8-Hour Ozone Implementing Current 2008 Standard Proposed New 2015 Standards

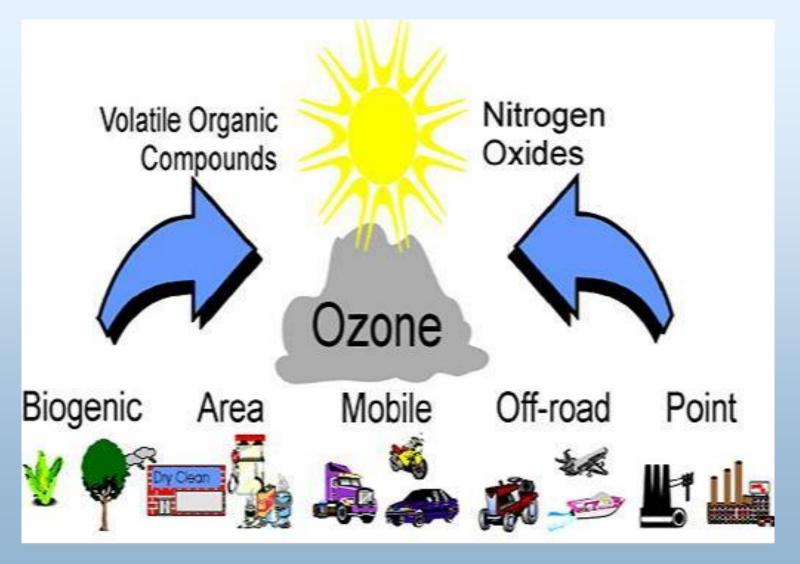
Denver Regional Council of Governments
Board Meeting

July 15, 2015

Ken Lloyd Executive Director



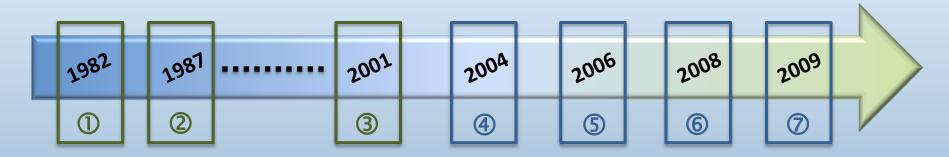
How Ozone Is Formed



Past Ozone Standards

1-Hour Ozone Standard (0.125 ppm)

- 1982 Ozone Attainment State Implementation Plan (SIP)
- 2 1987 Region Attains Standard
- 3 2001 Ozone Maintenance Plan and Redesignation Request, Region Designated Attainment/Maintenance Area



1997 8-Hour Ozone Standard (0.08 ppm)

- **4** 2004 Early Action Compact (EAC) Ozone Action Plan
- **⑤ 2006 Revision to EAC Ozone Action Plan**
- 6 2008 8-Hour Ozone Attainment Plan
- 2009 Region Attains Standard

2008 Ozone Standard

Promulgated by EPA in March 2008

Set at level of .075 ppm (75 ppb)

4th max value averaged over a 3-year period at each monitor

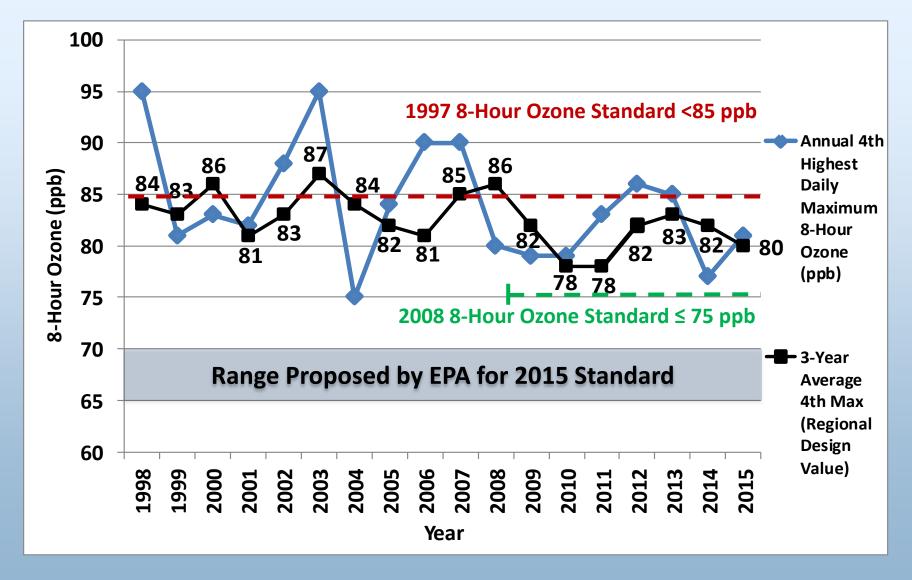
Denver/North Front Range region designated as a Marginal Nonattainment Area on July 20, 2012

Attainment deadline was established as Dec. 31, 2015 Up to 2 one-year extensions are possible

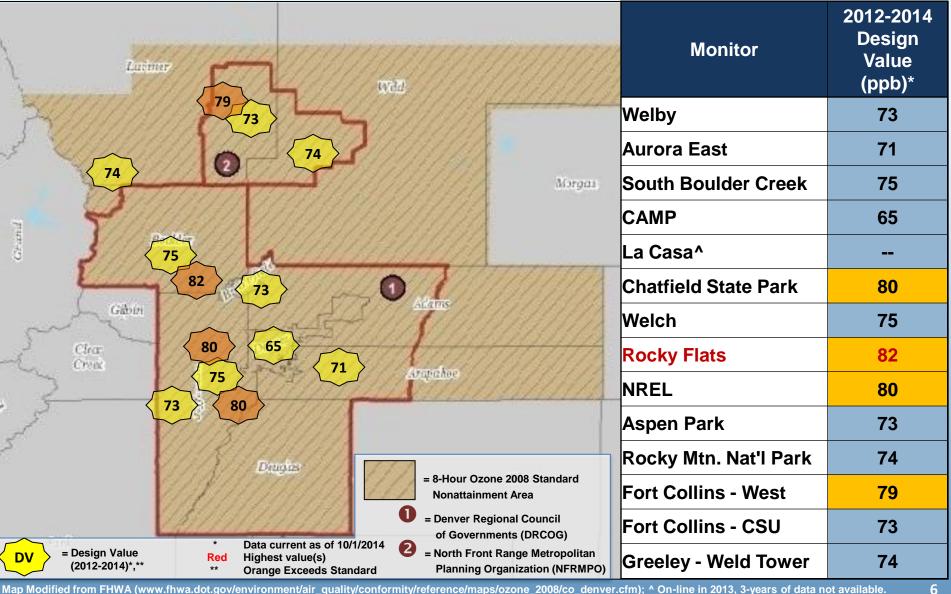
EPA issued a proposed SIP Requirements Rule in June 2013 (just recently finalized on March 6, 2015)

Marginal Area classification had few additional mandatory planning requirements

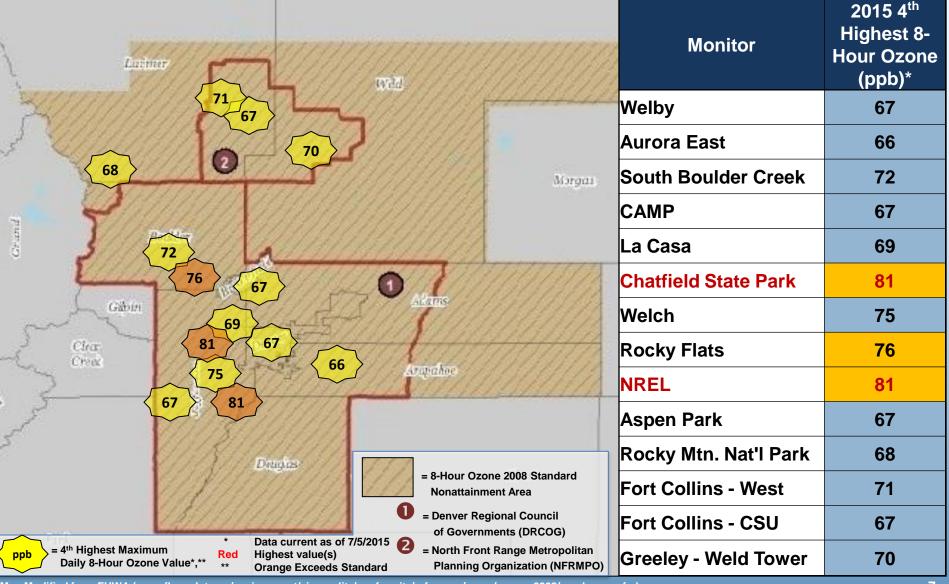
8-Hour Ozone Trend and Federal Standards



2012-2014 Design Values



2015 4th-Highest 8-Hour Ozone Values



2008 8-Hour Ozone Standard

Recent Developments

July 2012 Designations

EPA finalizes 2008 8-hour Ozone Designations, Classifications, and Implementation Rule, establishing the following:

- Denver/NFR area designated
 Marginal Nonattainment
- Attainment deadline of Dec. 31,
 2015 for Marginal Areas -- based on 2013-2015 data
- Attainment deadline of Dec. 31,
 2018 for Moderate Areas based on 2016-2018 data

Dec. 2014 Court Decision

Based on a challenge by environmental groups, DC Circuit Court revoked parts of 2012 Implementation Rule resulting in:

- Attainment deadline of July 20,
 2015 for Marginal Areas –
 attainment now based on 2012 2014 data
- Attainment deadline of July 20,
 2018 for Moderate Areas –
 attainment now based on 2015 2017 data

What Does This Mean For the Denver/NFR Area

Marginal Area attainment date of July 20, 2015 instead of Dec. 31, 2015

Based on 2012-14 data, area does not attain

"Bump-up" to Moderate nonattainment classification by Jan. 2016

EPA will issue a national rule reclassifying areas

New attainment deadline of July 20, 2018

Based on 2015-2017 data

Moderate Area State Implementation Plan (SIP) due 12-18 months after EPA determination

SIP and implementation deadlines will be established in EPA rule

Status of 2008 Nonattainment Areas

46 Areas Nationwide

Marginal: Bump-Up (Not Attaining)	10 areas
Atlanta, GA	Hartford, CT
Bakersfield, CA	Phoenix, AZ
Chicago, IL	San Diego, CA
Denver/NFR, CO	3 small areas in CA
Marginal: 1-yr. Extension	10 areas
Cincinnati, OH	Pittsburgh, PA
Cleveland, OH	St. Louis, MO
Houston, TX	San Luis Obispo, CA
New York-New Jersey, NY-NJ	Sheboygan, WI
Philadelphia, PA	Washington-Arlington, DC-VA
Marginal: Attained by 2014	16 areas
Allentown-Bethlehem, PA-NJ	Knoxville, TN
Baton Rouge, LA	Memphis, TN
Charlotte-Concord, NC-SC	San Francisco-Oakland, CA
Columbus, OH	Rock Springs, WY
Moderate and Above (2018+ Attainment Date)	10 areas
Baltimore, MD	Riverside-San Bernardino, CA
Dallas-Fort Worth, TX	Sacramento, CA
Los Angeles, CA	San Joaquin, CA

Moderate Area SIP Requirements

Attainment Demonstration using photochemical modeling 2017 Future Year

15% Reasonable Further Progress (RFP) Plan

15% VOC emission reduction from Jan. 2012-Dec. 2017

Reasonably Available Control Technology (RACT SIP)

CTGs/RACT determination/review for major sources

Reasonably Available Control Measures (RACM)

Measures that are technologically and economically feasible

Inspection/Maintenance Program

Applies to urbanized area in entire nonattainment area

New Source Review (NSR SIP)

Emission offset ratio for VOC/NOx will be 1.15:1

Contingency Measures

2008 Ozone Standard – SIP Schedule

EVENT	DATES
Ozone Modeling/SIP Development	Thru Summer 2016
2011 Base Year Modeling	Summer 2015
2017 Attainment Year Baseline Modeling	Fall 2015
RACM/RACT Evaluation and Selection (if nec.)	Thru Summer 2016
RAQC Control Strategy Subcommittees	Beginning May 2015
2017 Attainment Demonstration Modeling	Winter-Spring 2016
Formal "Bump-Up" to Moderate Nonattainment	By January 20, 2016
Proposed SIP Elements – RAQC	Summer 2016
SIP Adoption – Air Quality Control Commission (AQCC)	Fall 2016
Legislative Review	Winter 2017
Control Measure Implementation	Prior to 2017 Ozone Season
Submit to EPA	Winter/Spring 2017
Moderate Attainment Deadline (based on 2015-2017 data)	July 20, 2018

Implications for Transportation Conformity

Motor vehicle emissions budgets (MVEB) established under 1997 ozone standard will continue to be used until new budgets are established for 2008 ozone standard

New NOx and VOC MVEB will be established as part of the SIP for the 2008 standard (probably at 2017-18 projected emission levels)

Once EPA determines budgets are "adequate" (probably no earlier than 2018), new budgets will become applicable for future conformity determinations by DRCOG and NFRMPO

PROPOSED 2015 OZONE STANDARD

Proposed Revised 8-Hour Ozone NAAQS

CAA section 109(d) requires EPA to review the scientific information and National Ambient Air Quality Standards every <u>five years</u>.

Primary Standard

Health-based standard

Proposed Range = 0.065 to 0.070 ppm

EPA Accepting Comments on range between 0.060 and 0.075 ppm

Secondary Standard

Welfare-based standard

Proposed Range = 0.065 to 0.070 ppm

EPA Accepting Comments on 8-Hour Average and alternative forms of standard

Air Quality Index (AQI)

Proposed adjusting AQI to revised thresholds based on level set for primary standard

Proposed Revised 8-Hour Ozone Standard

Timeline

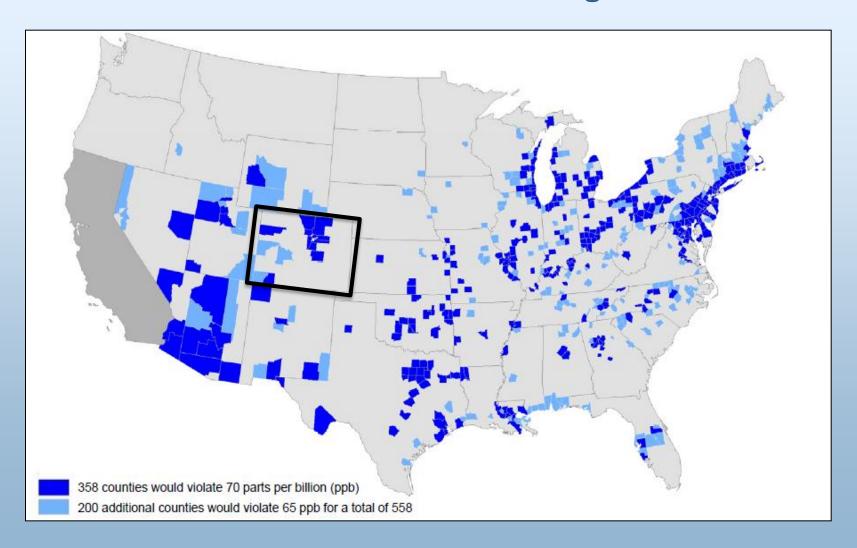
Standard proposed in Federal Register on December 17, 2014 90-day public comment period ended March 17, 2015

- ① Standard to be finalized by October 1, 2015
- ② Governor to submit designation recommendations to EPA by late 2016 (likely based on 2014-2016 ozone monitoring data)
- 3 EPA to designate nonattainment areas by late 2017
- 4 Attainment SIP due 2020-21 for Moderate Areas
- S Attainment deadline 2022-24 for Moderate Areas



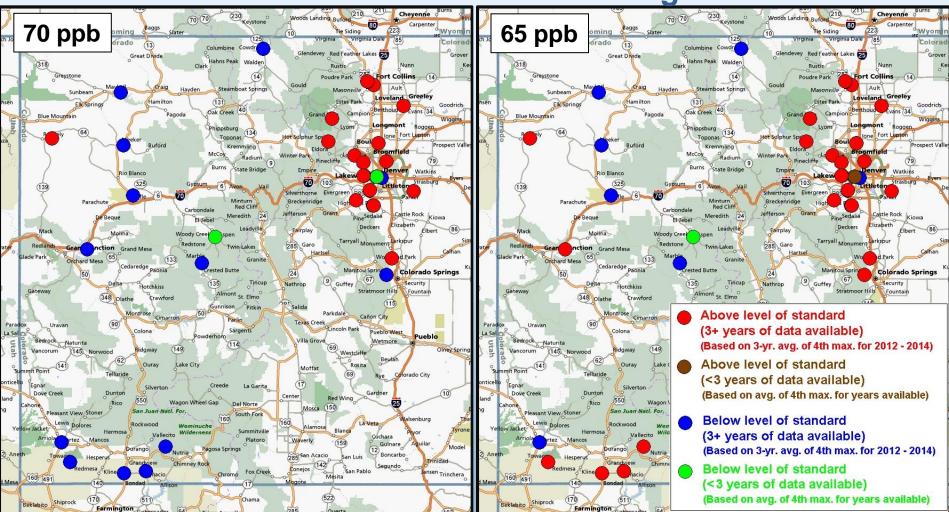
Areas Currently Above Proposed Range (65-70 ppb)

Based on 2011-2013 Monitoring Data



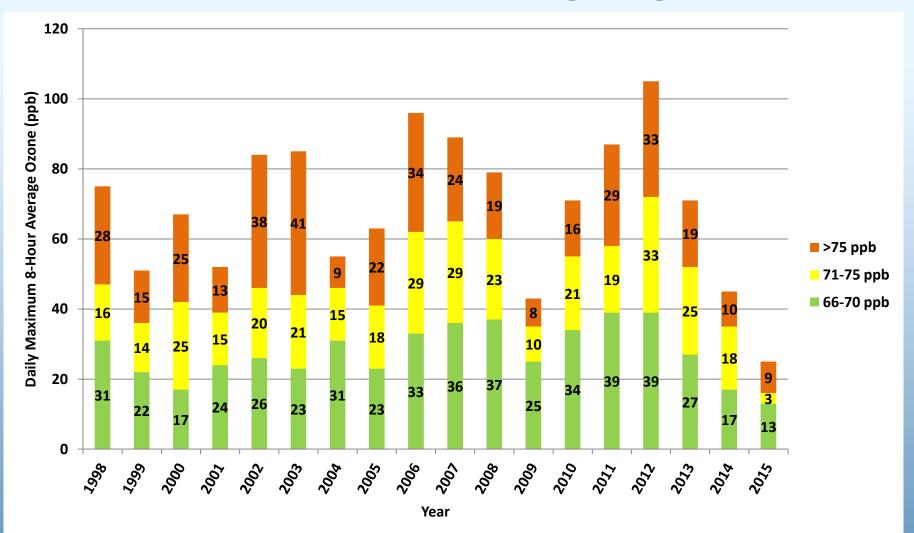
Comparison of 70 ppb and 65 ppb Standard

Based on 2012-2014 Monitoring Data

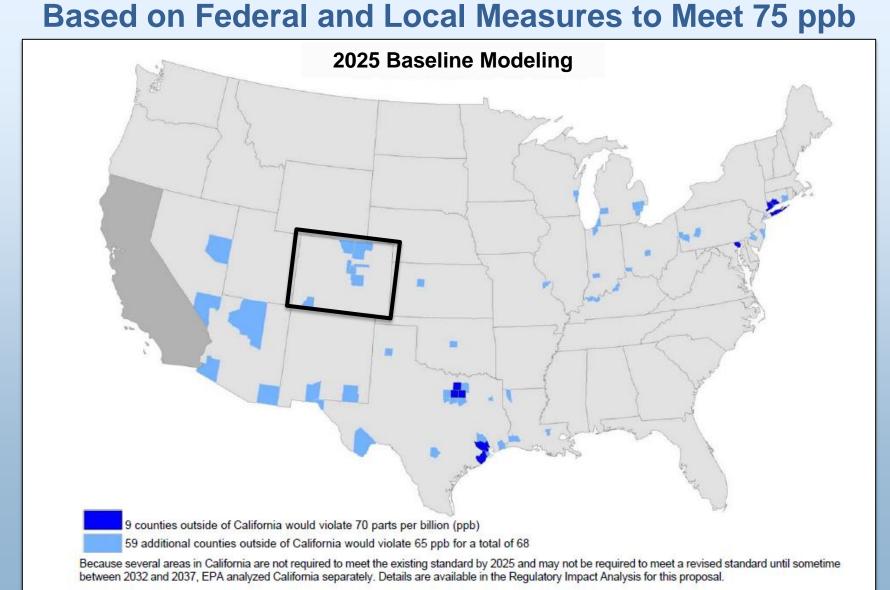


Comparison of Ozone Exceedance Days

Denver/North Front Range Region



Projected Counties Above 65 or 70 ppb in 2025



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