 | 2.03 | 186.39 |
| | Local Roads | 92 | 0.17 | 15.27 | 0.13 | 12.05 | 0.13 | 12.24 | 0.14 | 12.88 |
| | School Buses | 58 | 0.33 | 18.90 | 0.06 | 3.47 | 0.02 | 1.36 | 0.02 | 1.13 |
| | Transit Buses | 92 | 0.26 | 23.64 | 0.04 | 3.78 | 0.02 | 1.94 | 0.02 | 1.60 |
| | Auto Access | 66 | 0.01 | 0.79 | 0.01 | 0.71 | 0.01 | 0.84 | 0.01 | 0.91 |
| | Total (Daily) | | 4.60 | | 2.61 | | 2.12 | | 2.22 | |
| | SEASON TOTAL | | | 411.98 | | 237.59 | | 193.93 | | 202.91 |
| SUMMER | Major Roads | 92 | 4.02 | 369.38 | 2.45 | 225.40 | 2.02 | 185.38 | 2.11 | 194.49 |
| | Local Roads | 92 | 0.17 | 15.82 | 0.13 | 12.33 | 0.14 | 12.70 | 0.15 | 13.62 |
| | School Buses | 40 | 0.33 | 13.05 | 0.06 | 2.35 | 0.02 | 0.92 | 0.02 | 0.78 |
| | Transit Buses | 92 | 0.26 | 23.68 | 0.04 | 3.68 | 0.02 | 1.94 | 0.02 | 1.60 |
| | Auto Access | 66 | 0.01 | 0.81 | 0.01 | 0.73 | 0.01 | 0.86 | 0.01 | 0.94 |
| | Total (Daily) | | 4.78 | | 2.69 | | 2.21 | | 2.31 | |
| | SEASON TOTAL | | | 422.74 | | 244.49 | | 201.80 | | 211.42 |
| FALL | Major Roads | 91 | 3.84 | 348.99 | 2.27 | 206.21 | 1.91 | 173.99 | 2.00 | 181.73 |
| | Local Roads | 91 | 0.17 | 15.65 | 0.13 | 11.56 | 0.13 | 12.01 | 0.14 | 12.74 |
| | School Buses | 58 | 0.28 | 16.51 | 0.05 | 3.16 | 0.02 | 1.22 | 0.02 | 1.13 |
| | Transit Buses | 91 | 0.23 | 21.30 | 0.04 | 3.35 | 0.02 | 1.78 | 0.02 | 1.58 |
| | Auto Access | 65 | 0.01 | 0.83 | 0.01 | 0.68 | 0.01 | 0.81 | 0.01 | 0.88 |
| | Total (Daily) | | 4.54 | | 2.49 | | 2.10 | | 2.19 | |
| | SEASON TOTAL | | | 403.28 | | 224.96 | | 189.81 | | 198.07 |
| ANNUAL TOTAL | | | | 1,651.35 | | 932.82 | | 765.65 | | 800.09 |

EXHIBIT 2
AIR QUALITY CONFORMITY SUMMARY TABLE
PM2.5 Precursor Emissions: NOx
Mobile Source Emissions Inventories
for 2005 CLRP and FY 2006-2011 TIP
(Tons)

| | Days | NOx | | | | | | | | |
|---------------------|----------------------|-------|----------|-----------|----------|-----------|----------|----------|----------|----------|
| | | 2002 | | 2010 | | 2020 | | 2030 | | |
| | | Daily | seasonal | Daily | seasonal | Daily | seasonal | Daily | seasonal | |
| WINTER | Major Roads-Starts | 90 | 18.09 | 1627.83 | 7.95 | 715.32 | 3.56 | 320.49 | 2.76 | 247.95 |
| | Major Roads-VMT | 90 | 223.72 | 20135.07 | 107.47 | 9672.39 | 35.14 | 3162.24 | 26.75 | 2407.14 |
| | Local Roads | 90 | 11.06 | 995.04 | 5.69 | 512.01 | 2.44 | 219.60 | 2.06 | 185.40 |
| | School Buses | 58 | 5.63 | 326.26 | 3.61 | 209.25 | 0.69 | 39.96 | 0.27 | 15.93 |
| | Transit Buses | 90 | 6.30 | 566.79 | 4.22 | 379.88 | 1.15 | 103.55 | 0.34 | 30.45 |
| | Auto Access | 65 | 1.94 | 126.23 | 0.91 | 59.41 | 0.42 | 27.41 | 0.37 | 23.80 |
| | Total (Daily) | | | 266.73 | | 129.85 | | 43.40 | | 32.54 |
| SEASON TOTAL | | | | 23,777.22 | | 11,548.26 | | 3,873.25 | | 2,910.66 |

| | Days | NOx | | | | | | | | |
|---------------------|----------------------|-------|----------|-----------|----------|-----------|----------|----------|----------|----------|
| | | 2002 | | 2010 | | 2020 | | 2030 | | |
| | | Daily | seasonal | Daily | seasonal | Daily | seasonal | Daily | seasonal | |
| SPRING | Major Roads-Starts | 92 | 15.34 | 1411.46 | 7.20 | 662.77 | 3.31 | 304.43 | 2.62 | 240.86 |
| | Major Roads-VMT | 92 | 209.27 | 19252.75 | 101.03 | 9294.30 | 33.98 | 3126.34 | 26.43 | 2431.28 |
| | Local Roads | 92 | 9.82 | 903.07 | 5.25 | 483.00 | 2.33 | 214.36 | 2.02 | 185.84 |
| | School Buses | 58 | 5.56 | 322.53 | 3.43 | 198.91 | 0.67 | 38.66 | 0.27 | 15.89 |
| | Transit Buses | 92 | 6.24 | 574.22 | 4.06 | 373.68 | 1.12 | 102.75 | 0.34 | 31.12 |
| | Auto Access | 66 | 1.65 | 108.62 | 0.82 | 54.33 | 0.40 | 26.16 | 0.35 | 23.20 |
| | Total (Daily) | | | 247.88 | | 121.79 | | 41.80 | | 32.03 |
| SEASON TOTAL | | | | 22,572.65 | | 11,066.99 | | 3,812.69 | | 2,928.19 |

| | Days | NOx | | | | | | | | |
|---------------------|----------------------|-------|----------|-----------|----------|-----------|----------|----------|----------|----------|
| | | 2002 | | 2010 | | 2020 | | 2030 | | |
| | | Daily | seasonal | Daily | seasonal | Daily | seasonal | Daily | seasonal | |
| SUMMER | Major Roads-Starts | 92 | 13.85 | 1274.29 | 6.63 | 609.96 | 3.05 | 280.14 | 2.41 | 221.81 |
| | Major Roads-VMT | 92 | 214.72 | 19754.42 | 103.20 | 9494.31 | 34.86 | 3207.49 | 27.26 | 2507.46 |
| | Local Roads | 92 | 10.38 | 955.33 | 5.48 | 504.07 | 2.49 | 229.08 | 2.19 | 201.48 |
| | School Buses | 40 | 5.56 | 222.39 | 3.43 | 137.18 | 0.67 | 26.66 | 0.27 | 10.96 |
| | Transit Buses | 92 | 6.24 | 574.22 | 4.06 | 373.68 | 1.12 | 102.75 | 0.34 | 31.12 |
| | Auto Access | 66 | 1.61 | 106.23 | 0.81 | 53.14 | 0.39 | 25.96 | 0.35 | 23.26 |
| | Total (Daily) | | | 252.37 | | 123.60 | | 42.58 | | 32.82 |
| SEASON TOTAL | | | | 22,886.89 | | 11,172.34 | | 3,872.08 | | 2,996.09 |

| | Days | NOx | | | | | | | | |
|---------------------|----------------------|-------|----------|-----------|----------|----------|----------|----------|----------|----------|
| | | 2002 | | 2010 | | 2020 | | 2030 | | |
| | | Daily | seasonal | Daily | seasonal | Daily | seasonal | Daily | seasonal | |
| FALL | Major Roads-Starts | 91 | 15.93 | 1449.27 | 6.68 | 607.88 | 3.10 | 282.37 | 2.54 | 230.69 |
| | Major Roads-VMT | 91 | 208.43 | 18967.13 | 91.87 | 8359.81 | 32.43 | 2950.77 | 25.57 | 2326.60 |
| | Local Roads | 91 | 10.27 | 934.75 | 4.85 | 441.08 | 2.21 | 201.11 | 1.96 | 178.36 |
| | School Buses | 58 | 5.48 | 318.00 | 3.16 | 183.43 | 0.56 | 32.36 | 0.27 | 15.89 |
| | Transit Buses | 91 | 6.02 | 548.07 | 3.81 | 346.87 | 1.04 | 94.65 | 0.34 | 30.79 |
| | Auto Access | 65 | 1.75 | 113.43 | 0.76 | 49.24 | 0.37 | 24.32 | 0.34 | 22.11 |
| | Total (Daily) | | | 247.88 | | 111.12 | | 39.71 | | 31.01 |
| SEASON TOTAL | | | | 22,330.64 | | 9,988.30 | | 3,585.59 | | 2,804.43 |

| | | | | | | | | | |
|---------------------|--|--|-----------|--|-----------|--|-----------|--|-----------|
| ANNUAL TOTAL | | | 91,567.40 | | 43,775.88 | | 15,143.61 | | 11,639.37 |
|---------------------|--|--|-----------|--|-----------|--|-----------|--|-----------|

