



# FINAL STATE IMPLEMENTATION PLAN (SIP) REQUIREMENTS RULE FOR THE 2008 OZONE NAAQS

February 26, 2015

Office of Air and Radiation



# PURPOSES OF THE RULEMAKING

Provide state and local air management agencies with final rules and guidance for planning to meet the 2008 ozone NAAQS in designated nonattainment areas.

- Translate ozone implementation requirements contained in the 1990 Clean Air Act Amendments (written when ozone was a 1-hour standard) into meaningful requirements for the 2008 8-hour ozone NAAQS.

Revoke the 1997 8-hour ozone NAAQS in order to provide additional flexibility to areas still working to complete the control requirements of that NAAQS.

New rules will be found in Subpart AA of 40 CFR sections 51.1100 through 51.1119.

- Essentially replaces Subpart X, 40 CFR sections 51.900 through 51.918



# RELATED RULEMAKINGS

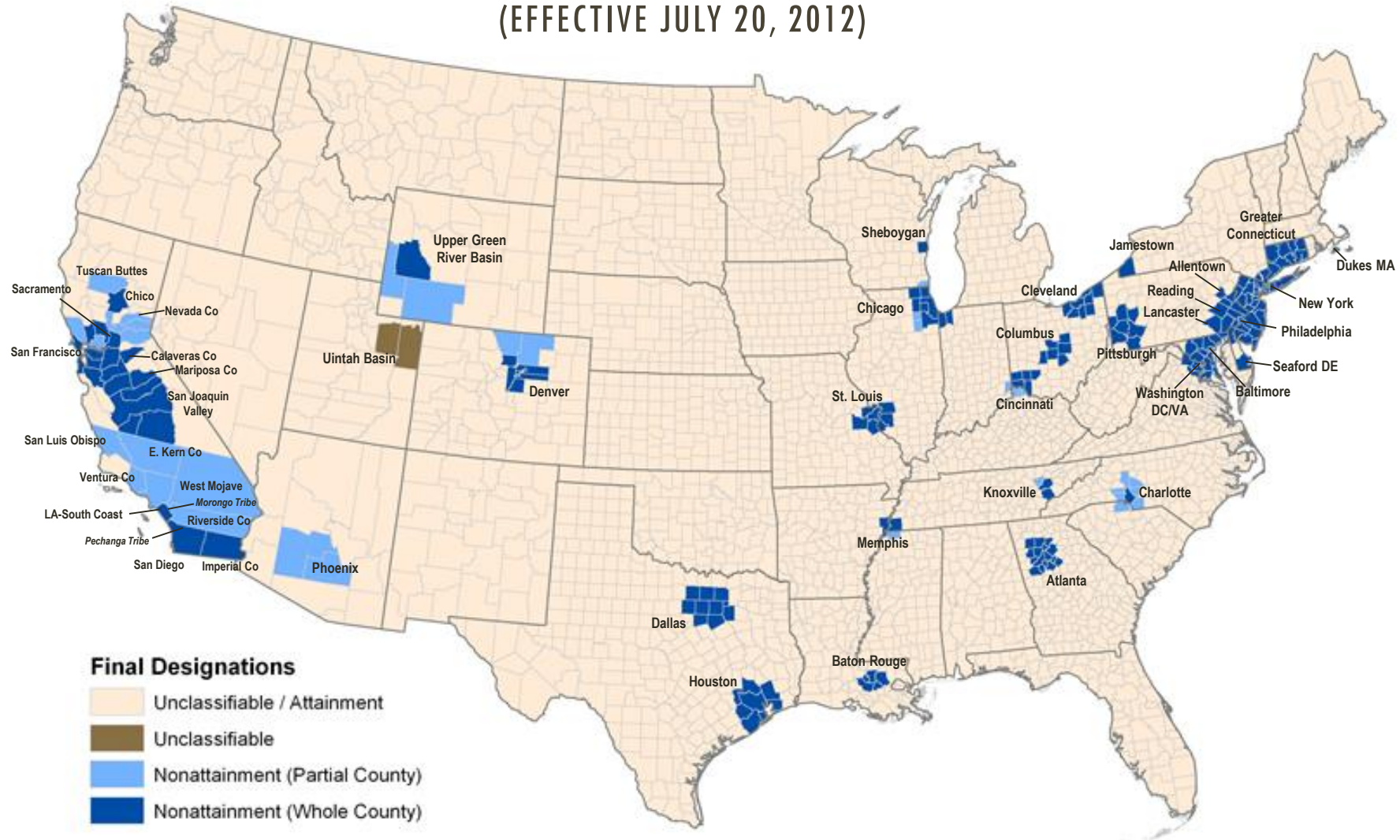
## Classifications Rule

- Signed by Administrator April 30, 2012.
- Published in Federal Register May 21, 2012 (77 FR 30160).
- Established air quality thresholds for each ozone nonattainment area classification.
- Other aspects of the final rule were vacated by DC Circuit Court in *NRDC* decision (12/23/2014).

## Initial Area Designations

- 46 initial nonattainment areas.
  - 36 Marginal areas                      3 Moderate areas                      2 Serious areas
  - 3 Severe areas                              2 Extreme areas
- Signed by Administrator April 30, 2012 (May 31, 2012 for Chicago).
- Published in Federal Register May 21, 2012 (77 FR 30088).
- Effective date July 20, 2012.

# AREA DESIGNATIONS FOR 2008 OZONE NAAQS (EFFECTIVE JULY 20, 2012)



**Notes:**

EPA has not designated as nonattainment any areas outside the Continental US.



# RULEMAKING TIMELINE

Final O<sub>3</sub> SRR signed by the Administrator on February 13, 2015.

Anticipated publication in the Federal Register: about two weeks after signature

Official title: “Implementation of the 2008 National Ambient Air Quality Standards for Ozone: State Implementation Plan Requirements”

- Shorthand title: O<sub>3</sub> SRR
- Docket number: EPA–HQ–OAR–2010–0885

Effective date: 30 days after publication, approximately end of March 2015



# MAXIMUM ATTAINMENT DATES

A 12/23/14 D.C. Circuit Court decision vacated the portion of the Classifications Rule that established December 31 of the applicable year as the maximum attainment date for each classification.

The final O<sub>3</sub> SRR modifies Table 1 of existing 40 CFR 51.1103 (established by the Classifications Rule) to indicate the maximum attainment date is **X** years from the effective date of designations, where **X** is the same number in CAA section 181 Table 1.

Years after effective date of designation:

- Marginal            3 years
- Moderate           6 years
- Serious             9 years
- Severe              15 years
- Extreme             20 years



# IMPACT OF NEW ATTAINMENT DATES

Effectively shortens by 1 ozone season the maximum allowable attainment date for all classifications.

Moderate and above area attainment demonstrations must ensure emissions controls are implemented no later than the beginning of the ozone season that is prior to the attainment date (e.g., beginning of the 2017 ozone season for Moderate areas).

Marginal area attainment determinations and 1-year attainment date extensions will be based on 2012-2014 air quality data rather than 2013-2015 data.



# ATTAINMENT DATE EXTENSIONS

An area that fails to attain the 2008 ozone NAAQS by its attainment date would be eligible for the first 1-year extension if, for the attainment year, the area's 4th highest daily maximum 8-hour average is at or below 0.075 ppm.

- Area must also meet other applicable requirements per CAA §181(a)(5)

The area would be eligible for the second 1-year extension if the area's 4th highest daily maximum 8-hour value, averaged over both the original attainment year and the first extension year, is at or below 0.075 ppm.





# BASIC SIP COMPONENTS FOR NONATTAINMENT AREAS

- Emissions inventory and emissions reporting statement rule
- Reasonable further progress (RFP) plan
- Reasonably available control technology (RACT)
- Reasonably available control measures (RACM)
- Attainment demonstration
- Contingency measures
- Nonattainment new source review (NSR) program
- Motor vehicle emissions budget (MVEB) (CAA §176(c))
- As applicable, a variety of area-wide mobile source and stationary source control programs

# Overview of CAA Ozone Nonattainment Area Planning & Control Requirements by Classification



|  |   | NSR offset ratio            | Major source threshold |   |
|--|---|-----------------------------|------------------------|---|
| <b>EXTREME</b><br>(20 years to attain)   | TRAFFIC CONGESTION CONTROLS (if appropriate)    | <b>1.5 : 1</b><br>Extreme   | 10                     |   |
|  | CLEAN FUELS REQUIREMENT FOR BOILERS             |                             |                        |   |
| <b>SEVERE</b><br>(15/17 years to attain) | PENALTY FEE PROGRAM FOR MAJOR SOURCES           | <b>1.3 : 1</b><br>Severe    | 25                     |   |
|  | LOW VOC REFORMULATED GAS (as appropriate)       |                             |                        |   |
|  | VMT GROWTH DEMONSTRATION (& TCMs if needed)     |                             |                        |   |
| <b>SERIOUS</b><br>(9 years to attain)    | VMT DEMONSTRATION (& TCMs if needed)            | <b>1.2 : 1</b><br>Serious   | 50                     |   |
|  | NSR REQUIREMENTS FOR EXISTING SOURCE MODS       |                             |                        |   |
|  | ENHANCED MONITORING PLAN                        |                             |                        | CLEAN FUELS PROGRAM (if applicable)                       |
|  | MODELED DEMO OF ATTAINMENT                      |                             |                        | MILESTONE DEMONSTRATIONS and CONTINGENCY MEASURES FOR RFP |
|  | 3% ANNUAL RFP UNTIL ATTAINMENT                  |                             |                        | ENHANCED I/M for larger population areas                  |
|  | CONTINGENCY MEASURES FOR FAILURE TO ATTAIN      |                             |                        |   |
|  | Stage II Gasoline Vapor Recovery                |                             |                        | BASIC VEHICLE I/M for larger population areas             |
| <b>MODERATE</b><br>(6 years to attain)   | 15% VOC ROP or 15% VOC/NOx RFP (OVER 6 YEARS)   | <b>1.15 : 1</b><br>Moderate | 100                    |   |
|  | VOC/NOx RACT for MAJOR/CTG SOURCES              |                             |                        | ATTAINMENT DEMONSTRATION                                  |
|  | TRANSPORTATION CONFORMITY DEMONSTRATION (MVEBs) |                             |                        |   |
| <b>MARGINAL</b><br>(3 years to attain)   | NONATTAINMENT NEW SOURCE REVIEW PROGRAM         | <b>1.1 : 1</b><br>Marginal  | 100                    |   |
|  | BASELINE EMISSION INVENTORY (EI)                |                             |                        | MAJOR SOURCE EMISSION STATEMENTS                          |
|  | PERIODIC EMISSION INVENTORY UPDATES             |                             |                        |   |

# SIP SUBMITTAL DEADLINES



**Maximum CAA timeframe associated with each element (from effective date of designation)**

Emission inventories and emission statement SIPs are due from states with Marginal and higher areas no later than **2 years** (July 20, 2014).

Reasonably Available Control Technology (RACT) SIPs for Moderate and higher areas, and all states in the Ozone Transport Region (OTR), are due no later than **2 years** (July 20, 2014).

15% Reasonable Further Progress (6-year ROP/RFP) SIPs for Moderate and higher areas are due no later than **3 years** (July 20, 2015).

Nonattainment NSR (NNSR) SIPs are due no later than **3 years** (July 20, 2015).

Attainment plan with Reasonably Available Control Measures (RACM) and attainment demonstration SIPs are due no later than **3 years** (Moderate) or **4 years** (Serious and higher) (July 20, 2015 or July 20, 2016).

RFP SIPs showing an average of 3% reduction in emissions per year after the initial 6-year period for Serious and higher areas are due no later than **4 years** (July 20, 2016).

Vehicle I/M program SIP, where applicable, due no later than an area's attainment demonstration deadline.

Stationary source penalty fee program SIPs (§185) are due for Severe and Extreme areas no later than **10 years** (July 20, 2022).



# EMISSION INVENTORIES

States may use the 3-year cycle inventory described by the AERR to meet the inventory requirement.

Reporting requirements of the AERR should be applied to determine the data elements required.

Modifications were made to address reporting of an ozone season day and partial county emissions.

- If the ozone season day emissions were not reported as part of the AERR, they must be reported for ozone nonattainment area SIP submissions.
- Definitions of “base year inventory” and “ozone season day” were modified based on comments.
- Inventories for partial county areas must include only emissions from that portion of the county.



# REASONABLE FURTHER PROGRESS (RFP)

2011 is the baseline year for RFP.

- Corresponds to periodic emissions inventory submission year closest to the 2012 designation year.

States may also choose any year from 2008-2012 (i.e., the year the NAAQS was established to the designation year).

- Allows areas that achieved reductions in 2008 to count those reductions toward meeting RFP requirements.
- When a year earlier than 2011 is selected, the area must achieve RFP of 15% for the first 6 years after the baseline year and 3% per year thereafter (the general RFP requirement). For example, an area selecting 2009 as a base year would plan for reductions of 15% over the first 6 years 2010-2015, and 3% per year for both 2016 and 2017 for a total reduction of 21%.

Reductions from sources outside the nonattainment area do not count toward meeting the RFP requirements.



## RFP (CONTINUED)

Reductions from all SIP-approved or federally promulgated measures implemented after the baseline year can be applied toward fulfilling RFP requirements.

An area that has a previously approved 15% VOC ROP plan is considered to have already met that CAA requirement, and must instead meet a more flexible 15% RFP requirement where both NO<sub>x</sub> and VOC reductions are creditable.

Alternative approaches to RFP may be considered on a case-by-case basis.

“Pre-1990 adjustments” calculation for RFP is waived.

- States no longer need to calculate and deduct emissions related to pre-1990 motor vehicle standards (per CAA section 182(b)(1)(D)(i)).



# REASONABLY AVAILABLE CONTROL TECHNOLOGY

EPA has defined RACT as:

- "...the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility." (44 FR 53762; September 17, 1979)

States should refer to existing CTGs and ACTs, and other relevant information for purposes of meeting RACT requirements.

In some cases states may conclude that sources already implementing RACT for a previous ozone NAAQS do not need to implement additional controls.

States may consider area-wide average emissions rates and conduct a technical assessment to show that cap-and-trade emissions controls satisfy RACT for EGUs.

New RACT measures must be implemented by no later than January 1, 2017.

EPA solicited comment on modifying existing guidance on "reasonably available" to allow states to consider the "negligible effect" of VOC on ozone concentrations in determining RACT. EPA did not finalize a modification, but is willing to explore in the future.



# REASONABLY AVAILABLE CONTROL MEASURES

EPA interprets the Clean Air Act's RACM provision to require a demonstration that:

- the state has adopted all reasonable measures (including RACT) to meet RFP requirements and to demonstrate attainment as expeditiously as practicable, and
- no additional measures that are reasonably available will advance the attainment date or contribute to RFP for the area.

States should consider all available measures, including those being implemented in other areas, but must adopt measures for an area only if those measures are economically and technologically feasible and will advance the attainment date or are necessary for RFP.

To meet RACM requirements, states may require beyond-RACT controls.





# MODELING ATTAINMENT DEMONSTRATIONS

When an attainment demonstration is necessary, states are required to use photochemical grid modeling, or an Administrator-approved alternative, to demonstrate attainment.

Model results are used to determine the amount of VOC and/or NO<sub>x</sub> emission reductions that are needed for the area to attain the NAAQS.

EPA has issued guidance on the use of models:

- Draft Modeling Guidance for Demonstrating Attainment of Air Quality Goals for Ozone, PM<sub>2.5</sub>, and Regional Haze (December 2014). Comments due to EPA by March 13, 2015.  
[www.epa.gov/ttn/scram/guidance/guide/Draft\\_O3-PM-RH\\_Modeling\\_Guidance-2014.pdf](http://www.epa.gov/ttn/scram/guidance/guide/Draft_O3-PM-RH_Modeling_Guidance-2014.pdf)
- This is an update to the April 2007 guidance. [http://epa.gov/scram001/guidance\\_sip.htm](http://epa.gov/scram001/guidance_sip.htm)



# CONTINGENCY MEASURES

Contingency measures must represent 1 year's worth of emissions reduction progress.

Earlier EPA policy interpretations indicating that a percentage of these contingency measures had to be VOC controls has changed – now there is no such restriction.

In Extreme areas when the attainment demonstration relies on the anticipated development of new control technologies, the state can make a commitment to adopt contingency measures in the future, but not later than 3 years before such measures might be triggered (e.g., by failure to attain by the attainment date).



# NONATTAINMENT NSR (NNSR)

## Appendix S Clarifications

Preamble clarifies that the 2009 NRDC decision that vacated the extension of the 18-month time limit for Appendix S only applies to the Section VI offset waiver provision—not to the continued use of Appendix S to issue NNSR permits until the SIP is revised.

## Inter-precursor Offset Substitution

The policy on inter-precursor offset substitution is not changed, but minor clarifying amendments to both 51.165 and Appendix S were made to affirm the policy.



# CLEAN DATA DETERMINATIONS AND REDESIGNATIONS

## Clean Data Policy

The O<sub>3</sub> SRR applies the same approach as under the 1997 ozone NAAQS.

If EPA determines that an area has attained, the planning SIP submittal requirements can be suspended for as long as the area attains.

See 40 CFR 51.1118 for the list of submission requirements that can be suspended.

## Redesignations

No changes to existing redesignation requirements and guidance.

If EPA determines that an area attains before a specific SIP is due, the SIP submittal requirement is not considered a deficiency for redesignation for as long as the area attains (1992 Calcagni memo).



# MISCELLANY

## NO<sub>x</sub> Waivers (CAA §182(f))

Waivers issued for the 1997 ozone NAAQS do not automatically apply to the 2008 ozone NAAQS.

## Rural Transport Areas

Clarity provided on the U.S. Bureau of the Census terms that govern the Clean Air Act's "adjacency" test.

The Act's terms "MSA" and "CMSA" are interpreted to mean what the Census Bureau now defines as "Metropolitan Statistical Area."

- This means a Census-defined "Micropolitan Statistical Area" could qualify for RTA status even if part of a larger Census-defined "Core Based Statistical Area" (CBSA)



# REVOKING 1997 NAAQS AND “ANTI-BACKSLIDING” REQUIREMENTS

O<sub>3</sub> SRR revokes the 1997 ozone NAAQS for all purposes *including transportation conformity* effective 30 days after the date the final O<sub>3</sub> SRR is published in the Federal Register.

Areas designated nonattainment for the 2008 ozone NAAQS and still designated nonattainment for the 1997 NAAQS on that date will be subject to a list of “applicable” anti-backsliding requirements.

- Also applies to areas that were nonattainment for the 1-hour NAAQS when it was revoked on June 15, 2005 that have not been redesignated for the 1997 NAAQS.
- Lists of relevant areas is provided in Appendix B to the preamble.



# ANTI-BACKSLIDING SUMMARY

Requirements reflect past court decisions on anti-backsliding.

All prior control requirements and associated triggering mechanisms apply.

Section 185 fee programs, contingency measures for failure to make RFP or attain, and NNSR provisions that EPA previously sought to waive also apply.

There are two paths for establishing that anti-backsliding requirements have been fulfilled:

- Redesignation to attainment for the 2008 ozone NAAQS, or
- EPA approval of a 'redesignation substitute' for the revoked NAAQS.



# ANTI-BACKSLIDING FOR NNSR/PSD AND TITLE V

NNSR with regard to ozone will no longer apply in an area that is designated attainment for the current standard. PSD will apply and NNSR provisions may be removed from the SIP.

A nonattainment area is not subject to simultaneous application of NNSR for one standard and PSD for a prior revoked standard [revisions to 40 CFR 51.166(i)(2) and 52.21(i)(2)].

The historical designations and classifications resulting from the revoked 1997 ozone NAAQS will continue to serve to identify nonattainment NSR anti-backsliding requirements (i.e., major source thresholds and emissions offset ratios) that need to be taken into account in issuing nonattainment NSR permits for major stationary sources and major modifications [see exception under 'redesignation substitute'].

Title V: The major source threshold for Title V purposes in 2008 NAAQS nonattainment areas will be the same as the threshold that applies consistent with the NNSR-related anti-backsliding provisions.





# WHEN/HOW ANTI-BACKSLIDING APPLIES

| Designation for 2008 Ozone NAAQS | Designation for previous Ozone NAAQS (at time of revocation)                               | NNSR/PSD obligations  | Other transition obligations   |
|----------------------------------|--|---|--|
| 1. Attainment                    | Attainment/<br>Maintenance   | PSD remains in effect   | <ul style="list-style-type: none"> <li>- Requirements in the approved SIP and, where applicable, the section 175A maintenance plan are deemed to satisfy the general section 110(a)(1) maintenance requirement for prior NAAQS.</li> <li>- Any revisions to the SIP must be consistent with sections <b>110(l) and 193.</b></li> </ul> |
| 2. Attainment                    | Nonattainment for 1997 NAAQS only;<br>or<br>Nonattainment for 1997 <u>and</u> 1-hour NAAQS | NNSR in effect until revocation of the 1997 NAAQS; then state can request that nonattainment NSR be replaced by PSD | <ul style="list-style-type: none"> <li>- Requirements in the approved SIP for the area, plus the state's approved PSD SIP are deemed to satisfy the general section 110(a)(1) maintenance requirement for prior NAAQS.</li> <li>- Any revisions to the SIP must be consistent with sections <b>110(l) and 193.</b></li> </ul>          |

# WHEN/HOW ANTI-BACKSLIDING APPLIES



| Designation for 2008 Ozone NAAQS | Designation for previous Ozone NAAQS (at time of revocation)                               | NNSR/PSD obligations                                    | Other transition obligations   |
|----------------------------------|--|---|--|
| 3. Nonattainment                 | Attainment/<br>Maintenance   | NNSR applies based on 2008 NAAQS classification         | <ul style="list-style-type: none"> <li>- Area remains subject to requirements in the approved SIP, including the section 175A maintenance plan where applicable.</li> <li>- Any revisions to the SIP must be consistent with sections <b>110(l) and 193</b>.</li> </ul>  |
| 4. Nonattainment                 | Nonattainment for 1997 NAAQS only;<br>or<br>Nonattainment for 1997 <u>and</u> 1-hour NAAQS | NNSR applies based on highest applicable classification | <ul style="list-style-type: none"> <li>- Area subject to all <b>applicable anti-backsliding</b> requirements for 1997 NAAQS and, where applicable, 1-hr NAAQS</li> <li>- Area also remains subject to requirements in the approved SIP and any revisions to the SIP must be consistent with sections <b>110(l) and 193</b></li> <li>- Anti-backsliding obligations for specific revoked standard deemed fulfilled when either a) the area is redesignated to attainment for the 2008 NAAQS, or b) the EPA approves a redesignation substitute for the revoked 1-hour or 1997 NAAQS.</li> </ul> |



# REDESIGNATION SUBSTITUTE

This showing for a revoked NAAQS is based on the familiar redesignation criteria in CAA §107(d)(3)(E), and is now codified at 40 CFR 51.1105(b).

- States must demonstrate: 1) that the specific revoked NAAQS has been attained, 2) that this is due to permanent and enforceable measures, and 3) that the area will continue to maintain the standard over the next 10 years.
- EPA will conduct notice-and-comment rulemaking on the showing; no formal SIP submittal process.

## Effect on NNSR Requirements

- After a successful showing, NNSR requirements in the area for that specific revoked NAAQS would no longer apply and may be removed from the SIP.
- The remaining governing NNSR provisions (i.e., major source thresholds and offset ratios) would be set by the highest classification to which the area is still subject; could be another revoked ozone NAAQS or the 2008 ozone NAAQS.

## Effect on §185 Fee Program Requirements

- A successful showing terminates the requirement to implement a §185 fee program for that specific revoked NAAQS.



# RELATED RULES/PROGRAMS

## Rules affecting Ozone Implementation:

- Transportation Conformity Rules
- General Conformity Rules
- Exceptional Events Rule

## Other emissions control programs that impact Ozone Precursors

- Regional Haze
- PM2.5 NAAQS Implementation
- Greenhouse Gas Clean Power Plan
- Cross State Air Pollution Rule



# EPA REGIONAL OFFICE OZONE SIP CONTACTS

Region 1: Anne Arnold

Region 2: Rick Ruvo

Region 3: Maria Pino

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Region 6: Guy Donaldson

Region 7: Josh Tapp

Region 8: Jody Ostendorf

Region 9: John Kelly

Region 10: Claudia Vaupel



# TIME FOR QUESTIONS

Please keep your questions focused on the new Ozone SIP Requirements Rule.

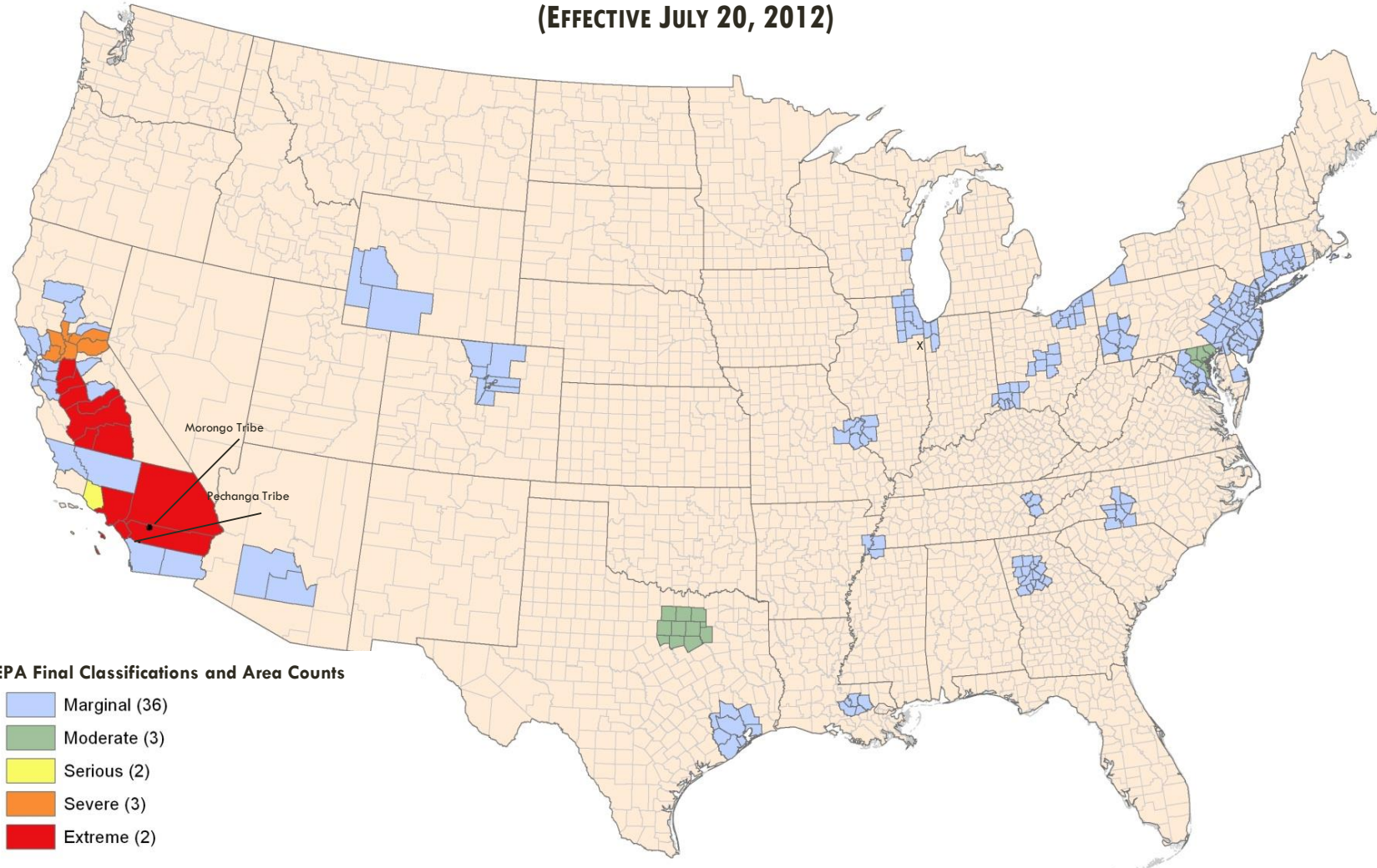
We will attempt to answer as many as we can, but can not guarantee that we will get to all of them.

You may experience periods of silence while we review the questions that are coming in.





# SUPPLEMENTAL SLIDES



## NONATTAINMENT AREAS FOR 2008 OZONE NAAQS BY CLASSIFICATION (EFFECTIVE JULY 20, 2012)



### EPA Final Classifications and Area Counts

|   |               |
|---|---------------|
|    | Marginal (36) |
|  | Moderate (3)  |
|  | Serious (2)   |
|  | Severe (3)    |
|  | Extreme (2)   |

### Notes:

- EPA did not designate as nonattainment any areas outside the Continental U.S.
- Map reflects classifications following requests for voluntary "bump-ups"



TABLE 1  
 CLASSIFICATIONS AND ATTAINMENT DATES FOR 2008 8-HOUR OZONE NAAQS (0.075 PPM) FOR  
 AREAS SUBJECT TO CFR SECTION 51.1102

| Area class |                      | 8-hour design value<br>(ppm ozone) | Primary Standard Attainment Date<br>(years after the effective date of designation for 2008<br>primary NAAQS) |
|------------|----------------------|------------------------------------|---|
| Marginal   | from                 | 0.076                              | 3 years   |
|            | up to*               | 0.086                              |   |
| Moderate   | from                 | 0.086                              | 6 years   |
|            | up to*               | 0.100                              |   |
| Serious    | from                 | 0.100                              | 9 years   |
|            | up to*               | 0.113                              |   |
| Severe-15  | from                 | 0.113                              | 15 years  |
|            | up to*               | 0.119                              |   |
| Severe-17  | from                 | 0.119                              | 17 years  |
|            | up to*               | 0.175                              |   |
| Extreme    | equal to<br>or above | 0.175                              | 20 years  |

\* but not including





# EXAMPLE: ATTAINMENT DATE EXTENSIONS

|               |                                     | 2012  | 2013  | 2014         | 2015         | 2 <sup>nd</sup><br>Extension<br>Average |
|---------------|-------------------------------------|-------|-------|--------------|--------------|---|
| <b>Area A</b> | Annual 4 <sup>th</sup><br>Max (ppm) | 0.079 | 0.078 | <b>0.074</b> | 0.076        | <b>0.075</b>                            |
|               | 3-year DV<br>(ppm)                  | -     | -     | <b>0.077</b> | <b>0.076</b> |   |
| <b>Area B</b> | Annual 4 <sup>th</sup><br>Max (ppm) | 0.084 | 0.078 | <b>0.072</b> | 0.080        | <b>0.076</b>                            |
|               | 3-year DV<br>(ppm)                  | -     | -     | <b>0.078</b> | <b>0.077</b> |   |