

Ozone Update

Meeting of the
Southern Ute Indian Tribe/State of Colorado
Environmental Commission and the Colorado Air
Quality Control Commission
4/16/2015



COLORADO

Air Pollution Control Division

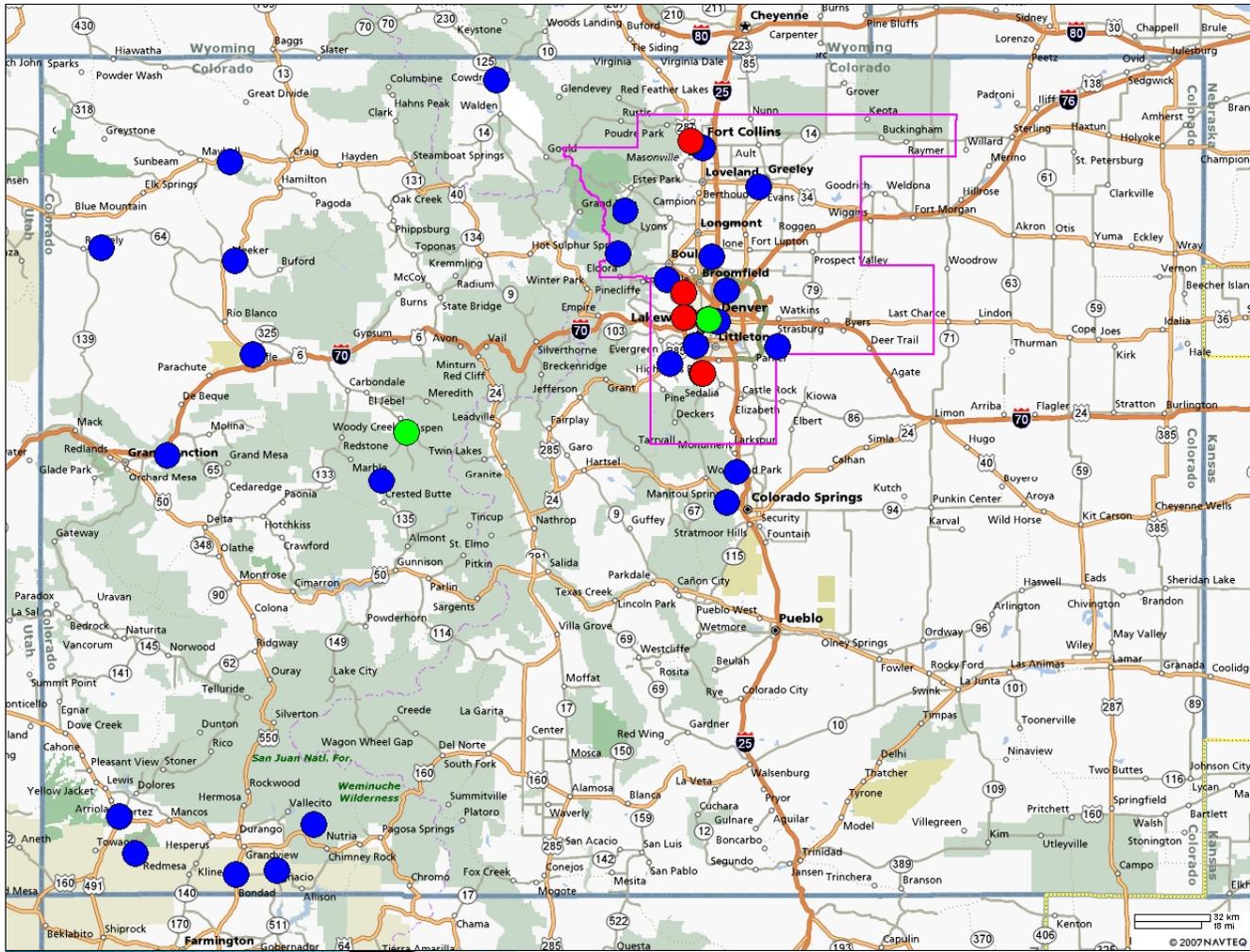
Department of Public Health & Environment

National Ambient Air Quality Standard (NAAQS)

0.075 ppm (or 75 ppb) as the
3-year average of the
4th maximum 8-hour values
(established in 2008)

Set the same for both the primary
“health-based” and secondary
“welfare-based” standards

Ozone Sites Over the Current 75 ppb Standard



Colorado Ozone Sites Comparison to Federal Ozone Standard (75 ppb) 2012 - 2014

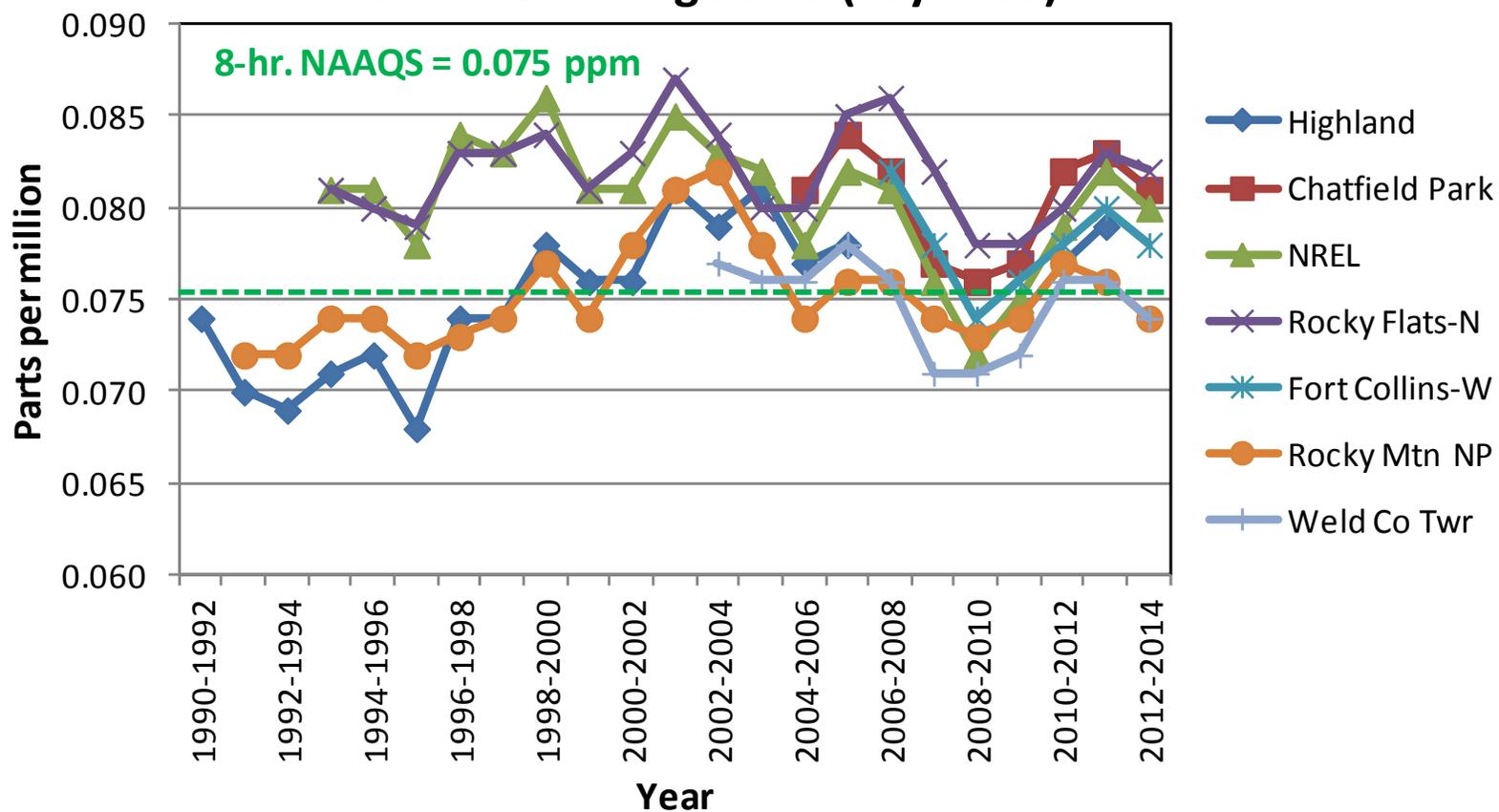
Ozone Standard:
3-year average of 4th maximum
8-hour values must be \leq 75 ppb

- Above level of standard (3+ years of data available) (Based on 3-yr. avg. of 4th max. for 2012 - 2014)
- Above level of standard (<3 years of data available) (Based on avg. of 4th max. for years available)
- Below level of standard (3+ years of data available) (Based on 3-yr. avg. of 4th max. for 2012 - 2014)
- Below level of standard (<3 years of data available) (Based on avg. of 4th max. for years available)

— Non-attainment area

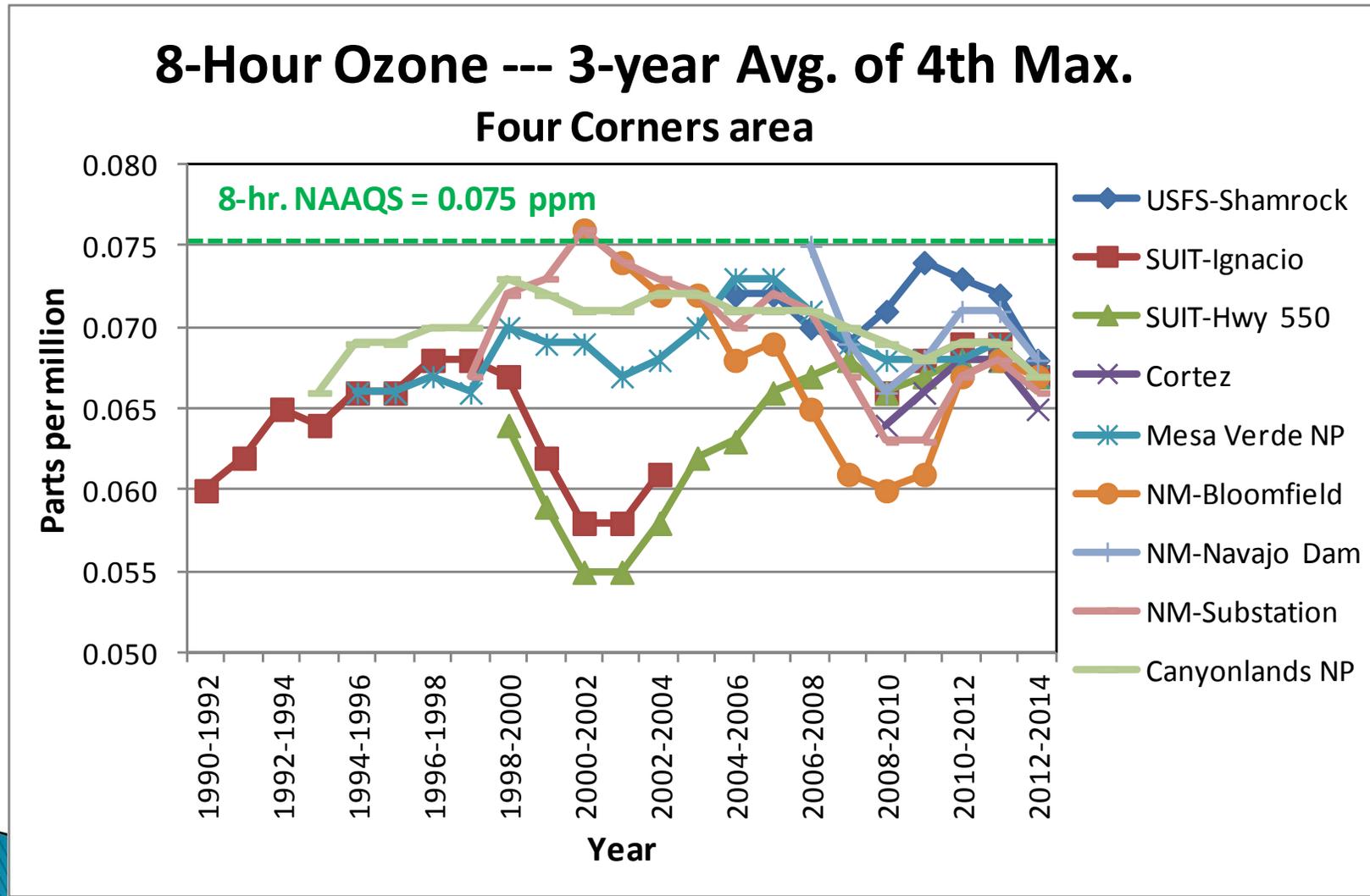
North Front Range Ozone Trends

8-Hour Ozone --- 3-year Avg. of 4th Max.
North Front Range area (key sites)



Four Corners Area

Ozone Trends



North Front Range Ozone SIP

Denver/North Front Range SIP

- ▶ Currently classified under the 2008 NAAQS as a “marginal” non-attainment area
- ▶ Compliance was to be based on 2013 – 2015 period
- ▶ Court ruling in Dec. 2014 moved compliance date to July 2015
- ▶ Area not showing attainment for 2012 – 2014 period
- ▶ Will be moved up to a “moderate” area and new SIP will be developed

Existing measures that reduce ozone

A lot
already
on the
books

- ▶ 2008 Ozone Action Plan and SIP
- ▶ Stationary sources
 - Renewable Energy Standard
 - Energy efficiency, demand side management
 - Clean Air Clean Jobs Act
 - Regional haze SIP
 - 2014 oil & gas air quality rulemaking
- ▶ On-road mobile sources
 - Vehicle inspection/maintenance
 - New vehicle standards
 - Fleet turnover
 - Cleaner/alternative fuels
 - Travel reduction programs
 - Diesel retrofits
 - New vehicle technologies
 - Transportation and land use policies
- ▶ Non-road mobile sources
 - Reciprocating internal combustion engine standards
 - Lawn and garden equipment change-out programs
 - Industrial and commercial boilers
 - Small engine standards
 - Locomotive engine standards



Ozone NAAQS Proposal

Ozone NAAQS Proposal

- ▶ EPA released a new NAAQS proposal on Nov. 26, 2014 (posted Dec. 17, 2014 in FR)
 - Ahead of court-order deadline of Dec. 1, 2014
- ▶ Primary “health-based” standard in range of 65–70 ppb
 - Taking comments on range, 60 ppb up to 75 ppb
 - Retain the 8-hour form
 - Change the applicability hours to be 7:00 a.m. to 11:00 p.m. for the start of 8-hour averaging periods to avoid double-counting across days
- ▶ Secondary “welfare-based” standard in W126 range of 13–17 ppm-hours, using primary range of 65–70 ppb as a surrogate
 - Taking comments on W126 form (ppm-hr) vs. ppb
 - Taking comments on range, 7 ppm-hours up to 17 ppm-hours or up to 75 ppb

Proposal (continued)

- ▶ Monitoring season to change for 33 states
- ▶ Monitoring to be required year-round at NCore sites
- ▶ AQI break-points to change according to a final primary NAAQS level
- ▶ Exceptional event deadlines to be revised
- ▶ Require PAMS monitoring (Jun–Aug) at NCore sites in existing non-attainment areas, to include hourly speciated VOCs, carbonyls, NO/NO₂/NO_y, and upper air meteorology
- ▶ Require an Enhanced Monitoring Plan be developed for all ozone NAAs to look at what O₃, NO_x, PAMS and meteorological monitoring is appropriate or needed
- ▶ Add a new Federal Reference Method analyzer
- ▶ Grandfather PSD sources currently under permit review with complete applications as they relate to causing or contributing to a NAAQS violation

Schedule

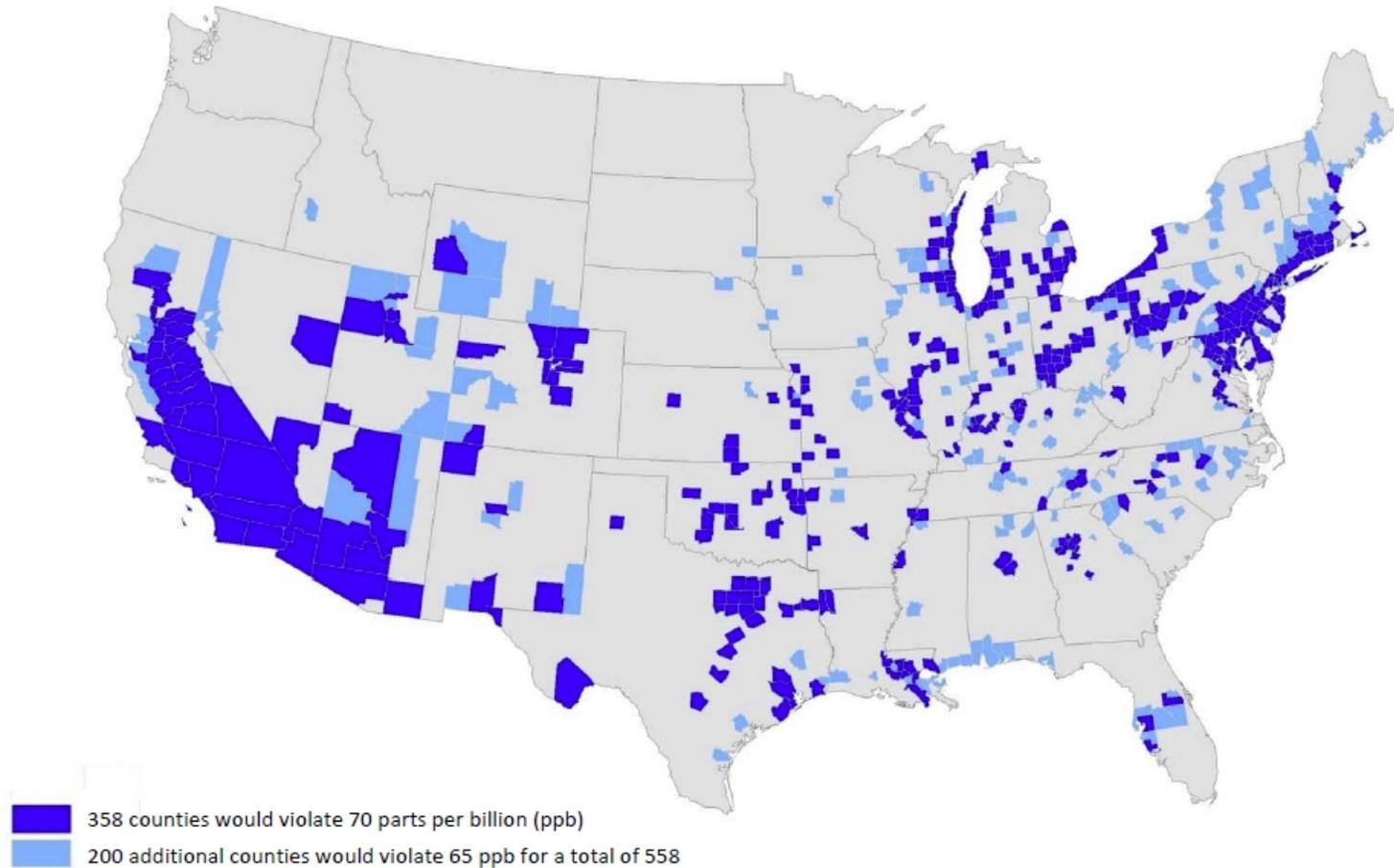
- ▶ Comments were due to EPA by March 17, 2015
 - 90 days after publication in the Federal Register
 - Docket ID number: EPA-HQ-OAR-2008-0699
- ▶ EPA must sign the final standards by October 1, 2015 (court-ordered)
- ▶ State area designation recommendations due to EPA within 1-year of promulgation (late 2016), based on 2013 - 2015 data period
- ▶ Initial EPA area designations in late 2017, likely on 2014 - 2016 data period
- ▶ SIPs due by 3-years from promulgation (late 2018)

Implications for Colorado

- ▶ Designated monitoring season would change from Mar.–Sep. to year–round (Jan.–Dec.)
- ▶ PAMS monitoring will be required at existing LaCasa NCore site in Denver
- ▶ **At 70 ppb using 2012–2014 data, NAA will be:**
 - Denver/North Front Range
 - Colorado Springs/El Paso County area
 - Rangely/Uinta Basin (will need to be joint with UT)
- ▶ **At 65 ppb using 2012–2014 data, NAA will be:**
 - Denver/North Front Range
 - Colorado Springs/El Paso County area
 - 4–Corners area
 - Rangely/Uinta Basin (will need to be joint with UT)
 - Grand Junction/Mesa County area

National view

Counties Where Measured Ozone is Above Proposed Range of Standards (65 – 70 parts per billion)



Based on 2011 – 2013 monitoring data



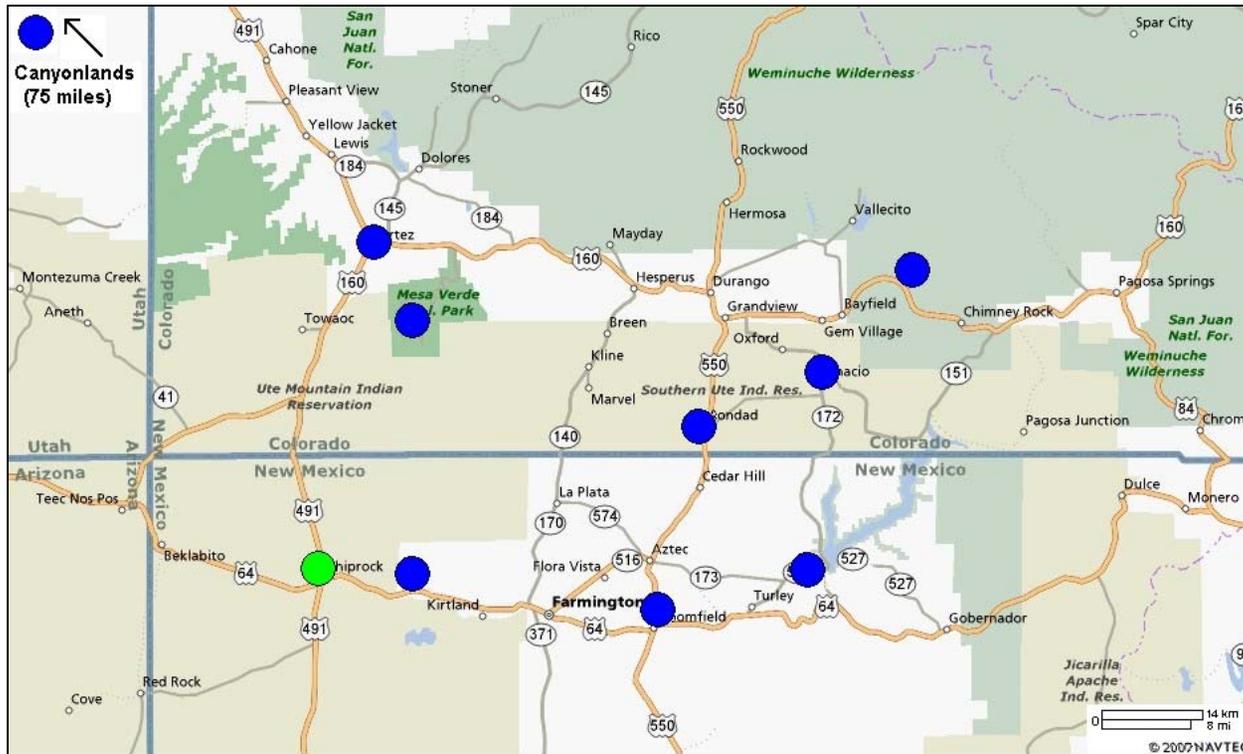
Focus on Four Corners Area

For NAAQS of 75 ppb

Three Year Average 4th Maximum Ozone Values

Four Corners Sites		<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2011-2013</u>	<u>2012-2014</u>
Site Name	AQS #	8-hr. O3 4th Max. Value (ppm)	8-hr. O3 4th Max. Value (ppm)	8-hr. O3 4th Max. Value (ppm)	8-hr. O3 4th Max. Value (ppm)	3-yr. Avg. 4th Max. Value (ppm)	3-yr. Avg. 4th Max. Value (ppm)
USFS - Shamrock	08-067-1004	77	69	72	64	72	68
SUIT - Ignacio	08-067-7001	72	67	69	67	69	67
SUIT - Bondad/Hwy 550	08-067-7003	69	69	67	65	68	67
Cortez	08-083-0006	71	70	64	62	68	65
NPS - Mesa Verde NP	08-083-0101	70	69	69	65	69	67
NMED - Bloomfield	35-045-0009	66	70	69	62	68	67
NMED - Navajo Dam	35-045-0018	74	71	70	63	71	68
NMED - Substation	35-045-1005	68	71	65	63	68	66
Navajo - Dine College	35-045-1223	63	71	---	---	---	---
NPS - Canyonlands	49-037-0101	69	72	66	64	69	67

Current 75 ppb Standard



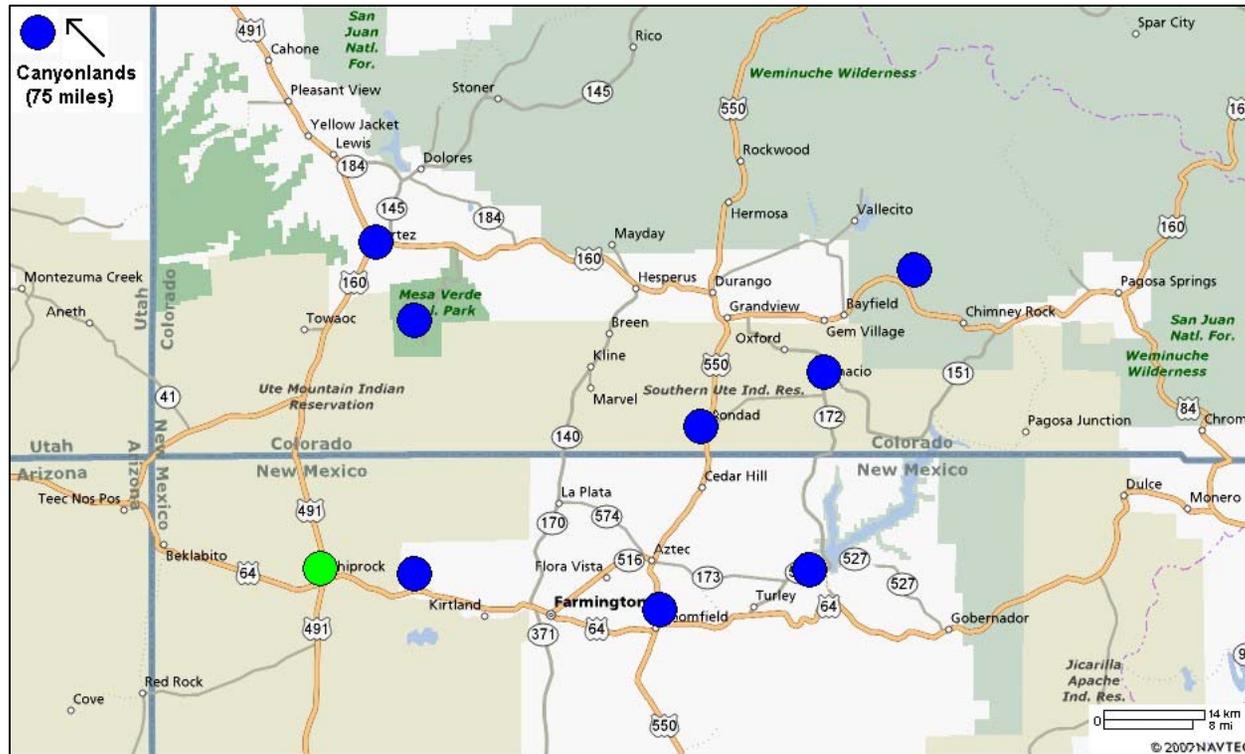
Comparison to 75 ppb Ozone Standard 2012 - 2014

Ozone Standard: 3-year avg. of 4th max. 8-hr. values

- | | |
|---|---|
| <p>Red Circle Above level of standard
(Site in operation 3+ years)
(Based on 3-year avg. of 4th max.)</p> | <p>Blue Circle Below level of standard
(Site in operation 3+ years)
(Based on 3-year avg. of 4th max.)</p> |
| <p>Brown Circle Above level of standard
(< 3 Years of data)
(Based on avg. of 4th max. for available years)</p> | <p>Green Circle Below level of standard
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If future NAAQS set at 70 ppb...



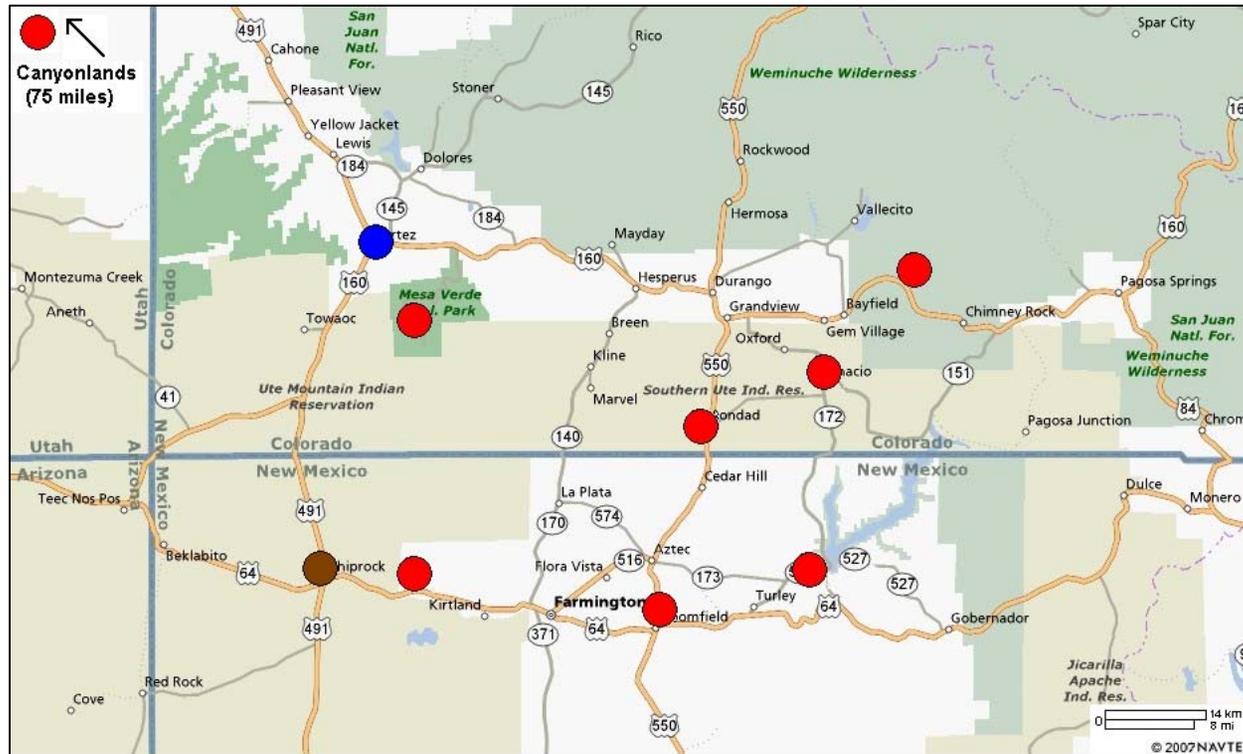
Comparison to possible 70 ppb Ozone Standard 2012 - 2014

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If future NAAQS set at 65 ppb...



Comparison to possible 65 ppb Ozone Standard 2012 - 2014

Ozone Standard: 3-year avg. of 4th max. 8-hr. values

- | | |
|--|--|
| <p>Red dot Above level of standard
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If need a SIP in Four Corners area...

- ▶ Likely to be multi-jurisdictional
 - States: Colorado, New Mexico, Utah
 - Tribes: Southern Ute, Ute Mountain Ute, Navajo
 - EPA Regions: 6, 8 and 9
- ▶ Control measures
 - Will need to be tailored to the area
 - Urban measures may not be appropriate
 - “Background” ozone and transport is an issue



Questions?

