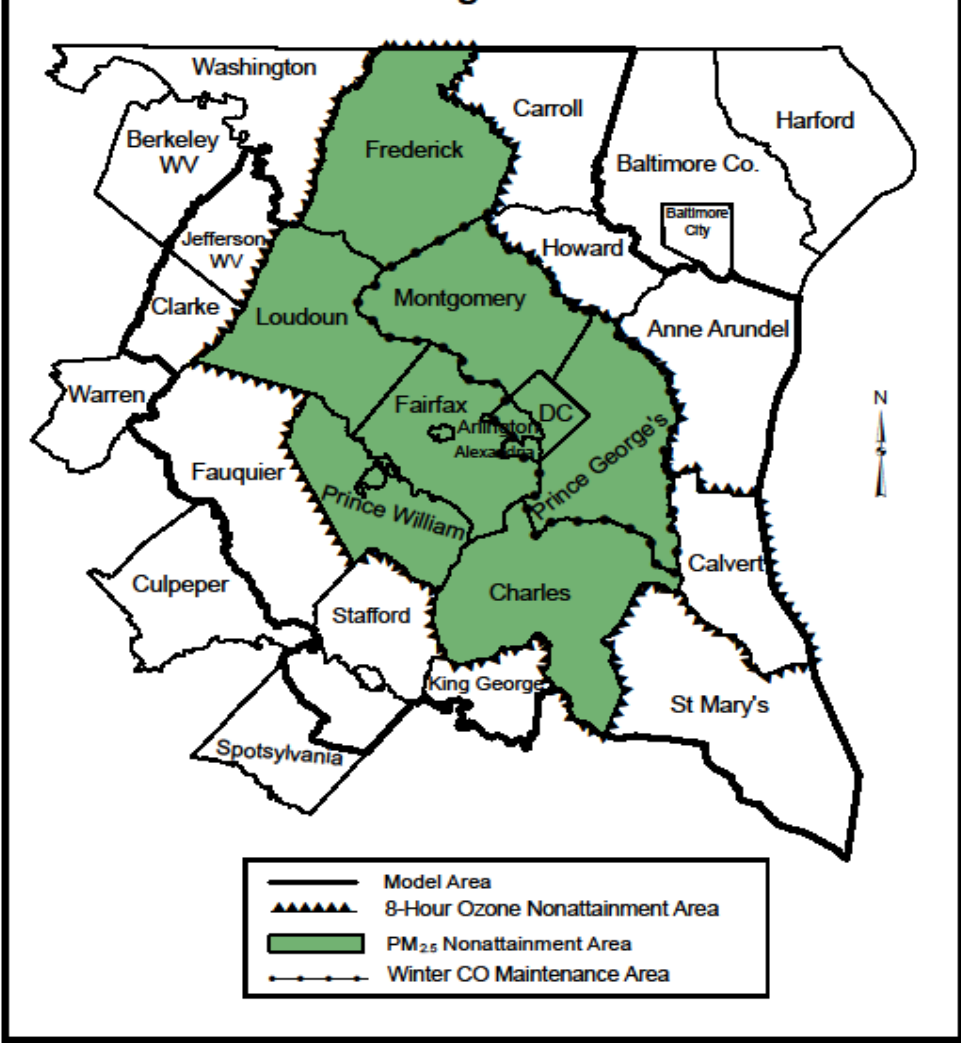


Transportation Planning Board

AIR QUALITY CONFORMITY ANALYSIS OF THE 2013 CONSTRAINED LONG RANGE PLAN & FY2013-2018 TRANSPORTATION IMPROVEMENT PROGRAM

DRAFT
June 13, 2013

EXHIBIT 1 Washington, D.C.- Maryland - Virginia Planning Areas



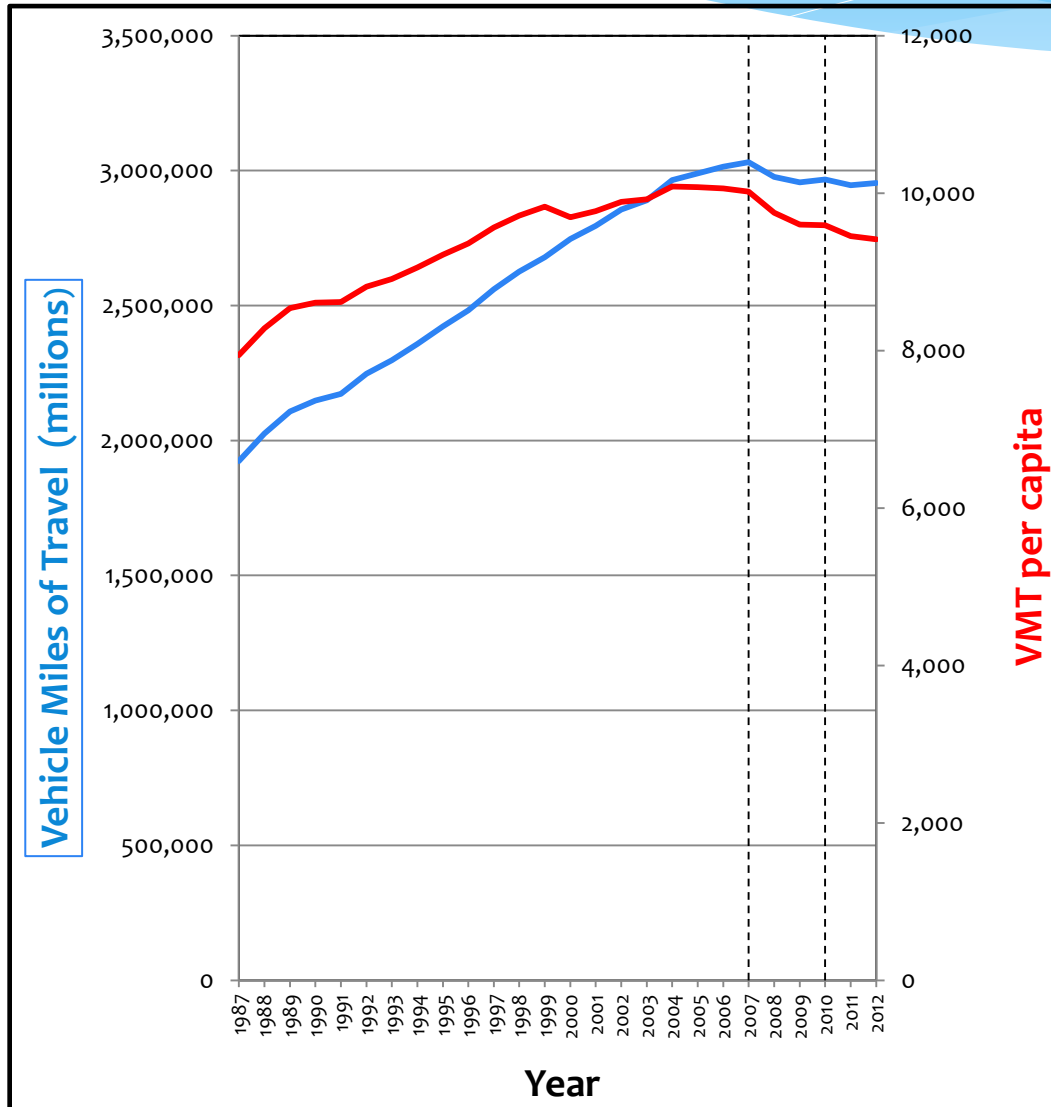
Travel model validation: background

- * Travel Model Adopted in 2012: Version 2.3.39
 - * Calibrated primarily with 2007 information:
 - * 2007/08 Household Travel Survey
 - * 2007 American Community Survey
 - * 2007 traffic counts
 - * Transit on-board surveys
- * 2010 model validation objectives:
 1. To evaluate calibrated model results against recent travel data:
 - * 2010 traffic counts
 - * 2010 American Community Survey
 - * 2010 Metrorail electronic counts
 - * 2010 Geographically Focused Household Travel Survey
 2. To refine the model to improve performance and forecasting ability
- * Validated travel model used in 2013 CLRP Analysis: Version 2.3.52

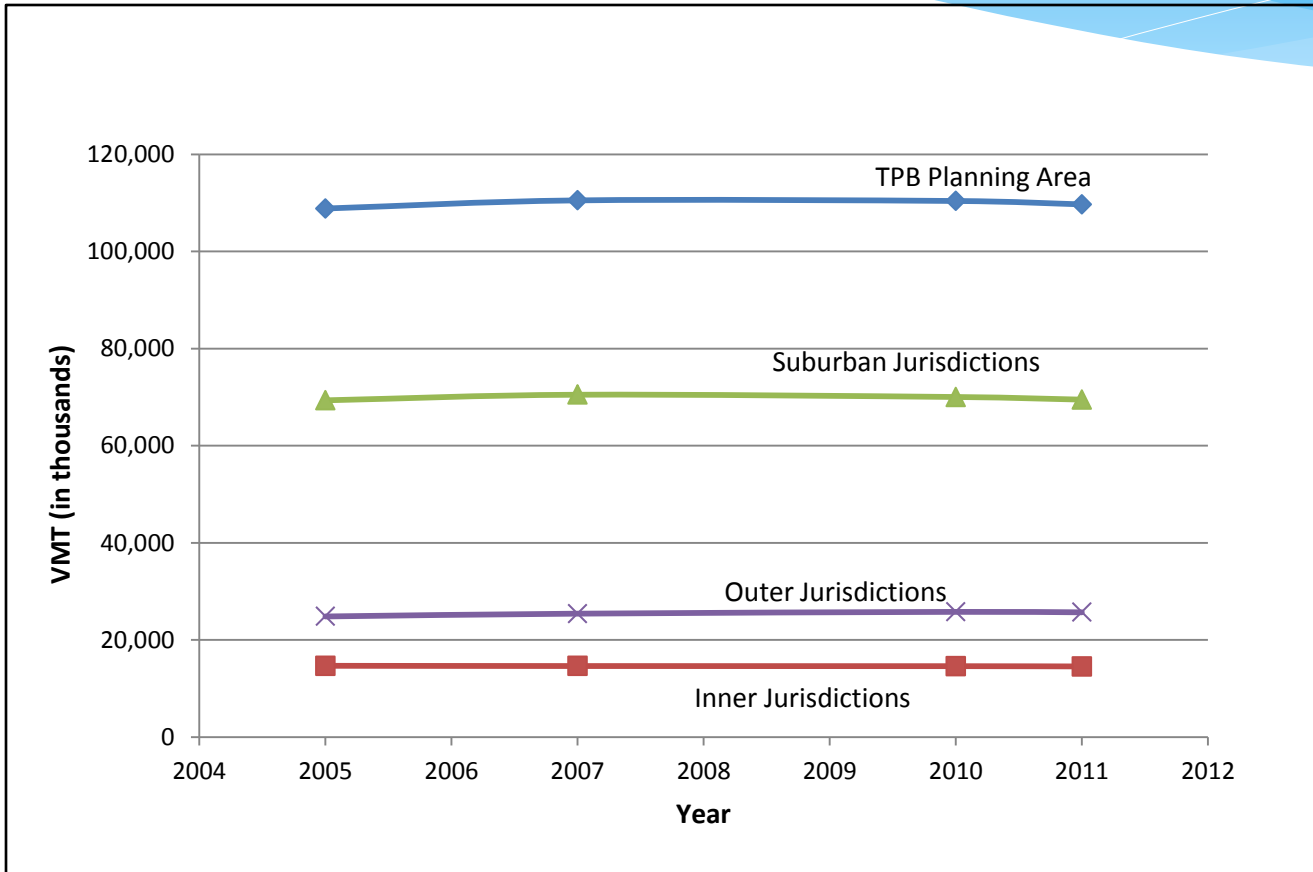
Why is 2010 an Important Validation Year?

- * VMT and VMT per capita have not followed historic trends since 2007
- * Potential Reasons
 - * Effect of Recession
 - * Fuel Price Volatility
 - * Growing Internet-based Commerce and Communications
 - * Telecommuting
 - * Changing Travel Preferences of the “Millennials” (ages 13-30)

Total US Vehicle-Miles and Vehicle-Miles per Capita 1987-2012



VMT for the TPB Planning Area 2005–2011



Legend:

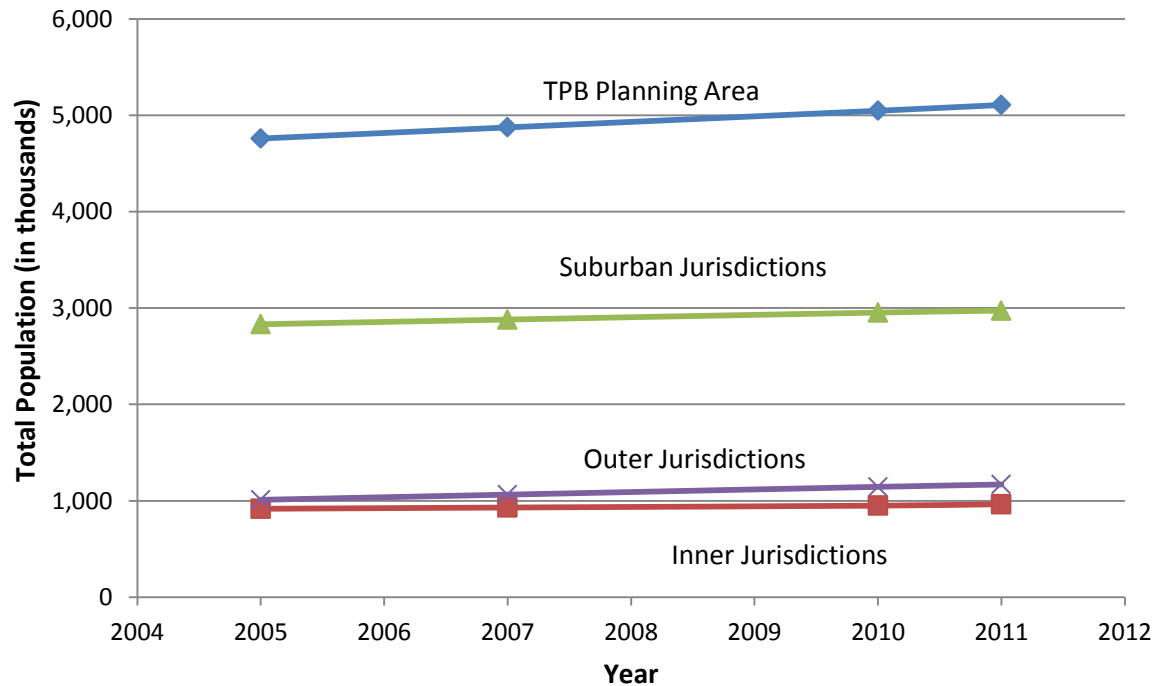
Inner Jurisdictions:
DC, Arlington, Alexandria

Suburban Jurisdictions:
Montgomery, Prince George's, Fairfax

Outer Jurisdictions:
Loudoun, Prince William, Frederick, Charles

Jurisdiction	Year				Ratio '11/'07	Ratio '11/'10
	2005	2007	2010	2011		
Inner Jurisdictions	14,672,100	14,621,000	14,597,700	14,538,000	0.99	1.00
Suburban Jurisdictions	69,355,500	70,506,100	70,038,800	69,496,900	0.99	0.99
Outer Jurisdictions	24,834,600	25,410,400	25,778,000	25,683,300	1.01	1.00
Grand Total	108,862,200	110,537,500	110,414,500	109,718,200	0.99	0.99

Population for the TPB Planning Area 2005-2011



Legend:

Inner Jurisdictions:
DC, Arlington, Alexandria

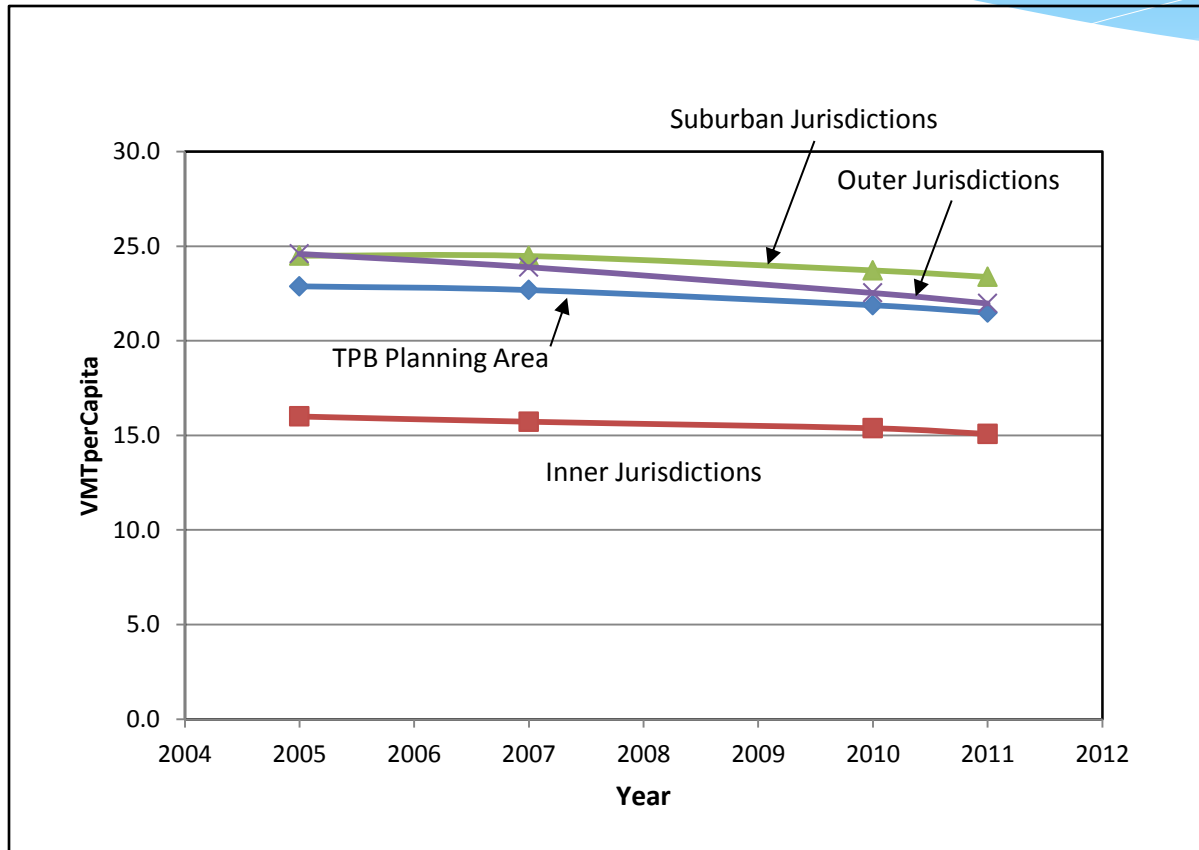
Suburban Jurisdictions:
Montgomery, Prince
George's, Fairfax

Outer Jurisdictions:
Loudoun, Prince William,
Frederick, Charles

Jurisdiction	Year				Ratio '11/'07	Ratio '11/'10
	2005	2007	2010	2011		
Inner Jurisdictions	917,100	930,000	949,300	964,500	1.04	1.02
Suburban Jurisdictions	2,831,500	2,880,000	2,952,800	2,973,400	1.03	1.01
Outer Jurisdictions	1,009,900	1,063,700	1,144,400	1,168,900	1.10	1.02
Grand Total	4,758,500	4,873,700	5,046,500	5,106,800	1.05	1.01

Source: Round 8.2 Cooperative Forecasts-
2007 & 2011 figures are linearly interpolated

VMT per Capita for the TPB Planning Area 2005-2011



Legend:

Inner Jurisdictions:
DC, Arlington, Alexandria

Suburban Jurisdictions:
Montgomery, Prince George's, Fairfax

Outer Jurisdictions:
Loudoun, Prince William, Frederick, Charles

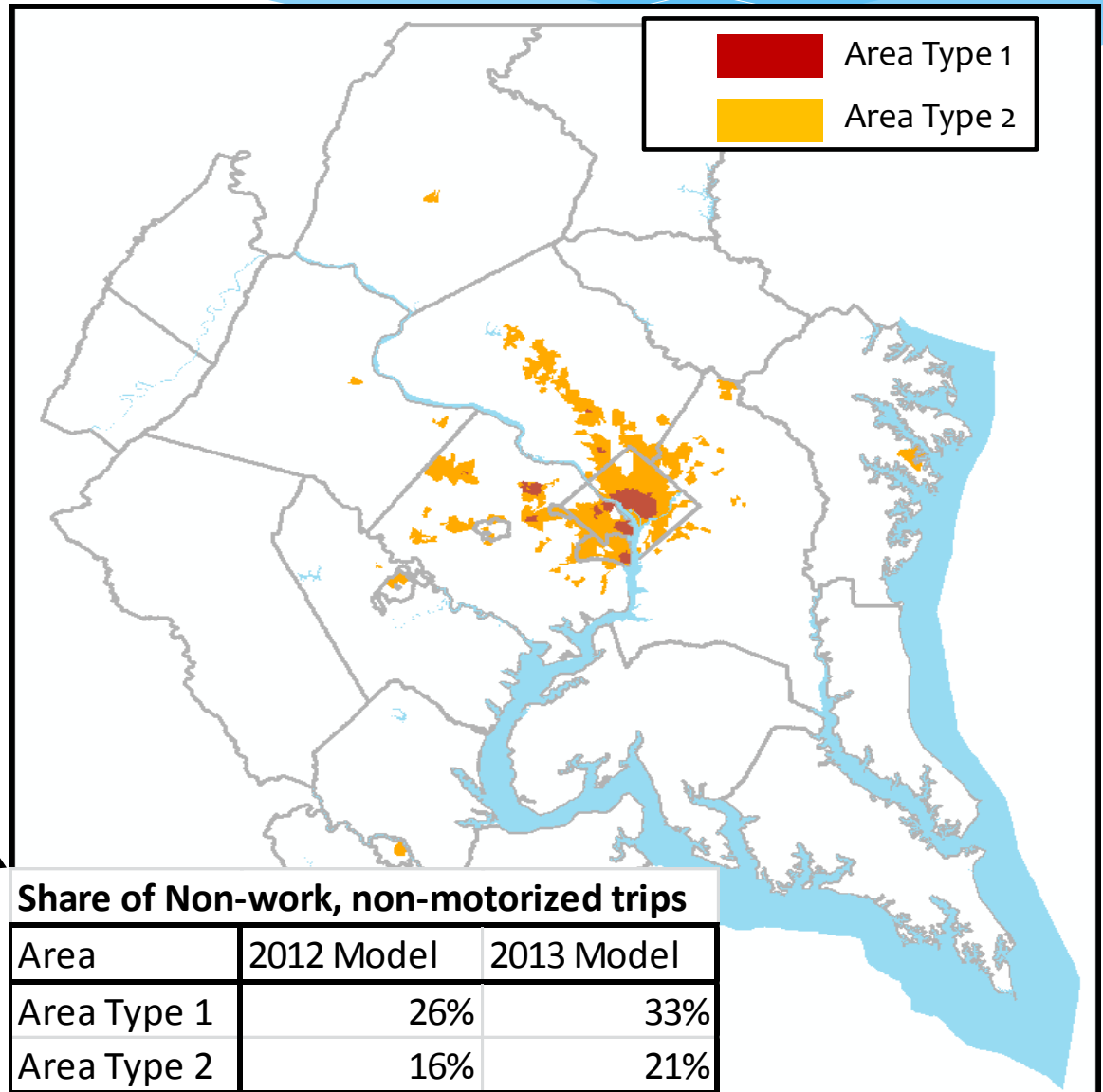
Jurisdiction	Year				Ratio '11/'07	Ratio '11/'10
	2005	2007	2010	2011		
Inner Jurisdictions	16.0	15.7	15.4	15.1	0.96	0.98
Suburban Jurisdictions	24.5	24.5	23.7	23.4	0.95	0.99
Outer Jurisdictions	24.6	23.9	22.5	22.0	0.92	0.98
Grand Total	22.9	22.7	21.9	21.5	0.95	0.98

Validation-related Changes to the Travel Demand Model

- * Increased non-motorized trip shares in dense-mixed use areas (Area Types 1 and 2)
 - Based on comparisons with non-motorized trip shares observed in geographically focused household travel survey
 - Applies to non-work purposes only (i.e. did not change work trips)
- * Refined highway network facility type coding
- * Improved estimated to observed VMT
 - 2012 model: 1.04
 - 2013 model: 1.00
- * Implemented several other technical adjustments to improve the performance or internal consistency of individual modeling steps

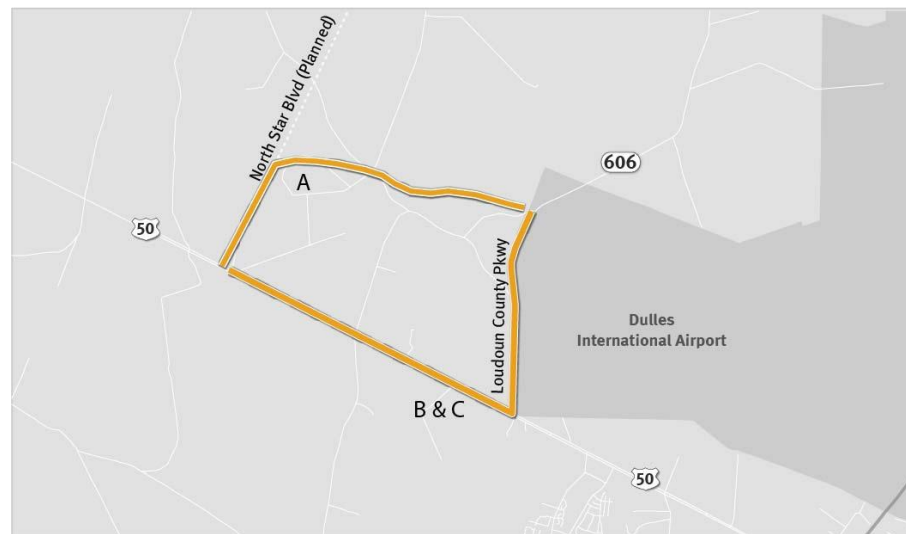
Non-motorized Trip Adjustment in the Travel Demand Model

- The share of non-work, non-motorized trips in dense mixed use areas has been adjusted upward
- map represents the year 2010



VDOT Dulles Access Improvements Alternatives

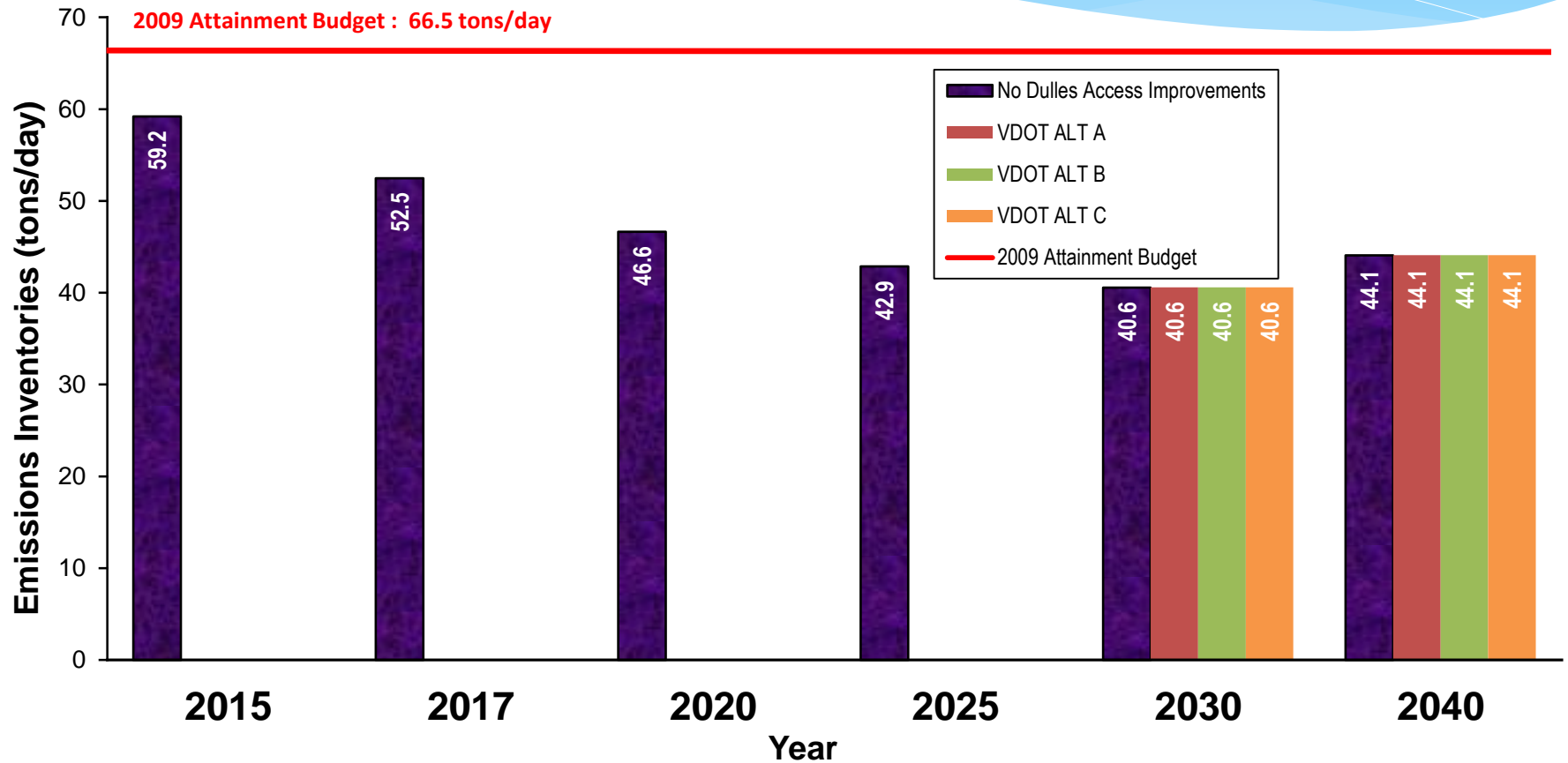
	US 50	VA 606 (Loudoun County Pkwy)		Northstar Blvd.
	Northstar Blvd. To VA 606	US 50 to 1.5 miles north of US 50	1.5 miles north of US 50 to Dulles Greenway	US 50 (at Northstar Blvd.) to VA 606 (at 1.5 miles north of US 50)
Current Conditions	4/5/6 lanes, major/principal arterial	2/4 lanes, minor arterial	2 lanes, minor arterial	-----
2013 CLRP (no Dulles access improvements)	6 lanes, principal arterial	4 lanes, minor/major arterial	4 lanes, minor/major arterial	-----
2013 CLRP VDOT A	6 lanes, principal arterial	4 lanes, minor/major arterial	4 lanes, minor/major arterial	4 lanes, principal arterial
2013 CLRP VDOT B	4 lanes, limited access facility + 6 lanes, principal arterial	4 lanes, limited access facility + 4 lanes, major arterial	4 lanes, major arterial	-----
2013 CLRP VDOT C (Loudoun County Comprehensive Plan)	6 lanes, limited access facility	8 lanes, limited access facility	4 lanes, major arterial	-----



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2013 CLRP & FY2013-2018 TIP

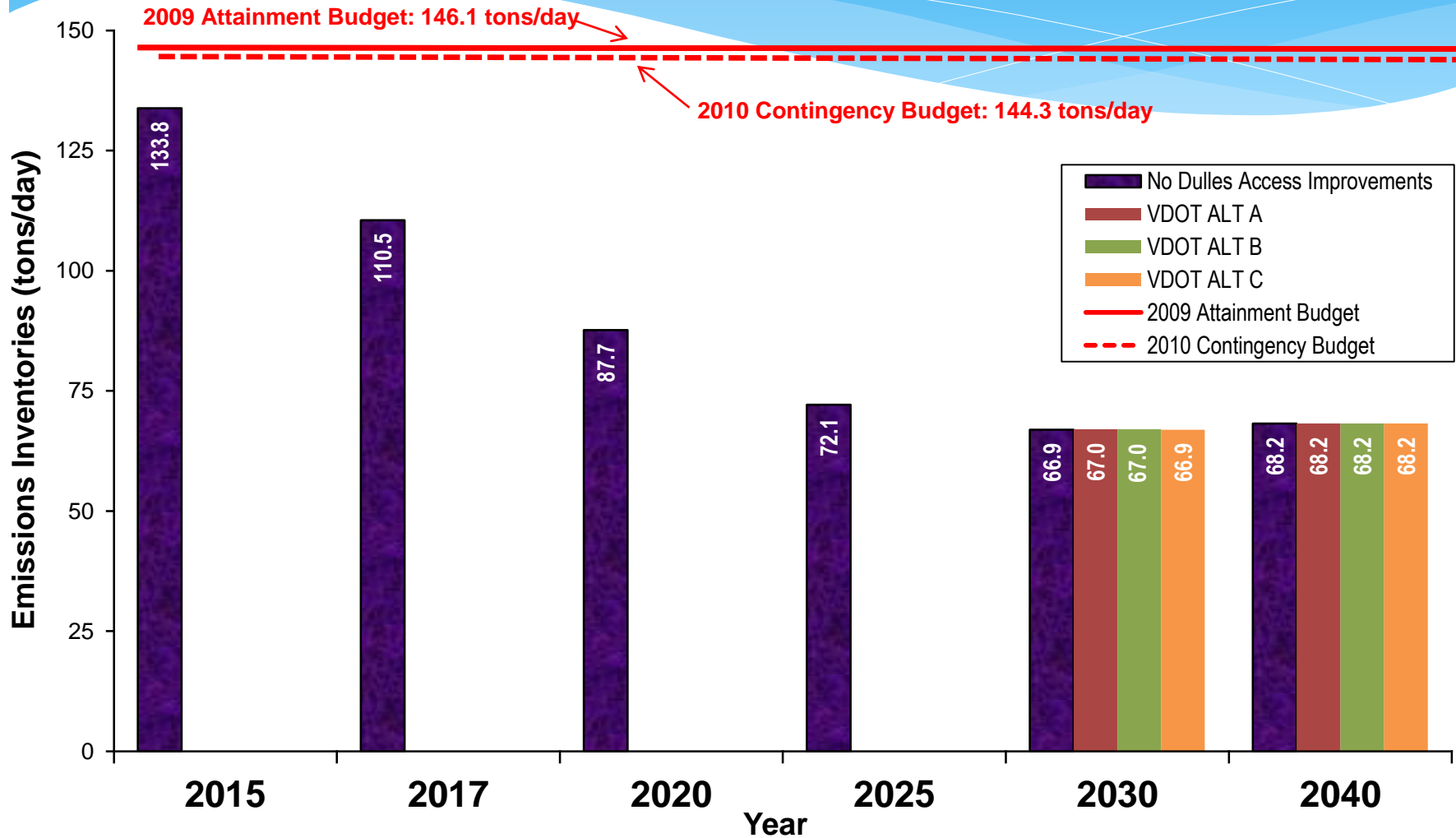
Ozone Season VOC



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2013 CLRP & FY2013-2018 TIP

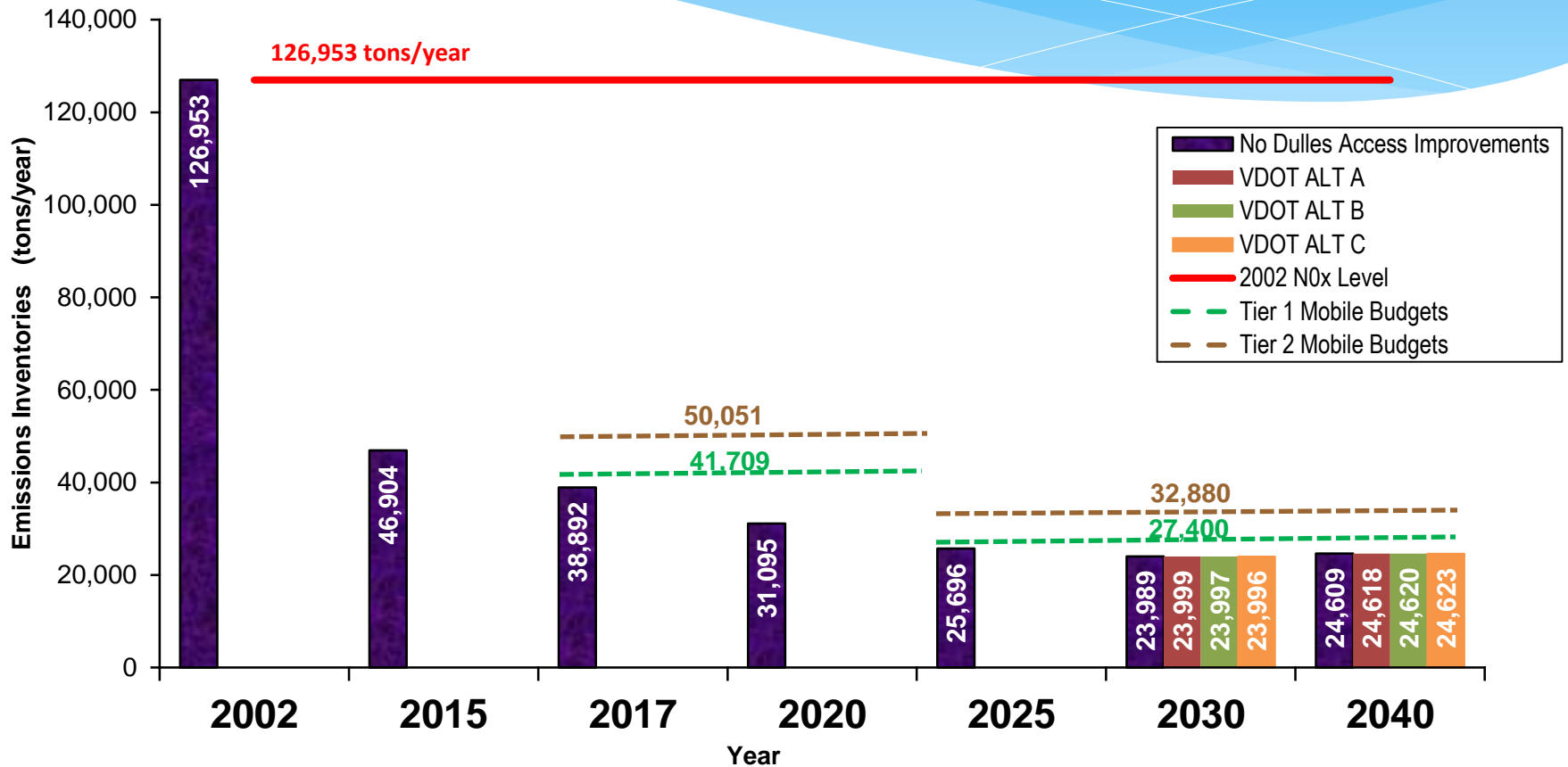
Ozone Season NOx



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2013 CLRP & FY2013-2018 TIP

PM_{2.5} Precursor NO_x

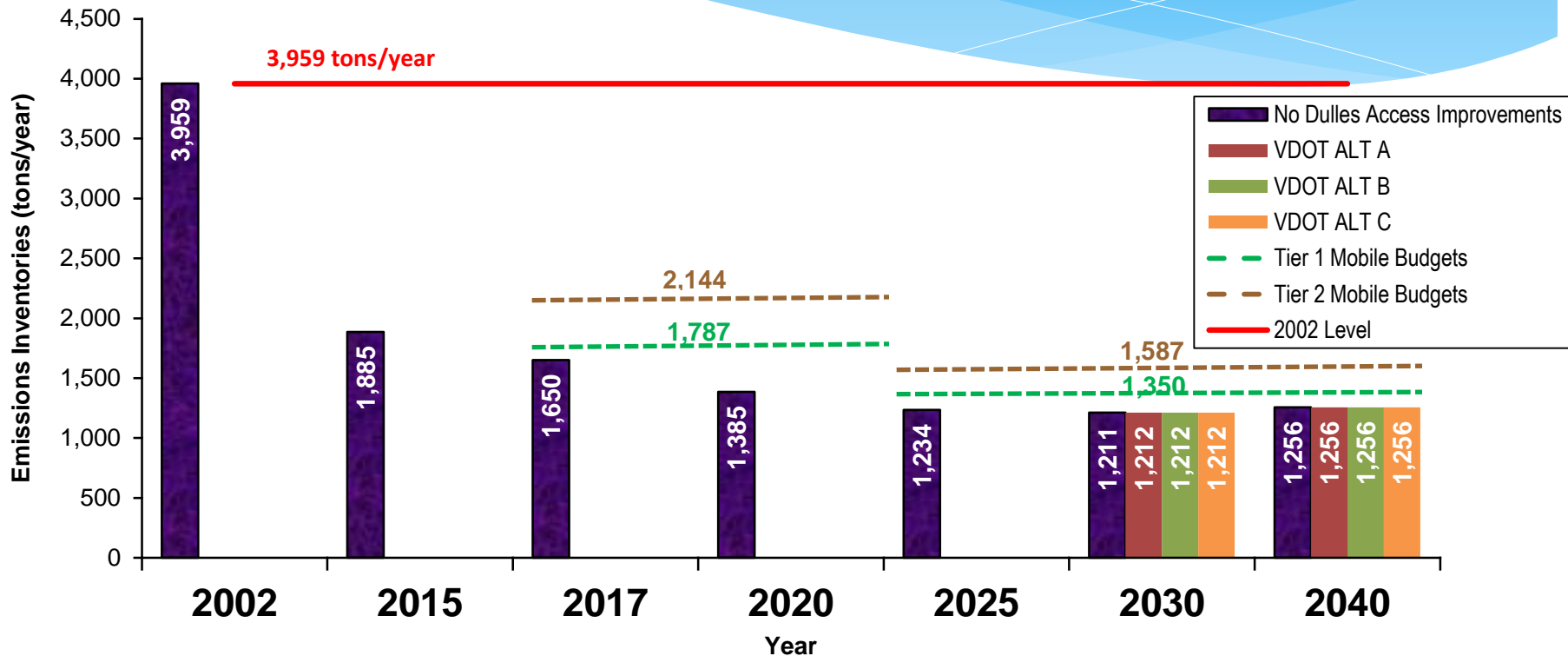


NOTE: MWAQC approved a PM_{2.5} Maintenance Plan on 5/22/2013. The Plan contains mobile budgets for years 2017 and 2025, which are shown in this graph for informational purposes only. When they are approved by EPA they will be used for conformity. In the meantime, without approved mobile budgets, it is required that Forecast Year emissions do not exceed Base Year 2002 emissions.

AIR QUALITY CONFORMITY

2013 CLRP & FY2013-2018 TIP

Direct PM_{2.5}



NOTE: MWAQC approved a PM_{2.5} Maintenance Plan on 5/22/2013. The Plan contains mobile budgets for years 2017 and 2025, which are shown in this graph for informational purposes only. When they are approved by EPA they will be used for conformity. In the meantime, without approved mobile budgets, it is required that Forecast Year emissions do not exceed Base Year 2002 emissions.

Schedule

*September 19, 2012	TPB is Briefed on Draft Call for Projects
*October 17, 2012	TPB Releases Final Call for Projects - Transportation Agencies Begin Submitting Project Information through On-Line Database
December 14, 2012	<u>DEADLINE:</u> Transportation Agencies Complete On-Line Submission of Draft Project Inputs.
January 4, 2013	Technical Committee Reviews Draft CLRP & TIP Project Submissions and Draft Scope of Work for the Air Quality Conformity Assessment
January 10, 2013	CLRP & TIP Project Submissions and Draft Scope of Work Released for Public Comment
*January 16, 2013	TPB is Briefed on Project Submissions and Draft Scope of Work
February 9, 2013	Public Comment Period Ends
*February 20, 2013	TPB Reviews Public Comments and is asked to Approve Project Submissions and Draft Scope of Work
May 3, 2013	<u>DEADLINE:</u> Transportation Agencies Finalize Congestion Management Documentation Forms (where needed) and CLRP & TIP Forms ¹ . (Submissions must not impact conformity inputs; note that the deadline for changes affecting conformity inputs was February 20, 2013).
June 13, 2013	Draft CLRP & TIP and Conformity Assessment Released for Public Comment at Citizens Advisory Committee (CAC)
*June 19, 2013	TPB Briefed on the Draft CLRP & TIP and Conformity Assessment
July 13, 2013	Public Comment Period Ends
*July 17, 2013	TPB Reviews Public Comments and Responses to Comments, and is Presented the Draft CLRP & TIP and Conformity Assessment for Adoption
*TPB Meeting	

¹ By this date, the CLRP forms must include information on the Planning Factors, Environmental Mitigation, Congestion Management Information, and Intelligent Transportation Systems; separate Congestion Management Documentation Forms (where needed) must also be finalized.