

Approach for Addressing Upcoming Federal Ambient Air Quality Standards

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Overview of District's Air Quality Challenge

- The Valley will experience unique and significant difficulties in achieving EPA's increasingly stringent standards
- EPA standards are strictly mass based - do not account for pollutant characteristics that better identify public health risk
- In the face of nearly impossible attainment thresholds, a new approach can maximize public health benefits

EPA's Standard Setting Process

- EPA is to review the standards for ozone, PM2.5, and other pollutants every 5 years
- A committee (CASAC) suggests a range of standards to EPA, based on available science
- Federal law does not allow economic considerations
- EPA designates nonattainment areas and adopts implementation rules to guide the local SIP process

Federal Sanctions & Public's Ability To Enforce Standards

- EPA can apply sanctions if an area fails to submit an approvable plan on time or fails to implement an approved plan:
 - De-facto ban on permitting new business (2:1 offset ratio)
 - Loss of federal highway funds
 - Federal implementation plan (FIP) – loss of local control
- Failure to attain by deadline results in Section 185 fees on stationary sources
- Once EPA approves a plan, the plan becomes federally enforceable

Standards and Schedules: PM2.5

<u>1997 PM2.5</u>	<u>2006 PM2.5</u>	<u>2011 PM2.5</u>
<p>1997: EPA sets NAAQS: <u>24-hr: 65 $\mu\text{g}/\text{m}^3$</u> <u>annual: 15 $\mu\text{g}/\text{m}^3$</u></p> <p>2005: EPA's designations</p>		
<p>2007: Implementation rule SJV's 2008 PM2.5 Plan</p>	<p>2006: EPA NAAQS: <u>24-hr: 35 $\mu\text{g}/\text{m}^3$</u> <u>annual: 15 $\mu\text{g}/\text{m}^3$</u></p>	
<p>2009: Designations</p>		
<p>2011: Midcourse Review</p>		<p>2011: expect NAAQS: <u>24 hr: 25-35 $\mu\text{g}/\text{m}^3$,</u> <u>annual: 12-13 $\mu\text{g}/\text{m}^3$</u></p>
<p>2015: Attainment deadline</p>	<p>2012: SIP due</p>	<p>2012: Designations</p>
	<p>2019: Attainment</p>	<p>2015: SIP due</p>
		<p>2022: Expected attmt.</p>

Standards and Schedules: Ozone

1997 8-hr ozone

- 1997:** EPA NAAQS: 84 ppb
- 2004:** EPA's final designations & classifications
- 2005:** EPA implementation rule
- 2007:** SJV's *2007 Ozone Plan*

- 2010:** Midcourse review

- 2024:** attainment deadline

2008/Revised 8-hr ozone

- 2008:** EPA NAAQS: 75 ppb
- 2010:** EPA proposes to revise NAAQS: 60 to 70 ppb. Also secondary standard.
- 2011:** Finalize NAAQS. EPA primary standard designations
- 2012:** EPA secondary standard designations
- 2013:** Attainment plan due

- 2031:** Expected attainment deadline

New Standards Will Pose Significant Challenges Valley-Wide

Number of Days Over Various NAAQS Thresholds, 2009 data

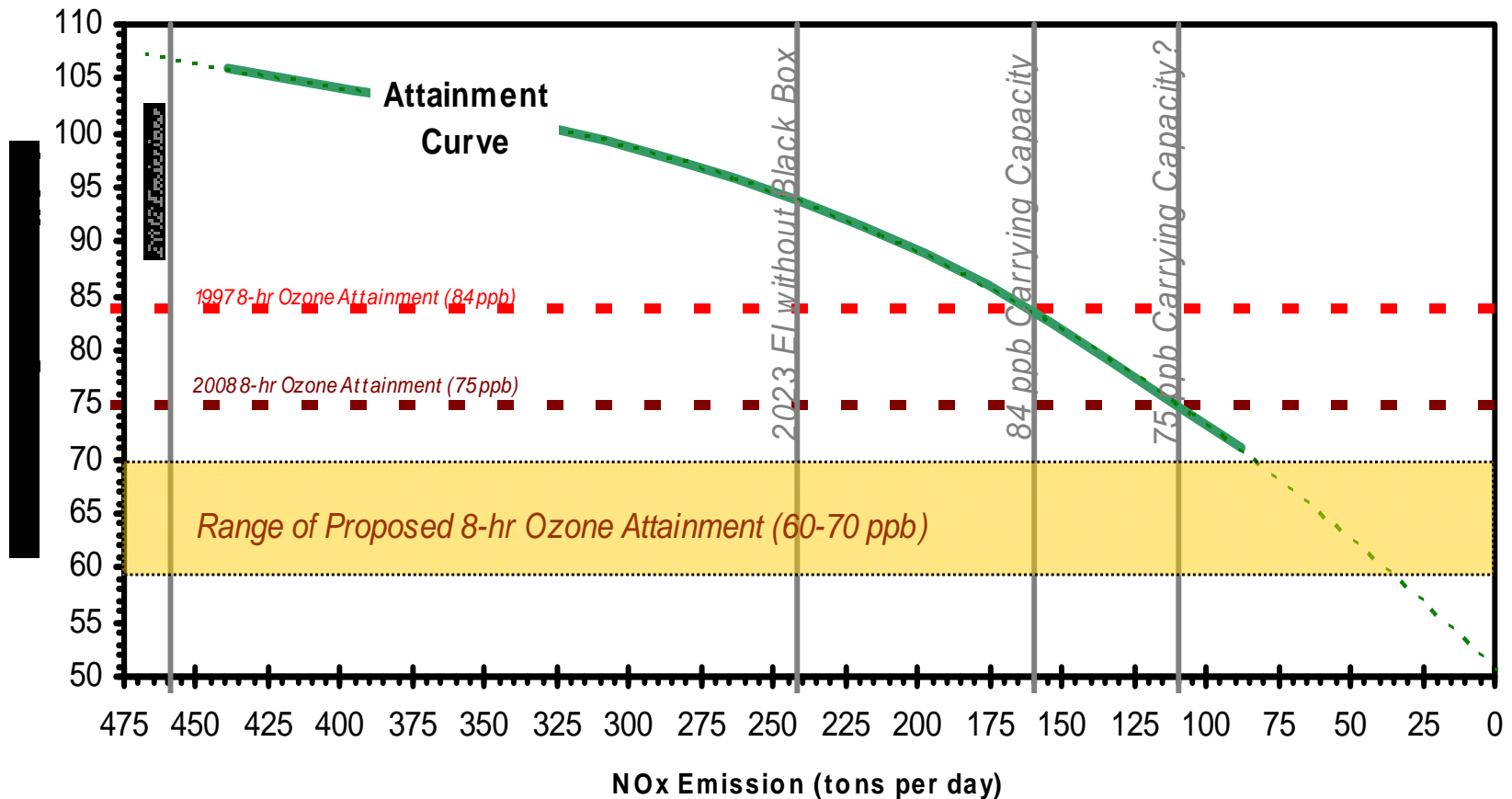
County	8-hr Ozone NAAQS				PM2.5 NAAQS		
	1997: 84 ppb	2008: 75 ppb	2010 Reconsideration		1997: 65 µg/m ³	2006: 35 µg/m ³	2011, low: 25 µg/m ³
			70 ppb	60 ppb			
Fresno	29	54	74	118	2	39	64
Kern	51	83	108	151	11	50	76
Kings	5	37	56	103	0	11	20
Madera	4	13	26	67	2	37	63
Merced	0	15	35	77	0	8	19
San Joaquin	1	8	19	47	0	6	13
Stanislaus	5	18	32	71	1	35	61
Tulare	45	83	103	145	0	8	19
<i>Basin-wide</i>	<i>68</i>	<i>99</i>	<i>119</i>	<i>162</i>	<i>11</i>	<i>66</i>	<i>99</i>

Past Efforts and Remaining Challenges

- The District's numerous regulations have achieved significant emissions reductions, resulting in measured improvements in ambient air quality
- There are not many available or foreseeable opportunities remaining for new control measure commitments
- Existing standards already require long-term, "black box" measures - even more will be needed for the new standards
- Valley is home to major arteries for goods and people movement
- Valley's natural environment exacerbates the formation and retention of air pollution

What Will It Take to Meet the New Standards?

Ozone Improvement from Emission Reductions
Basin Maximum



What Will It Take to Meet the New Standards?

- Meeting current standard requires 75% reduction in emissions
- New standards are approaching the Valley's natural "background" ozone levels
- Another 80-90% reduction
- Zero-emissions technology, ban on fossil fuel combustion?
- Transformative measures require significant investment and time

Valley Needs to Pursue a New Approach

- New mass-based standards may be impossible for the Valley to meet
- Mass-based standards do not take into account size, speciation, surface area, and other characteristics that better identify pollutants' risk to public health
- Shift to a risk-based strategy can provide significant public health benefit
- Focusing on most harmful components can produce a disproportionately greater reduction in health risk with less reductions in emissions on a mass basis

New Approach

- Track health studies and support new research
- Fund technology advancement efforts that will decrease the pollutants that adversely affect public health the most
- Integrate attainment strategies for multiple pollutants:
 - Coordinate the development of attainment plans to maximize efficiency for staff as well as stakeholders.
 - Coordinate control measure commitments to maximize health benefits, maximize emissions reductions, and minimize recurring costs whenever possible.

New Approach

- Mass-based NAAQS are less effective where pollution levels have already been significantly reduced (as in the Valley).
- By prioritizing and focusing on measures that target pollutants with higher risk, the Valley can achieve large improvements in public health at rates that are disproportionately greater than the rate of reduction in pollutant masses.
- Employ risk-based strategies locally; pursue supportive legislative and regulatory actions at the federal level.
- The federal government should accept responsibility for sources of air pollution under their control.
 - The Valley should not be sanctioned if failure to attain is primarily due to shortfall in reductions from sources under federal control.