

EPA's Proposed New 8-hour Ozone NAAQS and SIP Requirements

**Pima County Environmental Quality Advisory
Council**

March 18, 2015

Agenda

Proposed new 8-hour ozone standard

- Background
- Proposed NAAQS
- Schedule for NAAQS Implementation
- Boundary Guidance
- Timing of SIP submittals
- SIP Requirements
- Possible Approaches for Pima County

Background: National Ambient Air Quality Standards (NAAQS)

- Federal Clean Air Act requires U.S. EPA to set NAAQS for air pollutants considered harmful to public health & environment.
- Primary standards protect public health including sensitive populations such as asthmatics, the elderly and children.
- Secondary standards also set to protect public welfare including decreased visibility and damage to animals, crops, vegetation, and buildings.
- EPA has set NAAQS for 7 air pollutants: airborne lead, carbon monoxide, sulfur dioxide, nitrogen dioxide, particulate matter (10 and 2.5 microns or less), and ozone.

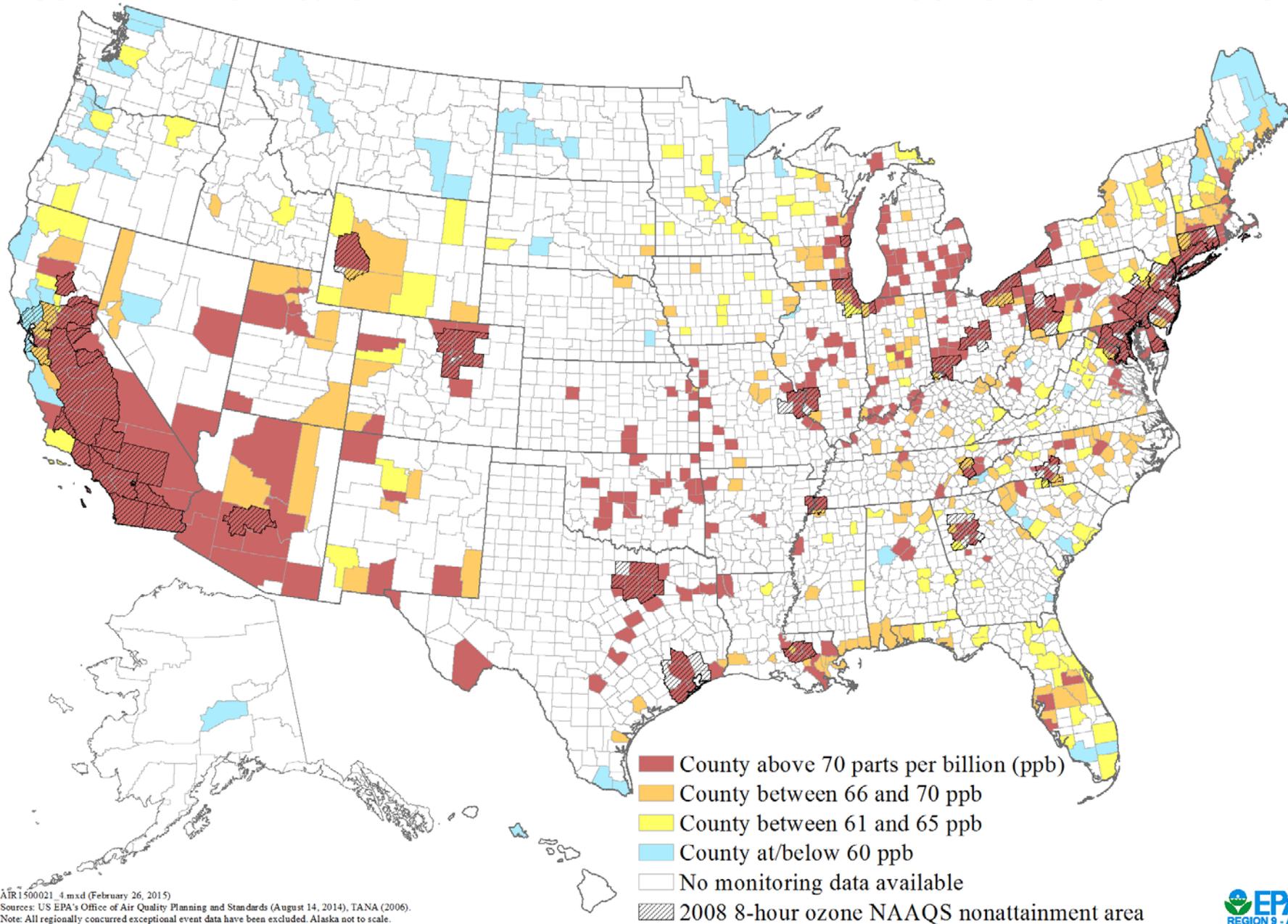
Proposed Ozone NAAQS

- EPA last changed ozone standard in 2008 from 80 to 75 parts per billion (ppb).
- November 25, 2014, EPA proposed to strengthen the standard based on extensive scientific evidence about ozone's effects on public health.
- EPA proposed a range of 65 to 70 ppb for the primary standard and adding a secondary standard
- CASAC recommended 60-70 for primary; EPA taking comment on 60 ppb

Timeline for Setting Proposed NAAQS

- Proposal signed November 25, published December 17, 2014
- 90-day public comment period ended yesterday, March 17
- Three hearings nationally, one in Sacramento February 2
- Final rule court-ordered deadline: October 1, 2015

2011-2013 COUNTY-LEVEL 8-HOUR OZONE DESIGN VALUES COMPARED TO PROJECTED 65 PPB AND 70 PPB PRIMARY 8-HOUR OZONE STANDARDS

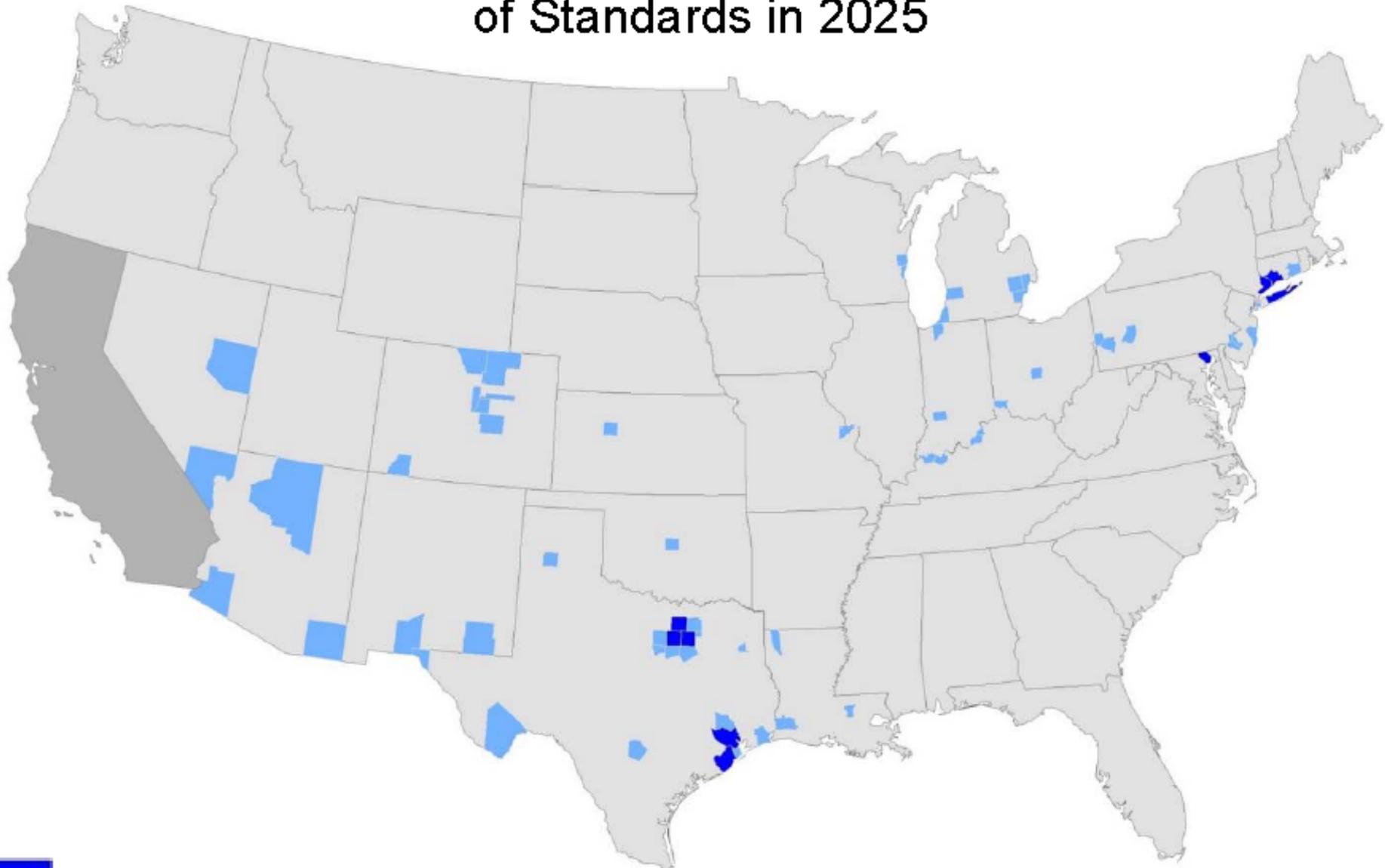


ÂIR1500021_4.mxd (February 26, 2015)

Sources: US EPA's Office of Air Quality Planning and Standards (August 14, 2014), TANA (2006).

Note: All regionally concurred exceptional event data have been excluded. Alaska not to scale.

EPA Projects Most Counties Would Meet the Proposed Range of Standards in 2025

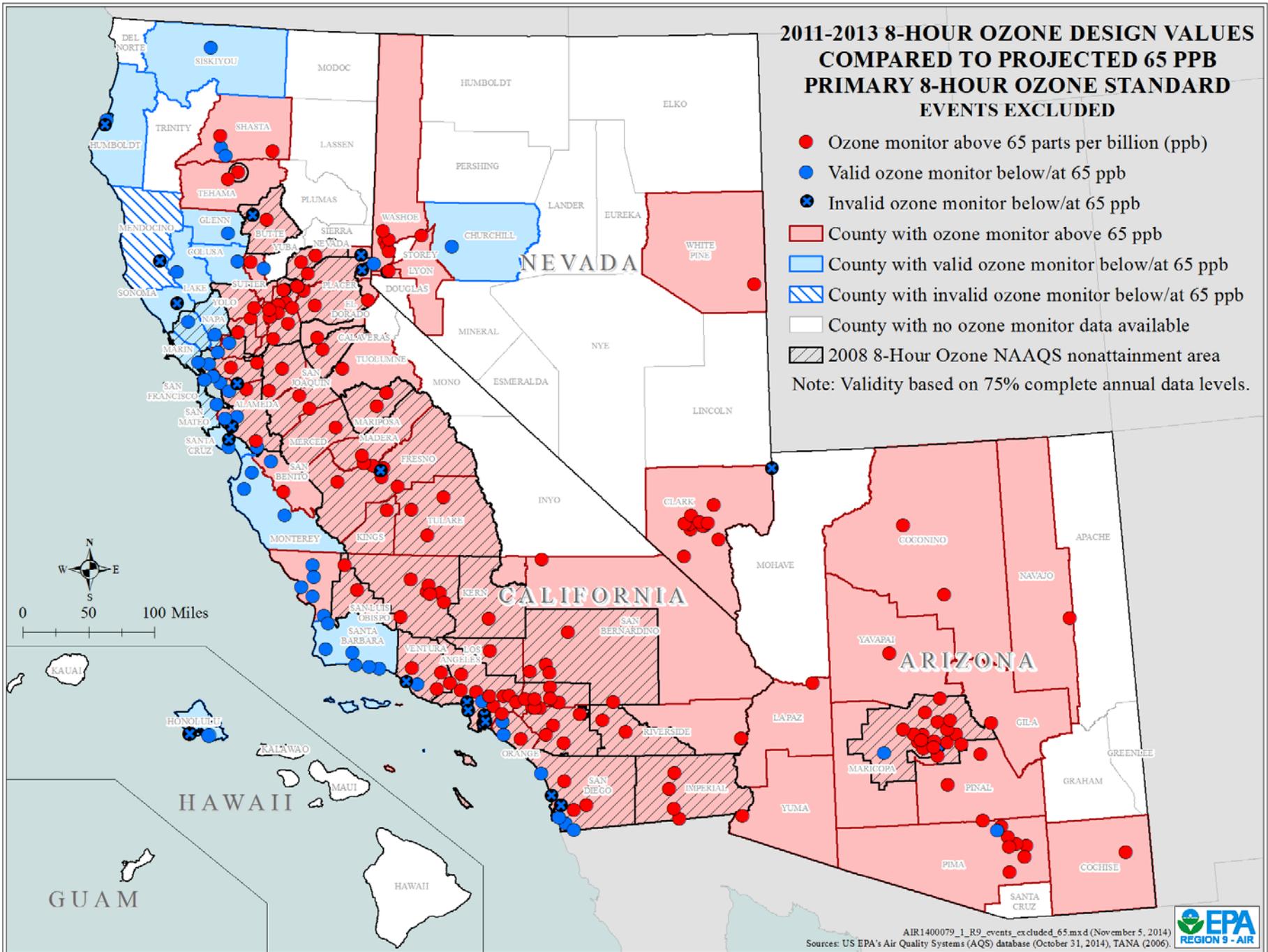


-  9 counties outside of California would violate 70 parts per billion (ppb)
-  59 additional counties outside of California would violate 65 ppb for a total of 68

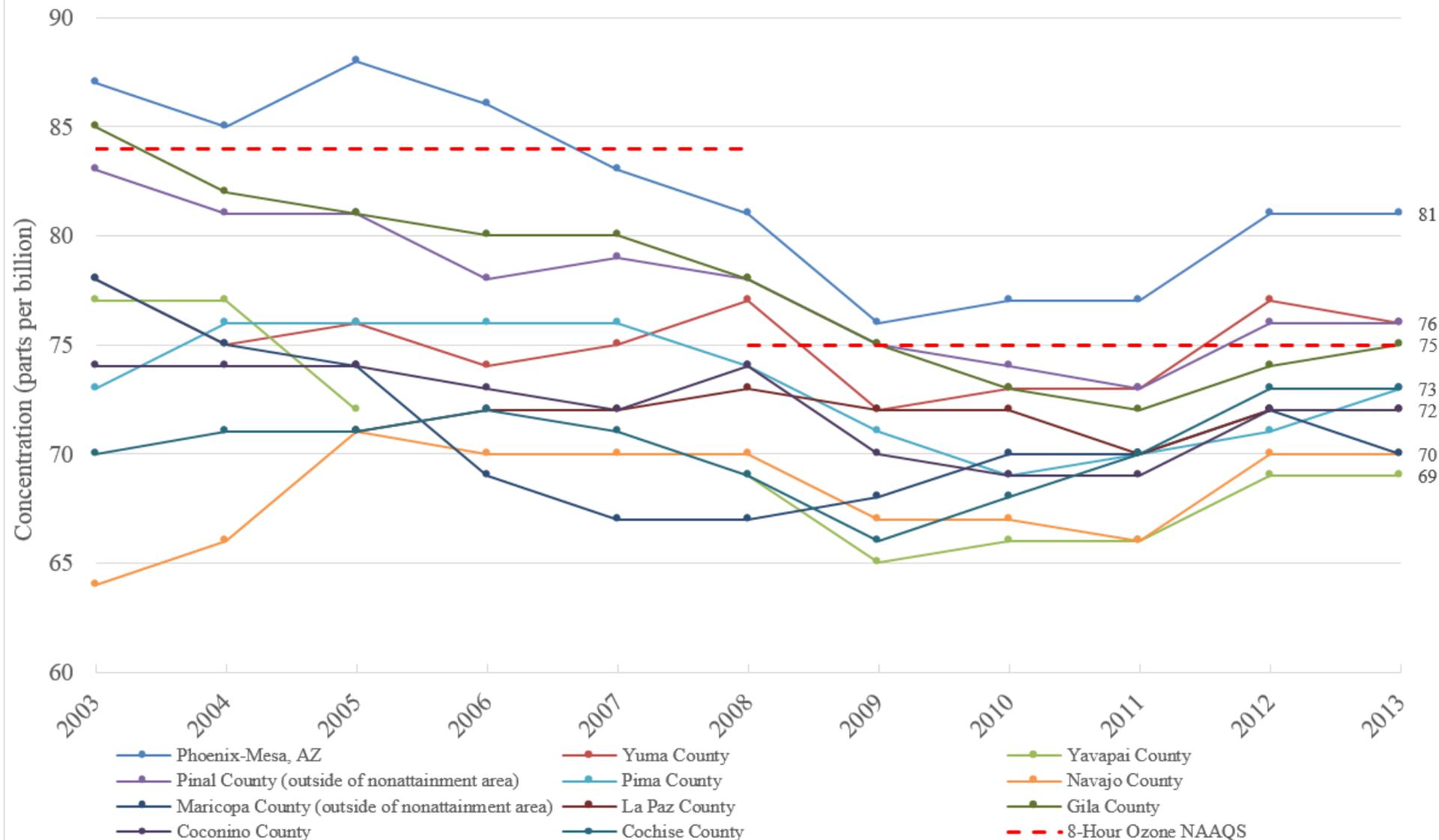
Because several areas in California are not required to meet the existing standard by 2025 and may not be required to meet a revised standard until sometime between 2032 and 2037, EPA analyzed California separately. Details are available in the Regulatory Impact Analysis for this proposal.

2011-2013 8-HOUR OZONE DESIGN VALUES COMPARED TO PROJECTED 65 PPB PRIMARY 8-HOUR OZONE STANDARD EVENTS EXCLUDED

- Ozone monitor above 65 parts per billion (ppb)
 - Valid ozone monitor below/at 65 ppb
 - ⊗ Invalid ozone monitor below/at 65 ppb
 - County with ozone monitor above 65 ppb
 - County with valid ozone monitor below/at 65 ppb
 - County with invalid ozone monitor below/at 65 ppb
 - County with no ozone monitor data available
 - 2008 8-Hour Ozone NAAQS nonattainment area
- Note: Validity based on 75% complete annual data levels.



8-HOUR OZONE DESIGN VALUES IN ARIZONA BY DESIGNATED AREA AND COUNTY, 2003-2013



Source: US EPA's Air Quality Systems (AQS) database (November 18, 2014). The 2008 national ambient air quality standard (NAAQS) for 8-hour ozone is 0.075 parts per million (ppm), or 75 parts per billion (ppb). The design value is a calculation of each year's 4th-highest day's recorded values, averaged over a 3-year period at an air quality monitor. The air quality monitor that has the highest design value for each year in a nonattainment area is shown here. X-axis labels represent the last year of a monitor's 3-year time period. All exceptional event data (e.g., high winds and wildfires) that EPA has concurred on have been excluded from design value calculations. Not all design values are valid due to incomplete data.

Timeline for Implementing Proposed Standard

- By **October 1, 2016**: States recommend to EPA the designation for all areas of the state and the boundaries for those areas.
- By **June 1, 2017**: EPA responds to states' initial recommendations.
- By **October 1, 2017**: EPA issues final area designations; those designations *likely based on 2014-2016 air quality data*.
- **2020 to 2021**: States complete development of implementation plans, outlining how they will reduce pollution to meet the standards.
- **2020 to 2037**: States are required to meet the health standard, with deadlines depending on the severity of an area's ozone problem.

Boundary Guidance

- Within two years of promulgation of a new or revised NAAQS, EPA must list and designate all areas in the country as:
 - Attainment - areas that meet the standard
 - Nonattainment - areas that either do not meet the standard, or are contributing to a nearby area that does not meet the standard
 - Unclassifiable - areas where there is insufficient information to make a determination as to attainment
- Designations are based on current air quality information, recommendations from state governors and tribal leaders, and other relevant information.

Boundary Guidance

- Boundary guidance will not be issued until a final standard is promulgated.
- Region 9 anticipates that it will be similar to the guidance issued for the 2012 PM_{2.5} NAAQS:
 - Factor 1: Air Quality Data
 - Factor 2: Emissions and Emissions-Related Data
 - Factor 3: Meteorology
 - Factor 4: Geography/Topography
 - Factor 5: Jurisdictional Boundaries

Timing of SIP Submittals

- Infrastructure SIP—within 3 years of NAAQS promulgation (October 2018)
- Attainment Plans—within 36-48 months after designations depending on classification (October 2020-October 2021)

Attainment Schedule by Classifications

Classification	Schedule
marginal	3 years to attain
moderate	6 years to attain
serious	9 years to attain
severe	15-17 years to attain
extreme	20 years to attain

*Areas must attain as expeditiously as practicable, but not later than the schedule in the table. Two one-year extensions are available in certain circumstances based on air quality.

SIP Basics

Overview of CAA Ozone Nonattainment Area Planning & Control Mandates by Classification

		NSR offset ratio	Major source threshold	
EXTREME (20 years to attain)	TRAFFIC CONTROLS DURING CONGESTION	1.5 : 1 Extreme	10	
	CLEAN FUELS REQUIREMENT FOR BOILERS			
SEVERE (15/17 years to attain)	PENALTY FEE PROGRAM FOR MAJOR SOURCES	1.3 : 1 Severe	25	
	LOW VOC REFORMULATED GAS			
	VMT GROWTH OFFSET			
SERIOUS (9 years to attain)	VMT DEMONSTRATION (& TCMs IF NEEDED)	1.2 : 1 Serious	50	
	NSR REQUIREMENTS FOR EXISTING SOURCE MODS			
	ENHANCED VEHICLE I/M			CLEAN FUELS PROGRAM (IF APPLICABLE)
	MODELED DEMO OF ATTAINMENT			MILESTONE CONTINGENCY MEASURES FOR RFP
	3% ANNUAL RFP UNTIL ATTAINMENT			ENHANCED MONITORING PLAN
	STAGE II GASOLINE VAPOR RECOVERY			
MODERATE (6 years to attain)	BASIC VEHICLE I/M	1.15 : 1 Moderate	100	
	CONTINGENCY MEASURES FOR FAILURE TO ATTAIN			
	ROP (15% RFP OVER 6 YEARS)			
	VOC/NOx RACT for MAJOR/CTG SOURCES			ATTAINMENT DEMONSTRATION
MARGINAL (3 years to attain)	TRANSPORTATION CONFORMITY DEMONSTRATION	1.1 : 1 Marginal	100	
	REFORMULATED GAS			
	NEW SOURCE REVIEW PROGRAM			MAJOR SOURCE EMISSION STATEMENTS
	BASELINE EMISSION INVENTORY (EI)			PERIODIC EMISSION INVENTORY UPDATES

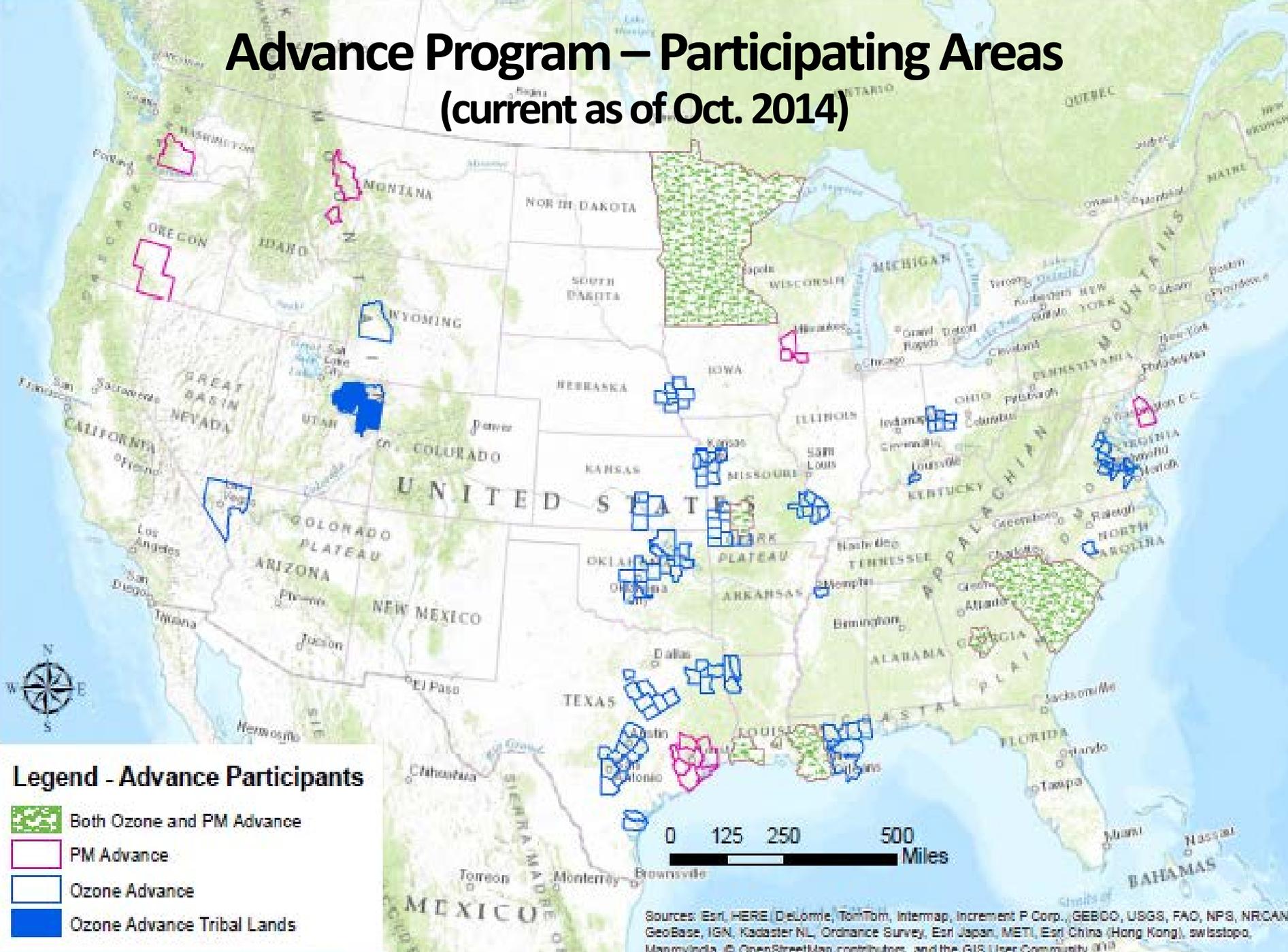
Planning Options – CAA section 179B

- (a) “[a state] implementation plan...shall be approved by the Administrator if
 - (1) [the implementation plan meets all the requirements other than the attainment demonstration requirement], and
 - (2) the submitting state establishes...that the implementation plan...would be adequate to attain and maintain the NAAQS by the attainment date, but for emissions emanating outside the US.”

Ozone Reduction Efforts - History

- **Early Action Compacts**
 - Agreements by violating areas, pledging to meet the 1997 8-hour ozone standard earlier than required. Additionally, the states had to meet a number of criteria and to meet certain milestones.
- **Ozone Flex Program**
 - A collaborative effort by EPA, states, tribes, and local governments in undesignated areas to encourage emission reductions and to take proactive measures to manage ozone based on narrow criteria
- **Ozone Advance Program**
 - A voluntary program that encourages ozone attainment and maintenance areas nationwide to take near-term, proactive steps to improve air quality and ensure continued health protection over the long term based on expanded criteria.

Advance Program – Participating Areas (current as of Oct. 2014)



Legend - Advance Participants

- Both Ozone and PM Advance
- PM Advance
- Ozone Advance
- Ozone Advance Tribal Lands

0 125 250 500 Miles

Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Ozone Advance

- EPA Support
 - Fostering communication
 - Webinars
 - Development of resources/tools
 - Grants information
 - Connecting participants with each other
 - Website – www.epa.gov/ozonepmadvance

Potential Planning Efforts for Near Term

- Prepare Emission Inventory – PDEQ and PAG
- Boundary of Ozone Nonattainment Area – PDEQ, PAG and ADEQ
- Evaluate Existing Programs for Potential to Reduce VOC/NO_x emissions – PDEQ and PAG
- Assess Interest in Ozone Advance

Questions ?

Proposed Ozone Standard -- EPA website

<http://www.epa.gov/groundlevelozone/actions.html>

Colleen McKaughan

USEPA, Region 9

520-498-0118; mckaughan.colleen@epa.gov