

Memorandum

May 18, 2010

To: MOVES Task Force

From: Eulalie Lucas *EL*

Department of Transportation Planning

Subject: Results of MOVES2010 Model Sensitivity Tests: Network and Local Road Emissions Analyzed Separately vs. Combined.

Introduction

Staff attempted to test the utility of maintaining the current approach used in MOBILE emissions analysis where separate network vs. local vehicle mixes are used based on traffic stream characteristics. This approach involves maintaining the separation of VMT by purpose and traffic stream as follows: network and local street traffic stream, as well as school and transit bus and auto access to transit. For this meeting staff estimated emissions for the District of Columbia for year 2005, ozone day and annual conditions. VMT were allocated by traffic stream: network and local.

Results

The attached tables with graphs show results for this test by pollutant. First for ozone day, the first bar illustrates network plus local street emissions based on individual MOVES executions and the second bar is the entire traffic stream. Results show minimal differences between the two approaches. Table 2 with graph shows the same layout for annual conditions.

Next Steps

Staff plans to conduct similar runs for transit and school bus, as well as for auto access to transit primarily for term analysis.

Table 1 Comparison of Ozone Day Emission of District of Columbia

	VOC	Nox
Network	8.65	24.25
Local	0.45	2.30
Network+Local	9.10	26.55
Combination	9.37	26.57
Difference %	2.91%	0.05%

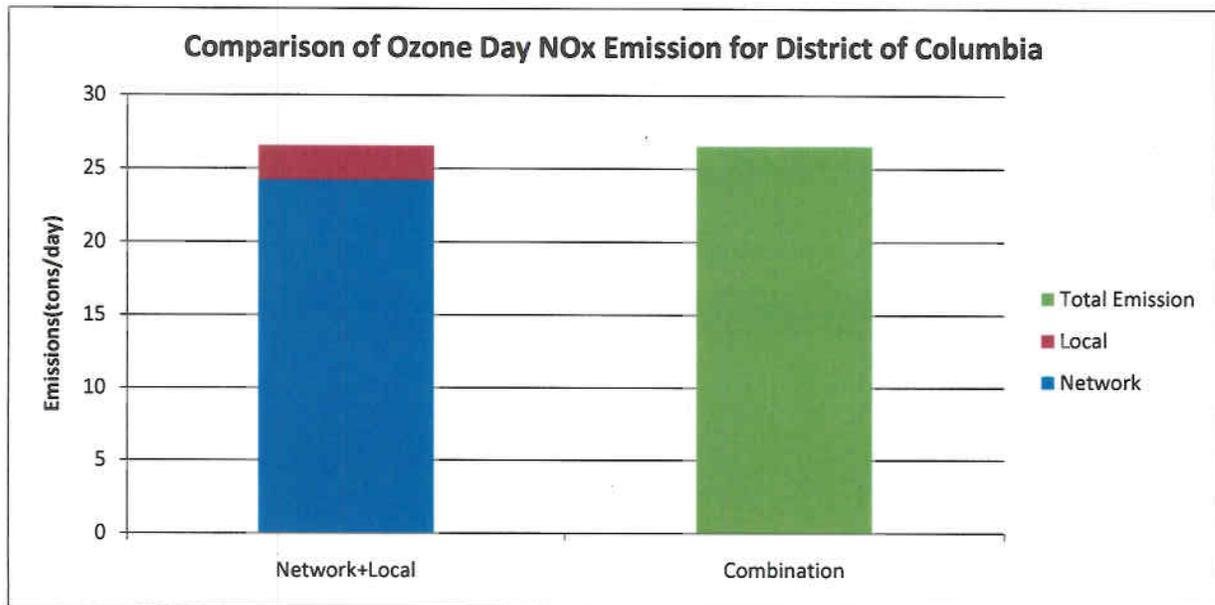
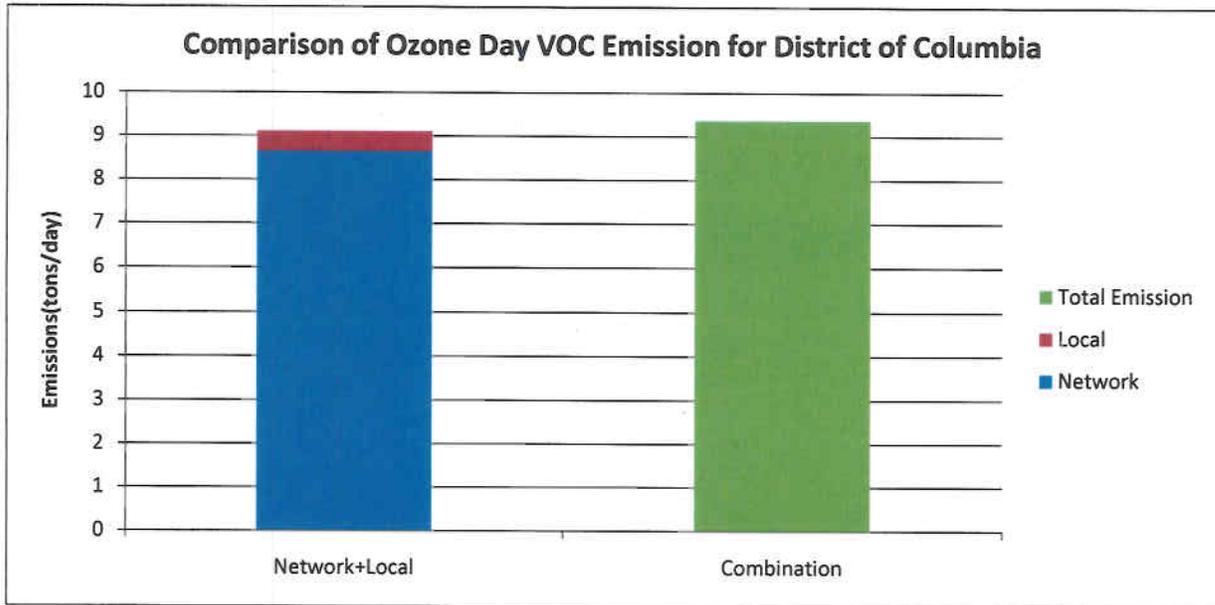


Table 2 Comparison of Annual Emission of District of Columbia

	PM2.5	Nox	CO2
Network	277.32	7993.33	1847535.36
Local	17.54	740.69	270618.42
Network+Local	294.85	8734.03	2118153.78
Combination	290.76	8970.35	2119336.98
Difference%	-1.39%	2.71%	0.06%

