



Air Quality Conformity Overview

And

Briefing on the Air Quality Conformity Analysis
of the 2014 Constrained Long Range Plan
and the FY2015-2020 Transportation Improvement Program

ACPAC

September 15, 2014

The Clean Air Act

- ❖ Requires EPA to set National Ambient Air Quality Standards (NAAQS) for 6 common air pollutants (“criteria pollutants”)
- ❖ Requires EPA to review those standards at least every 5 years considering new scientific data and public health
- ❖ Requires EPA to designate areas as meeting (attainment) or not meeting (non-attainment) the standards
- ❖ Allows EPA to define boundaries of “non-attainment” areas

The Clean Air Act

- ❖ Requires states to establish a network of air monitoring stations to monitor and report on pollutant levels

- ❖ Requires states to develop State Implementation Plans (SIPs)
 - a specific plan to attain and maintain the standards for each area designated nonattainment for a NAAQS.

- ❖ Requires Transportation Conformity in non-attainment areas
 - a process which ensures that transportation plans and programs are consistent with the purpose of the SIP

4 Sources of Air Pollution



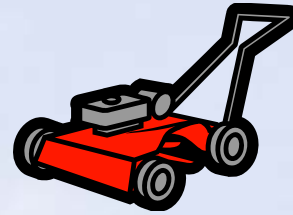
Point
Source

+



Mobile
Source

+



Area
Source

+



Non-road
source

Transportation Conformity

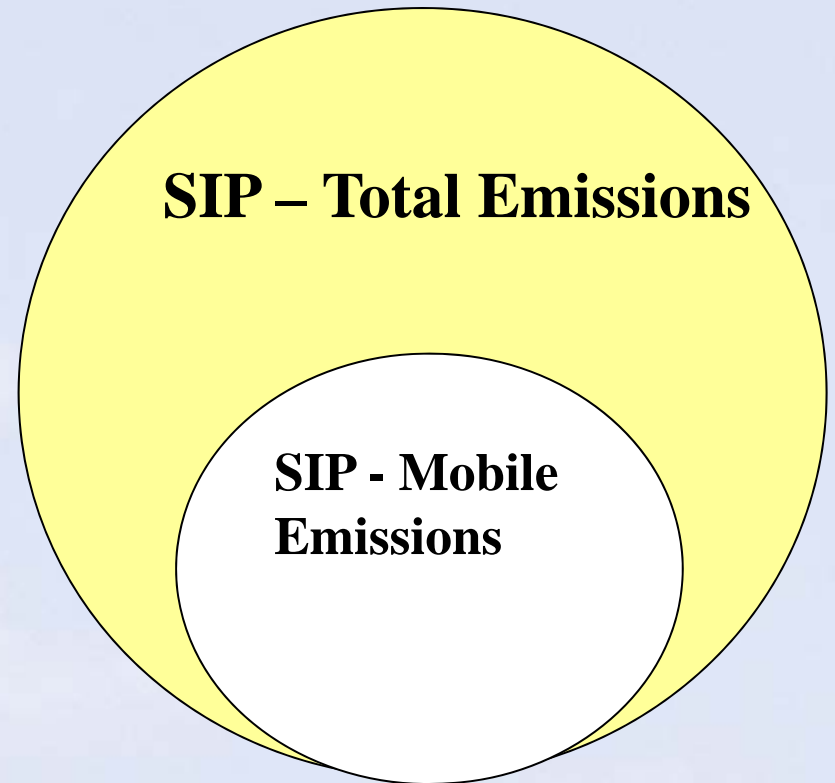
- ❖ Transportation Conformity only addresses mobile (motor vehicles) source pollution



- ❖ EPA's Transportation Conformity Rule establishes the criteria procedures for determining whether metropolitan transportation plans and programs conform to the SIP

SIPs And Mobile Source Budgets

- ❖ The SIP outlines a plan per which the area will attain the federal air quality standard by a certain date.
- ❖ Maintenance Plans outline a general plan on how the area will maintain its attainment of the federal air quality standards
- ❖ The SIP and Maintenance Plan contain maximum allowable amounts of emissions from each of the four sources for the area to meet the federal standard.
- ❖ The maximum allowable emissions from motor vehicles is also known as the *mobile emissions budget*.
- ❖ TPB must ensure that the short and long term motor vehicle emissions from the regional transportation plan (CLRP) and program (TIP) are within the SIP *mobile emissions budget* .



Washington DC-MD-VA: NAAQS Status

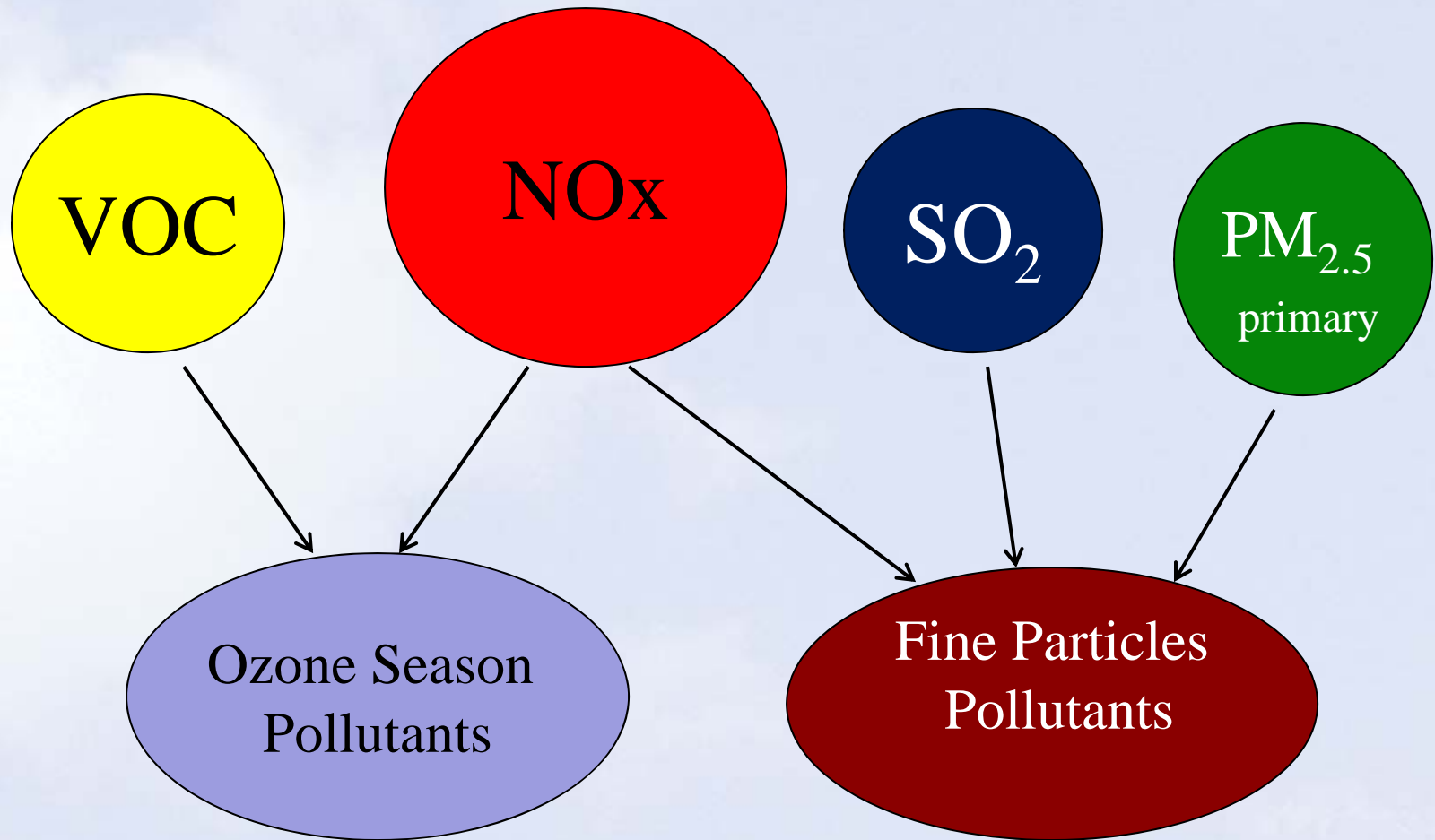
Our region is in “non-attainment” of :

- ❖ Ground Level Ozone Standards
(Pollutants - VOC and NO_x)
- ❖ Fine Particulate Matter Standards (Pollutants -
PM_{2.5}Direct - NO_x)

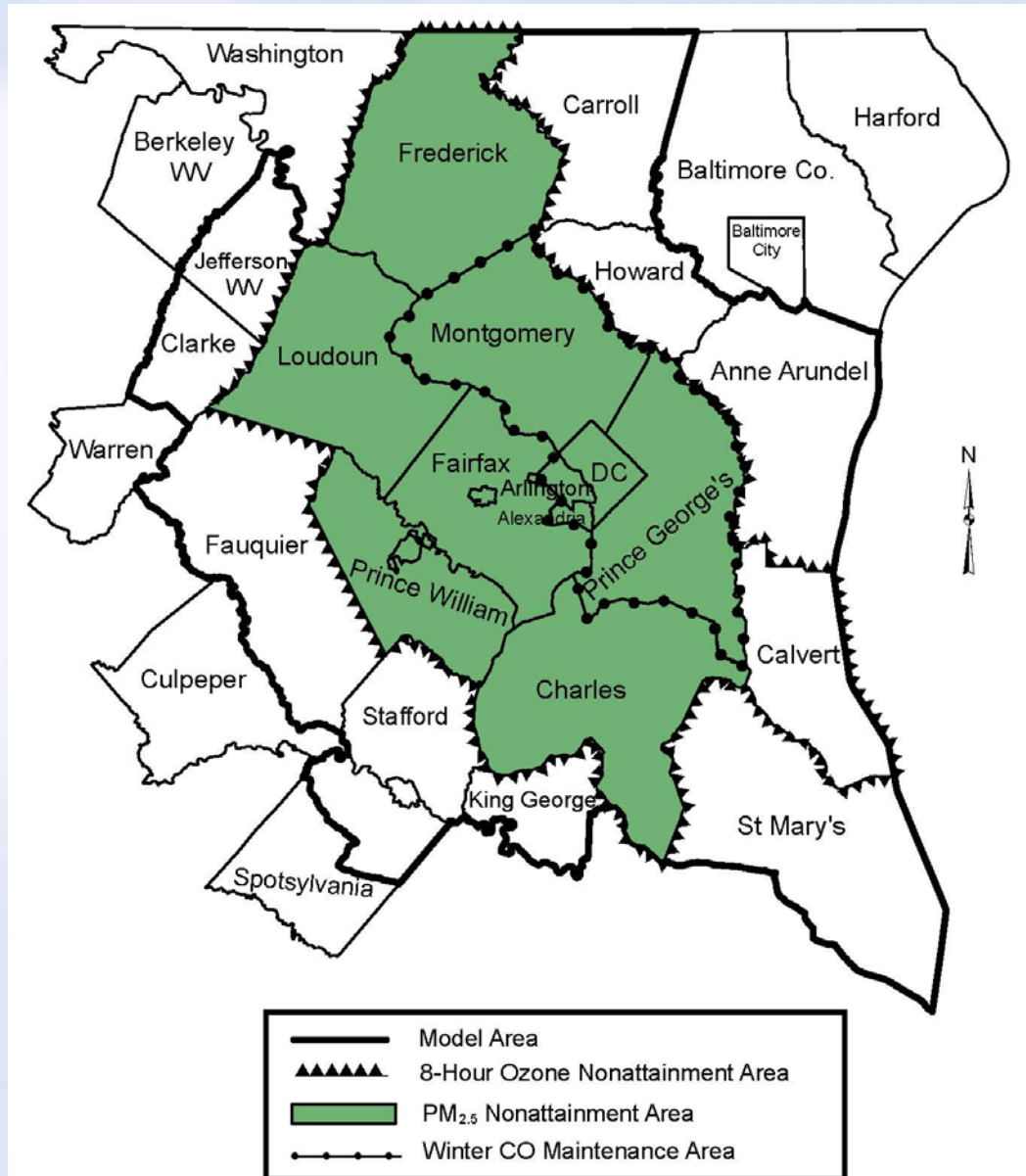
Our region is in “Maintenance” of :

- ❖ Carbon Monoxide Standards (CO)

Precursors for Ozone and Fine Particles



TPB Transportation Planning Area And Washington DC-MD-VA Non-Attainment and Maintenance Areas



Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

Key Technical Inputs and Tools:

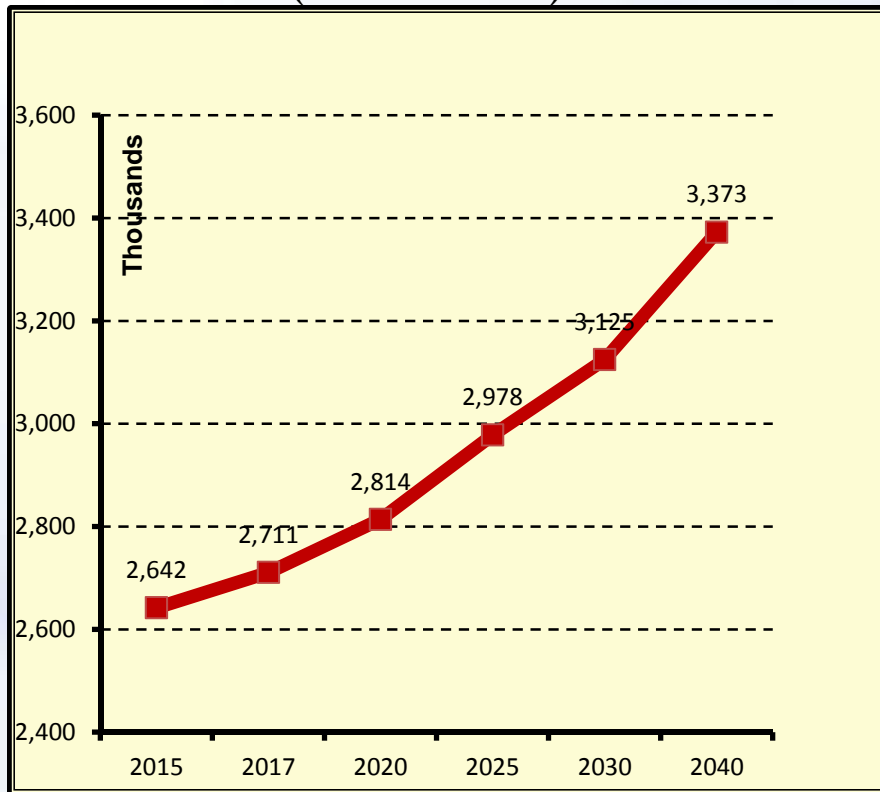
- ❖ Land use forecasts (Round 8.3 Cooperative Forecasts) - **NEW**
- ❖ “Regionally Significant” Transportation Projects - **UPDATED**
- ❖ Travel Demand Model (Version 2.3.57)
- ❖ Types and Age of Motor Vehicles (2011 Vehicle Registration Data -VIN)
- ❖ Motor Vehicle Emissions Model (EPA’s MOVES 2010a Model)
- ❖ MOVES Inputs: Fuel Supply and Formulation, Meteorology, and Inspection & Maintenance (I/M) Program Data - **UPDATED**

Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

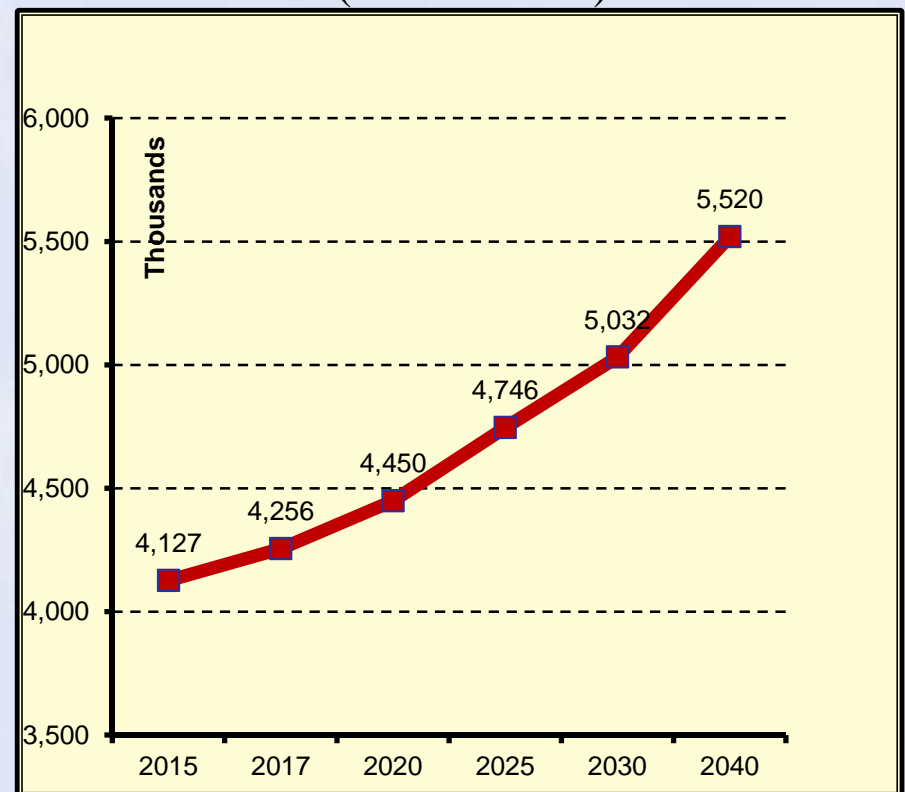
Round 8.3 Cooperative Forecasts

Households (in thousands)



NOTE: Values are for the modeled area.

Employment* (in thousands)



*Includes census adjustment

Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

Travel and Emissions Analysis Years:

2015, 2017, 2025, 2030, 2040

Mobile Source Emissions Budget Years:

2009, 2010, 2017, 2025

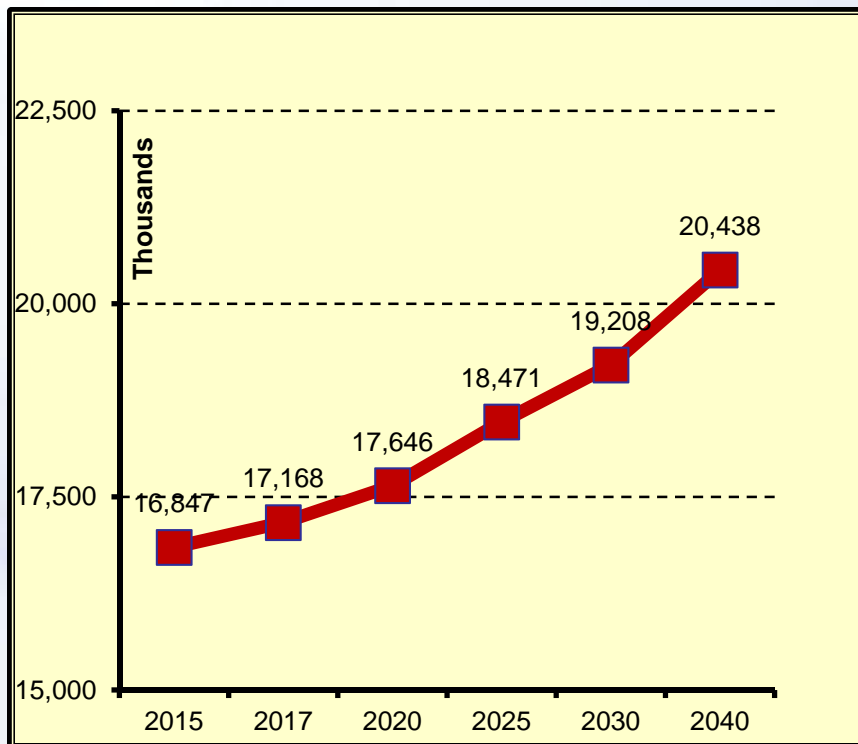
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2014 CLRP & FY2015-2020

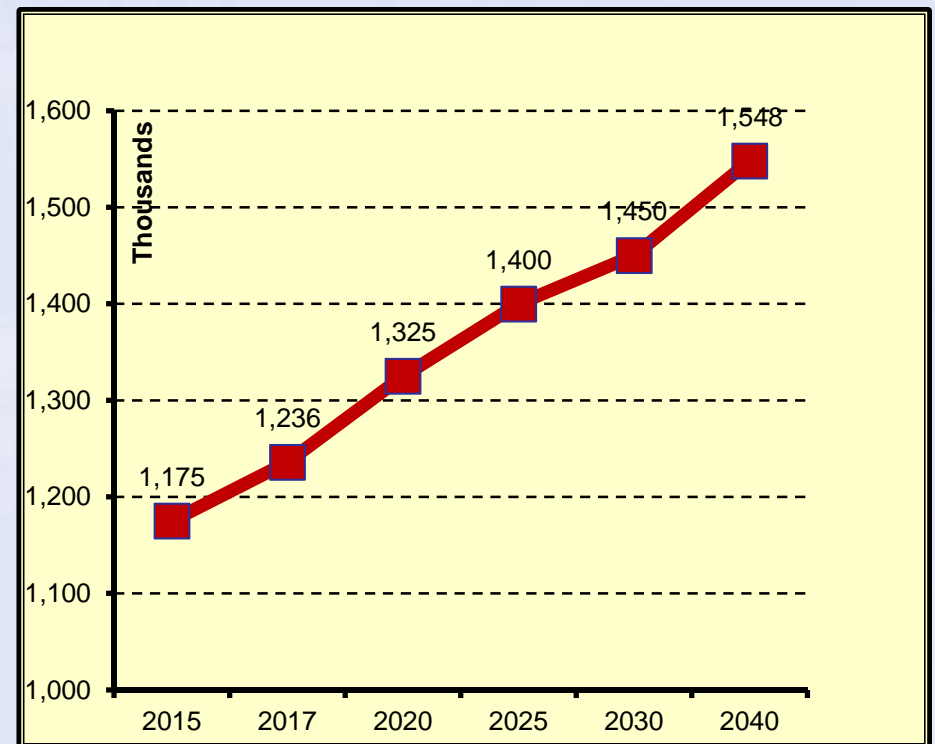
Average Weekday Traffic

Modeled Area

Vehicle Trips
(in thousands)



Transit Trips
(in thousands)



Air Quality Conformity Analysis

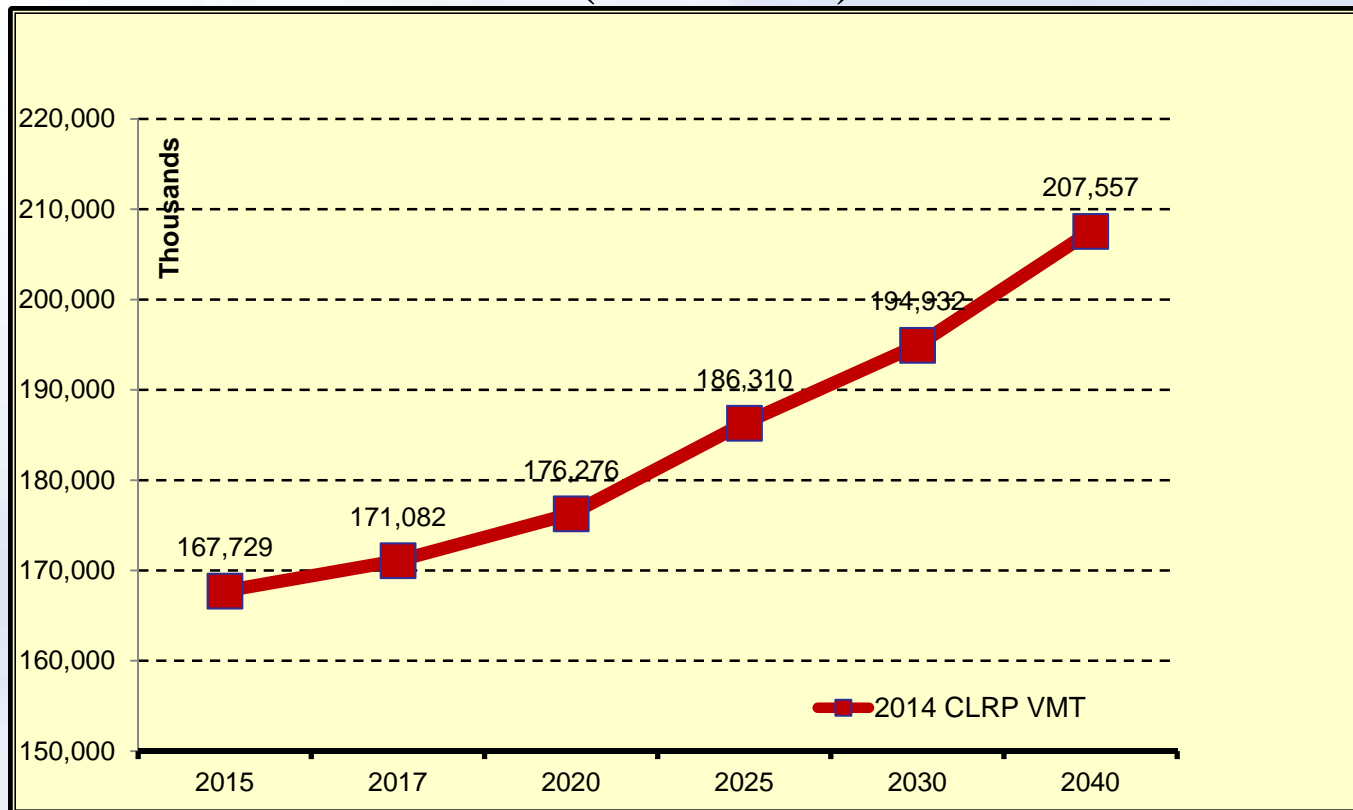
2014 CLRP & FY2015-2020

Average Weekday Traffic

Modeled Area

Vehicle Miles Traveled

(in thousands)



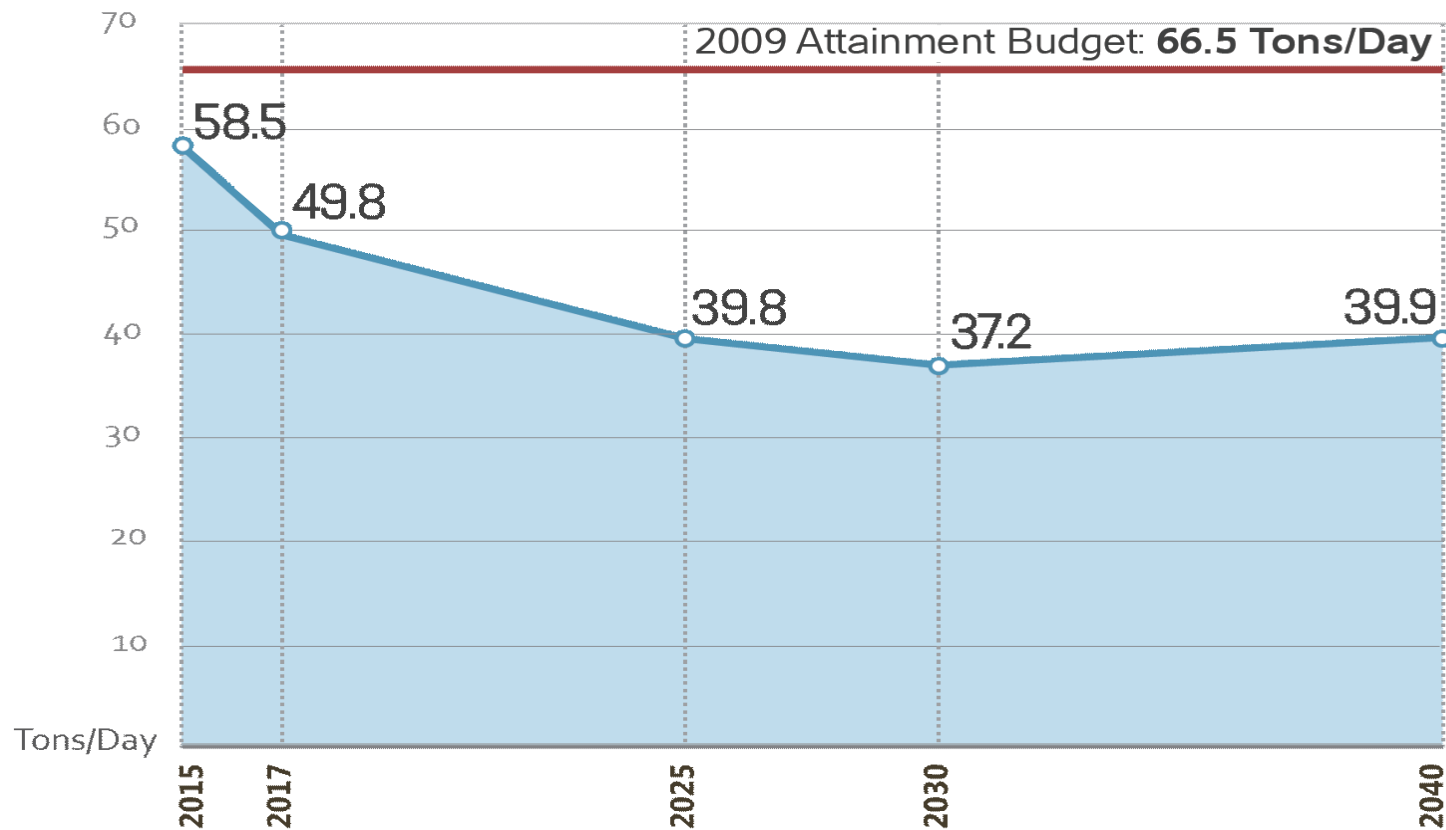
Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

NOTE: The Mobile Budget shown was developed in 2007, as part of the 8 Hour-Ozone SIP, in response to the 1997 Ozone Standard. This budget, as the most current approved by EPA, is required for use in any conformity analysis assessing ozone season pollutants.

Mobile Source Emissions

Ozone Season VOC

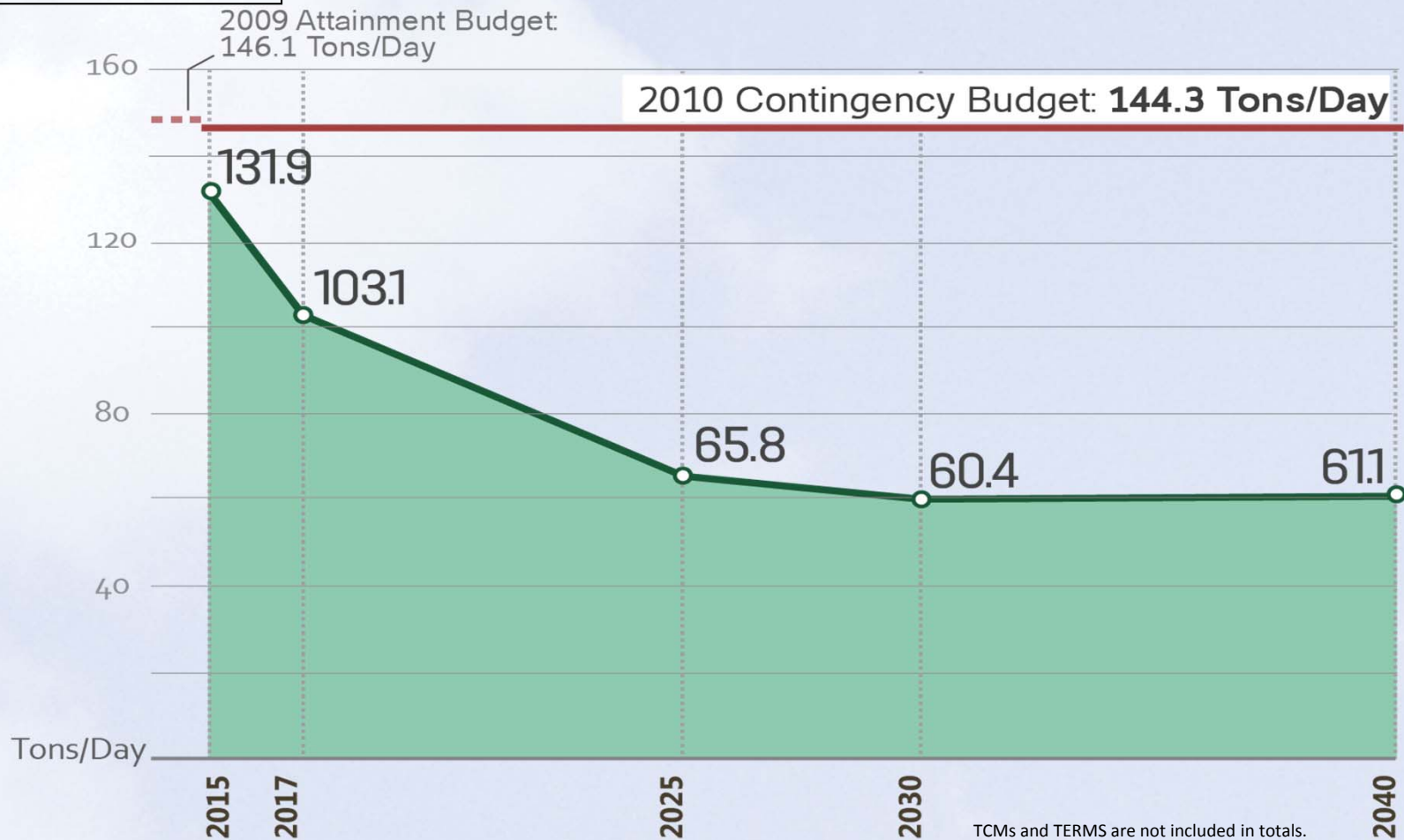


Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

NOTE: The Mobile Budgets shown were developed in 2007, as part of the 8-Hour Ozone SIP, in response to the 1997 Ozone Standard. These budgets, as the most current approved by EPA, are required for use in any conformity analysis assessing ozone season pollutants.

Mobile Source Emissions Ozone Season NO_x



Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

Mobile Source Emissions

PM_{2.5} Precursor NO_x



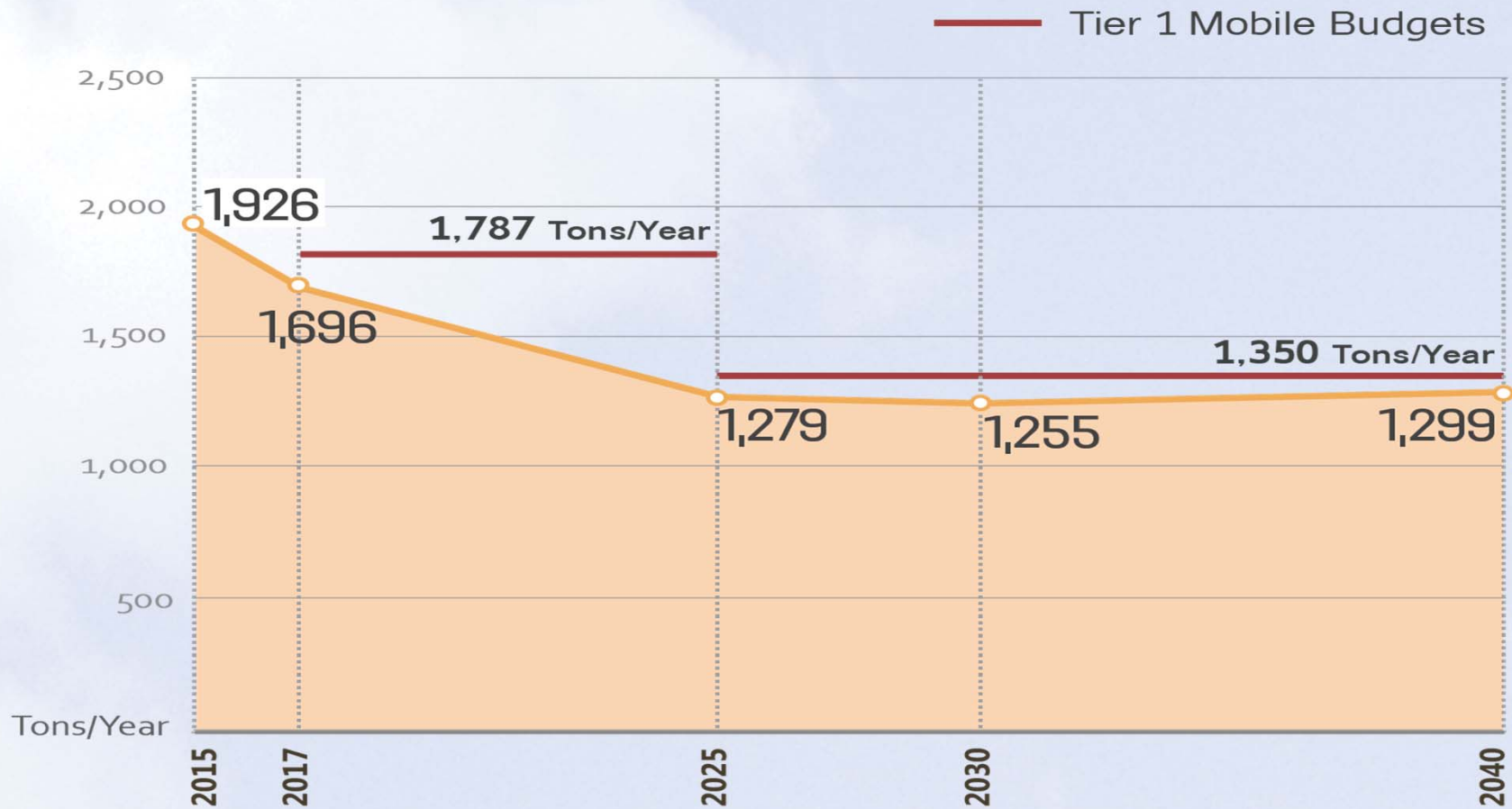
TCMs and TERMS are not included in totals.

Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

Mobile Source Emissions

PM_{2.5} Direct



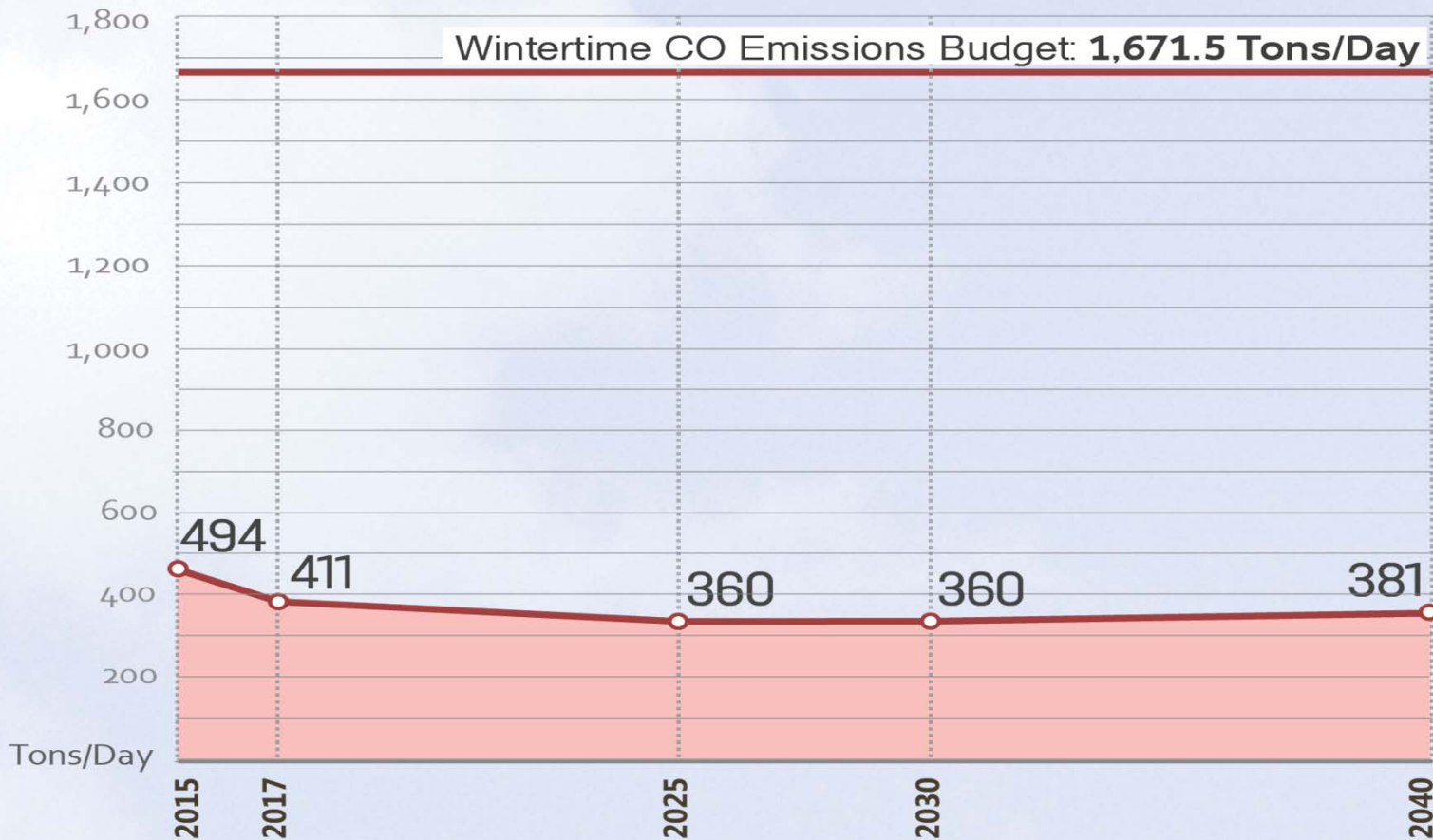
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Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

Mobile Source Emissions

Wintertime CO



TCMs and TERMS are not included in totals.

Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

Transportation Emission Reduction Measures (TERMs)

REGIONAL EMISSIONS REDUCTIONS- ALL TERMS COMBINED					
Years/Pollutants	Ozone - VOC	Ozone - NOx	PM2.5 Direct	Precursor NOx	Winter CO
	(tons/day)	(tons/day)	(tons/year)	(tons/year)	(tons/day)
2015	0.06	0.10	1.11	26.72	1.07
2017	0.07	0.10	1.42	27.53	1.30
2025	0.10	0.11	2.32	30.43	2.14
2030	0.12	0.13	2.99	34.63	2.74
2040	0.19	0.19	4.56	49.88	4.23

NOTE:

- TERMS are projects/programs funded by Transportation agencies to help reduce automobile travel thus reduce motor vehicle emissions.
- Emissions reduction benefits from these TERMS are not included in the emissions totals in this conformity analysis.

Air Quality Conformity Analysis

2014 CLRP & FY2015-2020

Schedule

*October 16, 2013	TPB is Briefed on Draft Call for Projects
*November 20, 2013	TPB Releases Final Call for Projects - Transportation Agencies Begin Submitting Project Information through On-Line Database
December 13, 2013	DEADLINE: Transportation Agencies Complete On-Line Submission of Draft Project Inputs.
March 7, 2014	Technical Committee Reviews Draft CLRP & TIP Project Submissions and Draft Scope of Work for the Air Quality Conformity Analysis
March 13, 2014	CLRP & TIP Project Submissions and Draft Scope of Work Released for Public Comment
*March 19, 2014	TPB is Briefed on Project Submissions and Draft Scope of Work
April 8, 2014	TPB Staff Briefs MWAQC TAC on Project Submissions and Scope of Work
April 12, 2014	Public Comment Period Ends
*April 16, 2014	TPB Reviews Public Comments and is asked to Approve Project Submissions and Draft Scope of Work
June 6, 2014	DEADLINE: Transportation Agencies Finalize Congestion Management Documentation Forms (where needed) and CLRP & TIP Forms. (Submissions must not impact conformity inputs; note that the deadline for changes affecting conformity inputs was April 16, 2014).
September 5, 2014	Technical Committee Reviews Draft CLRP & TIP and Conformity Analysis
September 11, 2014	Draft CLRP & TIP and Conformity Analysis Released for Public Comment at Citizens Advisory Committee (CAC)
*September 17, 2014	TPB Briefed on the Draft CLRP & TIP and Conformity Analysis
September 9, 2014	TPB Staff Briefs MWAQC TAC on the Draft CLRP & TIP and Conformity Analysis
October 11, 2014	Public Comment Period Ends
*October 15, 2014	TPB Reviews Public Comments and Responses to Comments, and is Presented the Draft CLRP & TIP and Conformity Analysis for Adoption
*TPB Meeting	

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2014 CLRP & FY2015-2020

Questions?