

**Ozone Motor Vehicle Emissions  
Budgets in the  
8-Hour Ozone State Implementation  
Plan**

Presented to the:

RPP 4/19/17

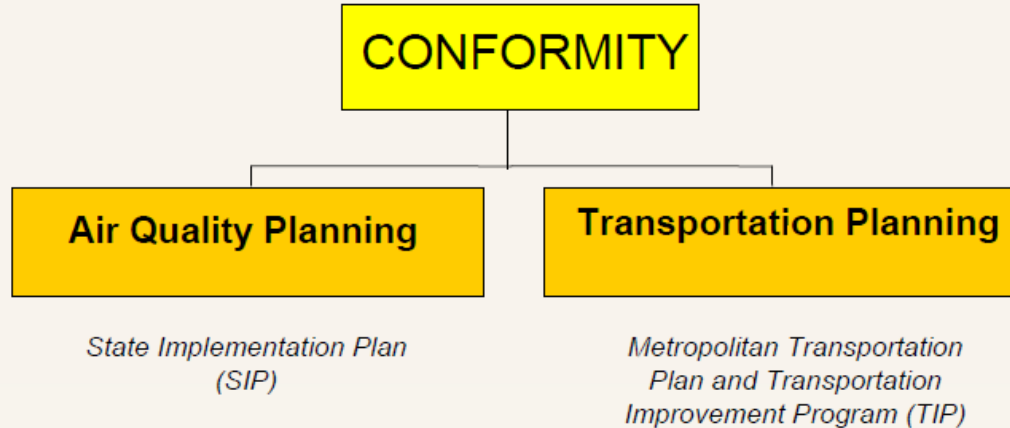
# OVERVIEW

- What is transportation conformity?
- Why do we need conformity analysis?
- What are the proposed Ozone budgets?

# What is Transportation Conformity?



## Transportation Conformity: A Link Between Transportation and Air Quality Planning



# Why do we need transportation conformity?

- CAA section 176(c) requires that federally supported transportation projects in nonattainment and maintenance areas cannot:
  - Cause or contribute to new air quality violations,
  - Worsen existing violations, or
  - Delay timely attainment of the national ambient air quality standards or interim milestones
- Conformity rule establishes requirements for transportation plans, TIPs, and federally funded or approved projects in nonattainment and maintenance areas

# How is regional conformity determined?

1. Interagency and public consultation.
2. Timely implementation of transportation control measures (TCMs).
3. Up-to-date planning assumptions and emission models.
4. Conduct an analysis that uses an appropriate emissions test.

# When do we do Conformity?

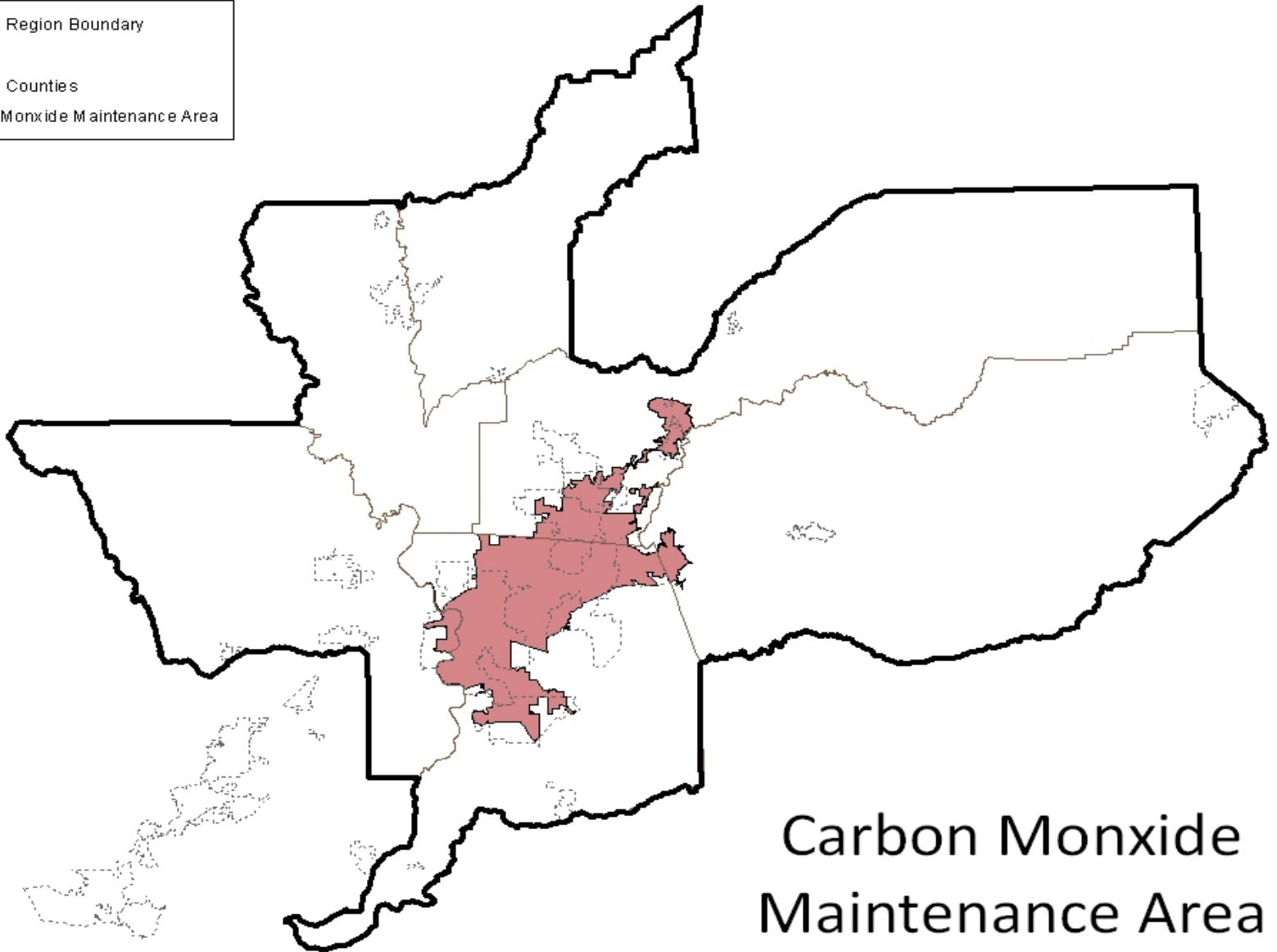
- MTP update
- MTIP Adoption / Amendment
- Seven to eight months to process an amendment that requires regional conformity.
- Next Conformity: 2019 MTIP (start date early 2018).

How do we know what to analyze?

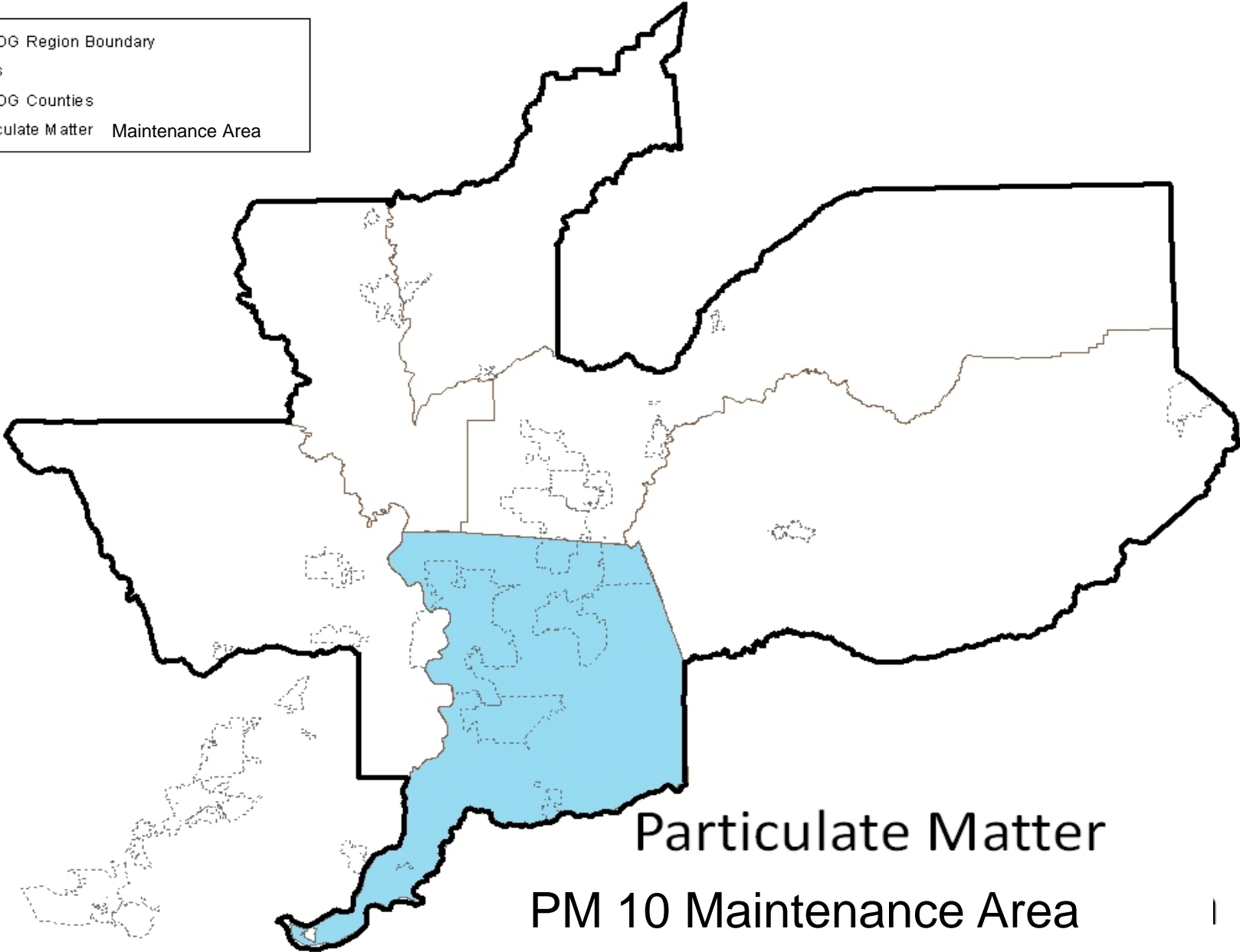
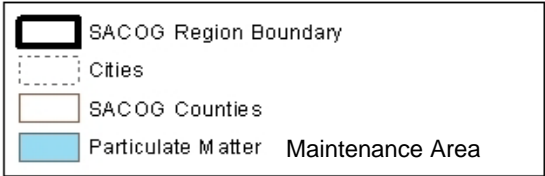
**- CRITERIA POLLUTANTS AND GEOGRAPHIES FOR WHICH THE REGION IS CLASSIFIED AS NON-ATTAINMENT OR MAINTENANCE**

# Criteria Pollutant Geographies

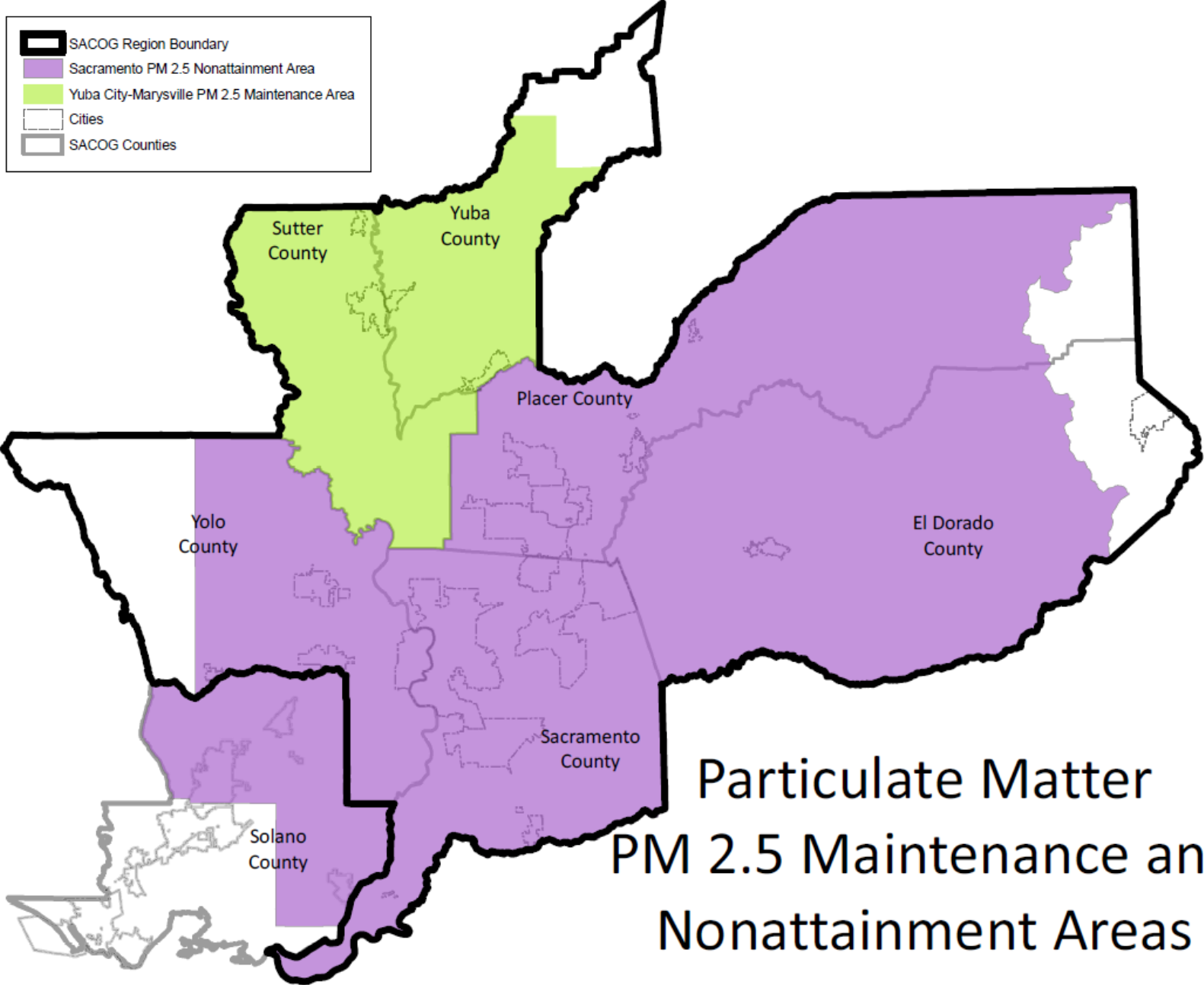
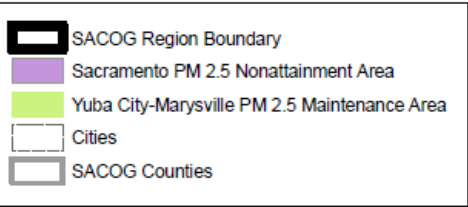








Carbon Monoxide  
Maintenance Area

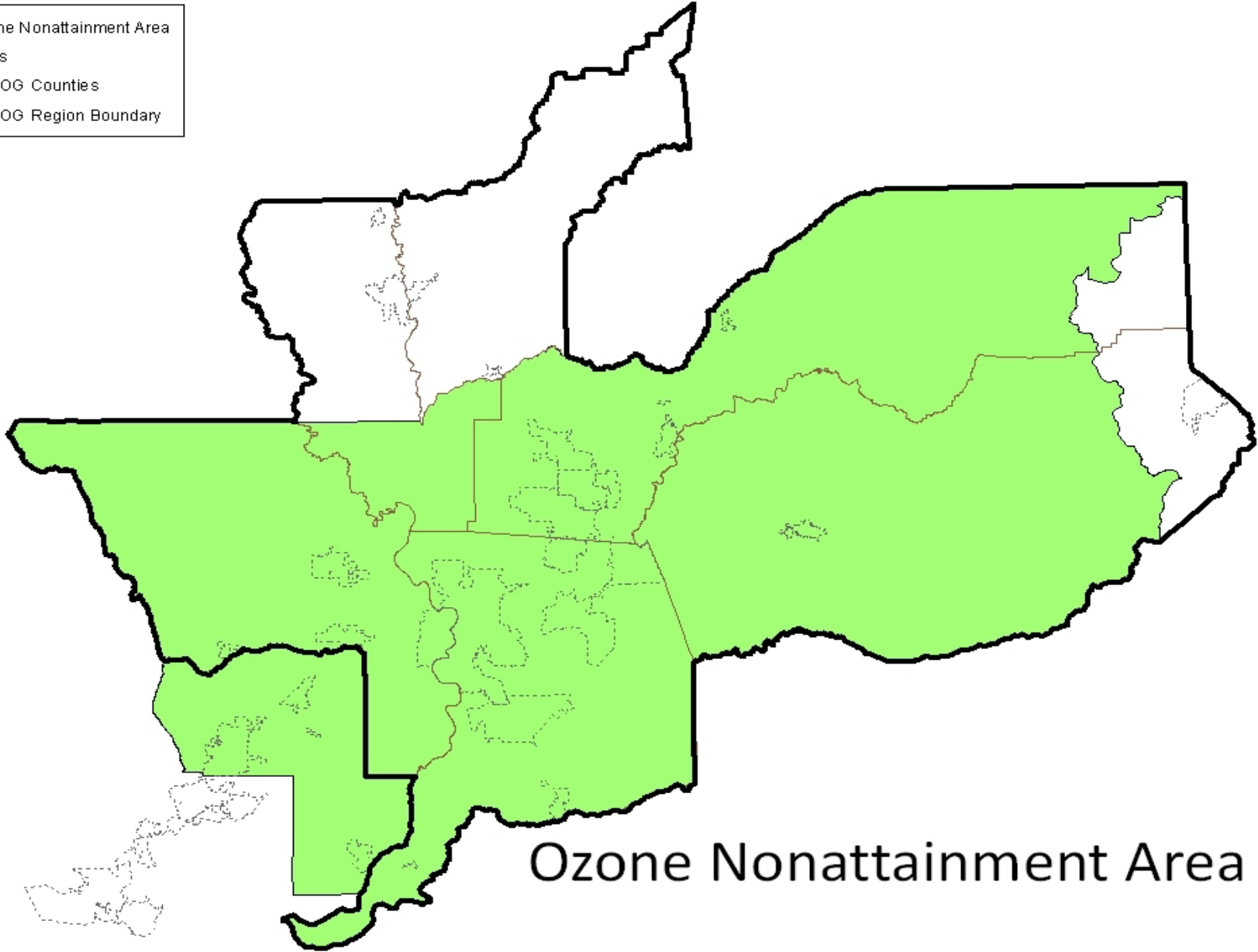


Particulate Matter  
 PM 10 Maintenance Area



# Particulate Matter PM 2.5 Maintenance and Nonattainment Areas

-  Ozone Nonattainment Area
-  Cities
-  SACOG Counties
-  SACOG Region Boundary



Ozone Nonattainment Area

# Regional Conformity Determination Process

- “What is RPP’s role?”
  - Interagency consultation
    - Initiate the beginning of a conformity process.
    - Provide consensus on how the analysis will be conducted.
    - TCMs
    - Provide interagency consultation on proposed conformity budgets

# Latest Planning Assumptions

- “Planning Assumptions” identify the various data sources and test methods that will be used to conduct a conformity analysis.
  - Project Selection
  - Criteria pollutants
  - Tests
  - Years
  - Model

# Project Selection

- Is my project in the MTIP and MTP?
  - Is my project exempt (non-capacity increasing) or non-exempt from air quality conformity?
  - Does the scope of my project in the MTIP and MTP accurately describe the work?
- What year do I plan to open my project up to traffic?
- How long will it take to make a change to the MTIP and MTP?

What specifically in these projects are we analyzing?

**- ON-ROAD MOBILE EMISSIONS**



# Type of Tests

- **BUDGET TEST**
- **INTERIM TEST**

# Models

- SACOG's regional Travel Demand Model
- EMFAC14 (Emission Factor) - CARB

# Interim Emissions Test

- This test is used when there are no EPA-approved budgets in place
- The test analyzes:
  - Final year of the MTP
  - Interim year or any ten year gaps

# Interim Test

- $PM_{2.5}$  –Sacramento Area:
  - Baseline Year: 2008
  - Intermediate Year: 2018, 2027
  - Final MTP Year: 2036

# A Budget Test

- A budget test compares EPA-approved emissions standards to those generated by the SACOG model. The region cannot exceed the approved EPA budgets.
- Where do budgets come from?
  - SACOG provides data to ARB from the most recent approved version of the MTP/SCS.
  - ARB uses SACOG data (and Solano County data) to develop proposed budgets for use in future conformity demonstrations and the SIP reasonable further progress and attainment demonstrations.
  - SACOG & Air Districts review budgets to ensure workability within the context of attaining the standard as expeditiously as practical.

# A Budget Test Cont.

- The SACOG budget test must analyze the:
  - Budget years
  - Attainment year
  - Final year of the MTP: 2036
  - Intermediate years or any ten-year gaps

# SACOG Budget Test

- Carbon Monoxide
- PM10
- PM2.5: Yuba City-Marysville
- **Ozone:**
  - Current Budget Years: 2017, 2018
  - Proposed Budget Years: 2018, 2021, 2024





What are the current and proposed  
Ozone budgets?

# Current Budgets

**Table 1: Current Budgets**<sup>1</sup>  
(Ozone, 2013 SIP Revision)-Developed using EMFAC2011

Sacramento Federal Ozone Nonattainment Area	2017		2018- Attainment		2021		2024	
	ROG	NO <sub>x</sub>	ROG	NO <sub>x</sub>	ROG	NO <sub>x</sub>	ROG	NO <sub>x</sub>
Baseline Emissions	16.58	36.11	15.46	33.19	15.46	33.19	15.46	33.19
Safety Margin	1	2	1	3	1	3	1	3
Total	17.58	38.11	16.46	36.19	16.46	36.19	16.46	36.19
Conformity Budget	18	39	17	37	17	37	17	37

<sup>1</sup> Current budgets for the 2009 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, 2013 SIP Revisions for the Sacramento Ozone Nonattainment Area were approved by EPA effective March 2, 2015 (80 FR 4795).

# Proposed Budgets

**Table 2: Proposed Budgets**

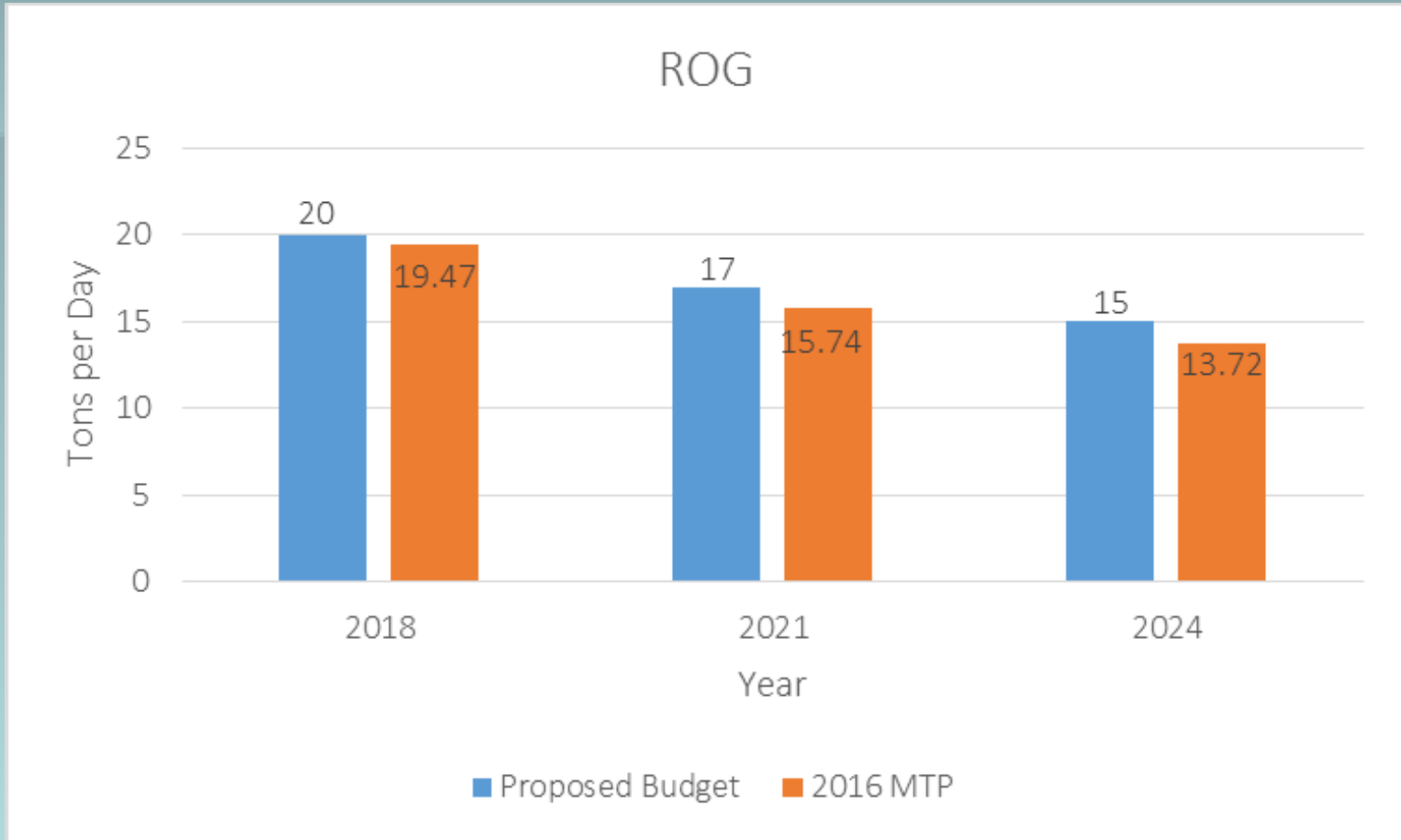
(Ozone, 2017 SIP Revision)-Developed using EMFAC2014:

Sacramento Federal Ozone Nonattainment Area	2018		2021		2024- Attainment	
	ROG	NO <sub>x</sub>	ROG	NO <sub>x</sub>	ROG	NO <sub>x</sub>
Baseline Emissions	19.85	35.38	16.24	26.96	14.03	19.55
Safety Margin	--	--	--	0.50	--	--
Total	19.85	35.38	16.24	27.46	14.03	19.55
Conformity Budget*	20	36	17	28**	15	20

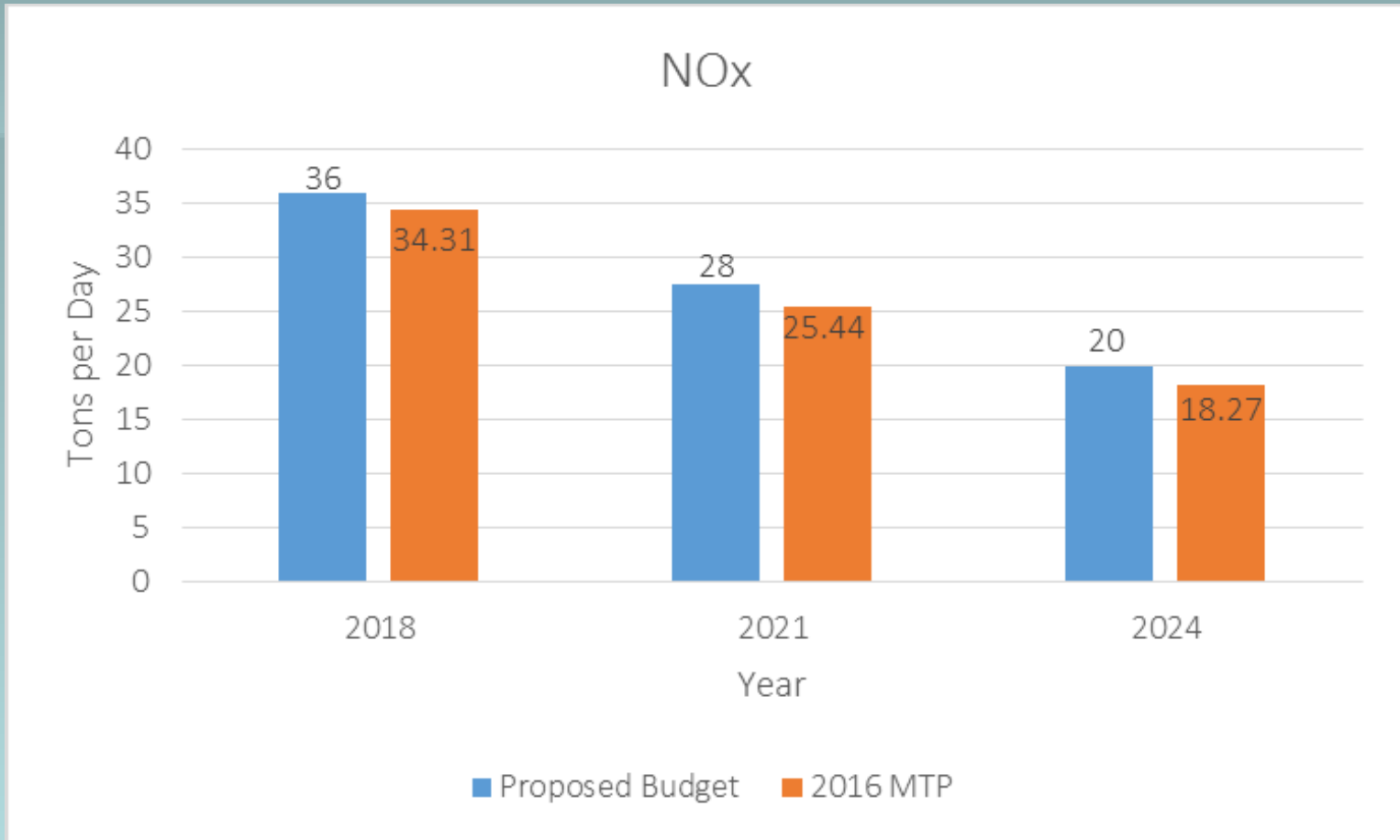
\*Budgets calculated with EMFAC2014 using SACOG 2016 MTP activity and MTC data for Eastern Solano County. Budgets are rounded up to the nearest ton.

\*\*0.5 tpd is included as a safety margin in the process, which is needed primarily to allow flexibility to adjust to uncertainties about population and economic growth and other factors which may affect the actual emissions during the near-term years of the emissions budget.

# How do these budgets look in comparison to the 2016 MTP/SCS?



# How do these budgets look in comparison to the 2016 MTP/SCS?



# Next Steps

- SACOG Board Action
- Air District Action
- ARB Action and Submittal
- EPA Action or Adequacy Finding

Questions?

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