

# CLIMATE AND NAAQS UPDATE

## CIBO QUARTERLY MEETING

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June 2017

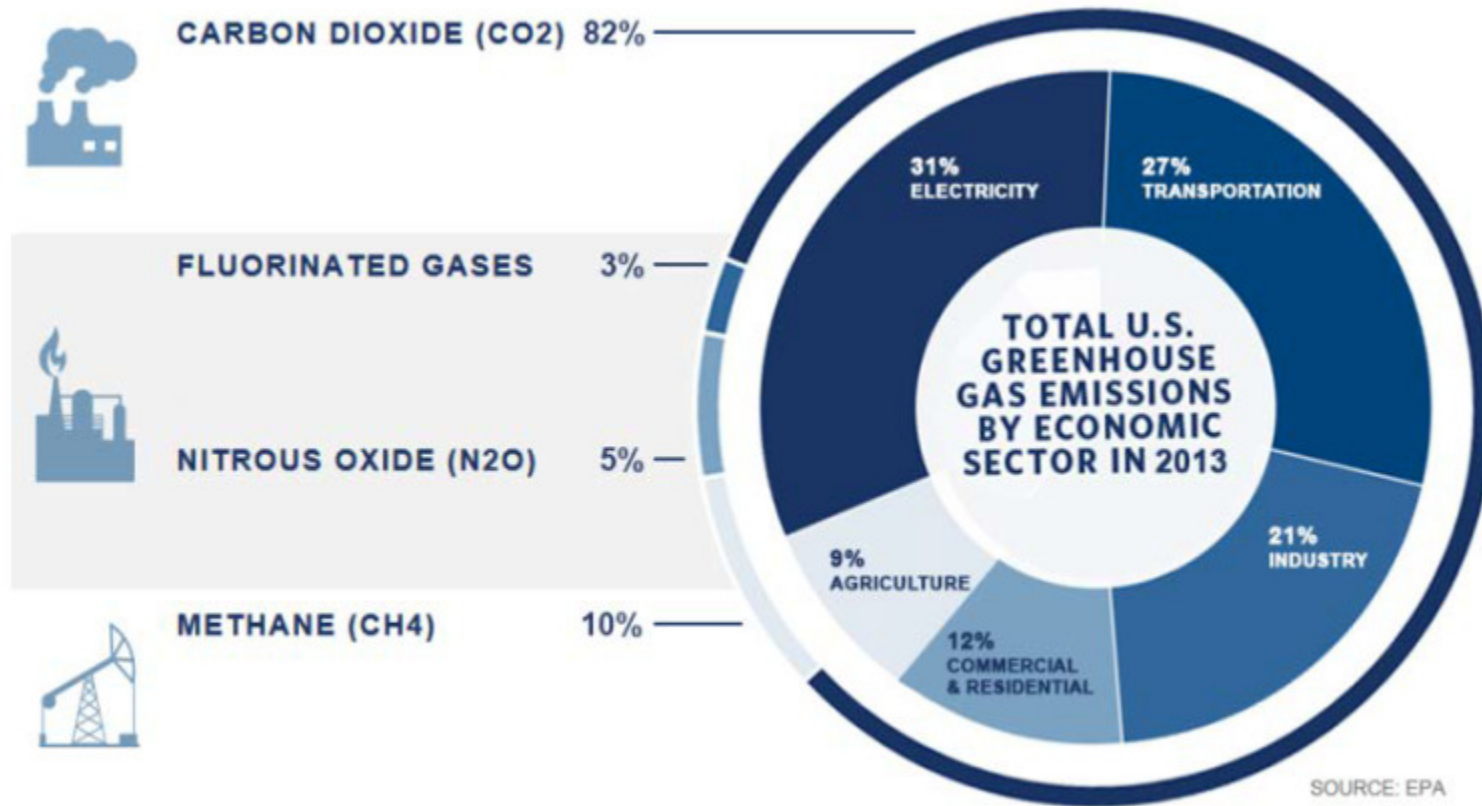


# Climate Regulatory Update

## Background – 2013 Obama Climate Action Plan

- Required EPA to issue GHG standards for new power plants.
  - EPA issued NSPS for new, modified, and reconstructed gas turbines and coal-fired EGUs.
- Required EPA to issue GHG standards for modified, reconstructed, and existing power plants under CAA section 111(b) and 111(d).
  - EPA issued the Clean Power Plan, which contained requirements for reductions in emissions from existing fossil fuel fired EGUs by 2030.
  - EPA identified efficiency improvements, renewables, and shifting dispatch preference to more efficient/lower carbon emitting generation as the best system of emissions reduction.
  - States required to implement regulations to make those reductions happen.
  - EPA also proposed a federal plan and a model rule for the CPP.

## Why was the Obama EPA focused on GHG from EGUs?



## March 28, 2017 Trump EO: Promoting Energy Independence and Economic Growth

- The heads of agencies shall review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (collectively, agency actions) that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources.
- Review plan to OMB within 45 days, draft final report to OMB within 120 days, finalize report within 180 days
- Rescission of certain Obama climate-related EO's and reports.
- Review of CPP and related rules and actions and oil and gas rule.
- Review of use of social cost of carbon.

## Recent Climate-Related Actions as a Result of EO

- White House CEQ withdrew GHG NEPA guidance as directed by the EO
- EPA withdrew oil and gas sector Methane ICR
- Reconsideration and partial stay of oil and gas methane NSPS
- EPA delays landfill methane NSPS
- Pending EPA action on review of EGU CO<sub>2</sub> rules (ESPS and NSPS)



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## This page is being updated.

Thank you for your interest in this topic. We are currently updating our website to reflect EPA's priorities under the leadership of President Trump and Administrator Pruitt. If you're looking for an archived version of this page, you can find it on the [January 19 snapshot](#).

## Withdrawal from Paris Climate Accord

- June 1 – Trump announces withdrawal from Paris climate accord. The White House will follow the Paris Agreement's exit process, which would take until November 2020 before a withdrawal would formally take effect.
- Trump also pledged to “immediately work with Democratic leaders to negotiate our way back into Paris under the terms that are fair to the United States and its workers, or to negotiate a new deal that protects our country and its taxpayers.”
- It is reported that Pruitt EPA was concerned that staying in the agreement would hamper their regulatory reform initiatives.

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# NAAQS Update



## Current NAAQS Review Schedule (as of March 2017)

|  | Ozone            | Lead             | Primary NO <sub>2</sub>   | Primary SO <sub>2</sub>  | Secondary (Ecological) NO <sub>2</sub> , SO <sub>2</sub> , PM <sup>1</sup>                          | PM <sup>2</sup>   | CO               |
|--|------------------|------------------|---|--|---|---|------------------|
| <b>Last Review Completed</b><br>(final rule signed)      | Oct. 2015        | Sept 2016        | Jan 2010  | Jun 2010   | Mar 2012  | Dec 2012  | Aug 2011         |
| <b>Recent or Upcoming Major Milestone(s)<sup>3</sup></b> | TBD <sup>4</sup> | TBD <sup>4</sup> | <u>Jan 2016</u><br>Final ISA<br><br><u>Sep 2016</u><br>1 <sup>st</sup> Draft PA<br><br><u>Spring 2017</u><br>Final PA | <u>Dec 2016</u><br>2 <sup>nd</sup> Draft ISA<br><br><u>Feb 2017</u><br>REA Planning Document<br><br><u>March 2017</u><br>CASAC review of Draft ISA and REA Planning Document | <u>Jan 2017</u><br>Final IRP<br><br><u>Spring 2017</u><br>CASAC review of 1 <sup>st</sup> Draft ISA | <u>Dec 2016</u><br>Final IRP<br><br><u>Winter 2017/2018</u><br>1 <sup>st</sup> draft ISA<br>REA Planning Document | TBD <sup>4</sup> |

Additional information regarding current and previous NAAQS reviews is available at: <http://www.epa.gov/ttn/naaqs/>

<sup>1</sup> Combined secondary (ecological effects only) review of NO<sub>2</sub>, SO<sub>2</sub>, and PM

<sup>2</sup> Combined primary and secondary (non-ecological effects) review of PM

<sup>3</sup> IRP – Integrated Review Plan; ISA – Integrated Science Assessment; REA – Risk and Exposure Assessment; PA – Policy Assessment

<sup>4</sup> TBD = to be determined

## Court Case Determines Deadlines for NO<sub>2</sub>/SO<sub>2</sub> Review

- In an April 28 Consent Decree, EPA agreed to issue a proposed rule by July 14 either modifying or leaving unchanged its primary, or health-based, NAAQS for NO<sub>2</sub>. Primary NAAQS are designed to protect human health “with an adequate margin of safety,” while secondary NAAQS, developed separately, are intended to protect the environment.
- The agency must propose a new SO<sub>2</sub> NAAQS rule by May 25, 2018, and a final rule by Jan. 28, 2019, under the consent decree.

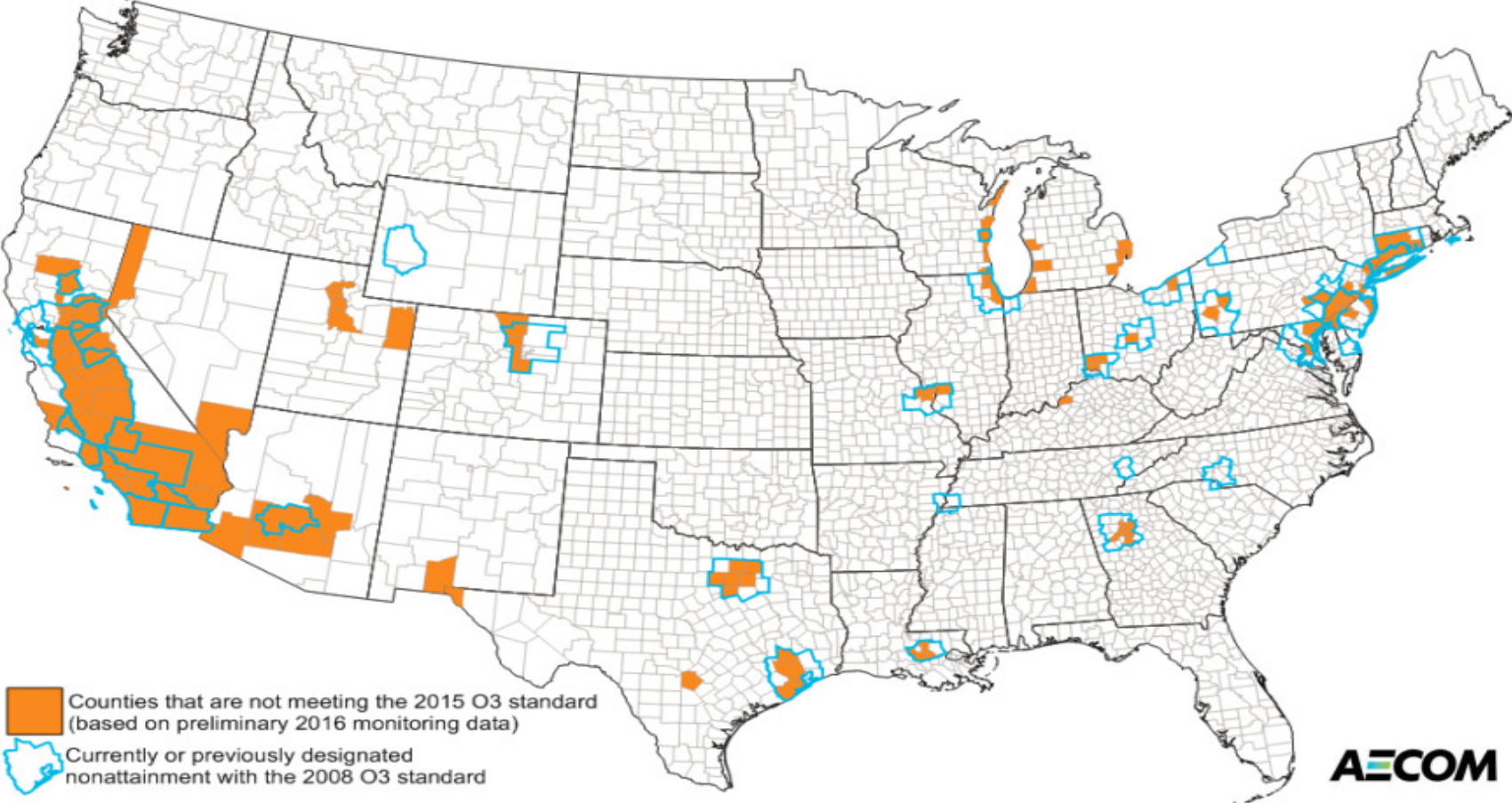
## NAAQS Implementation Milestones

| Pollutant                        | Final NAAQS Date | Designations Effective          | Infrastructure SIP Due | Attainment Plans Due                | Attainment Date                  |
|----------------------------------|------------------|---------------------------------|------------------------|-------------------------------------|----------------------------------|
| PM <sub>2.5</sub> (2006)         | Oct 2006         | Dec 2009                        | Oct 2009               | Dec 2014                            | Dec 2015 (Mod)<br>Dec 2019 (Ser) |
| Pb (2008)                        | Oct 2008         | Dec 2010-2011                   | Oct 2011               | June 2012-2013                      | Dec 2015-2019                    |
| PM <sub>2.5</sub> (2012)         | Dec 2012         | Apr 2015                        | Dec 2015               | Oct 2016 (Mod)                      | Dec 2021 (Mod)<br>Dec 2025 (Ser) |
| NO <sub>2</sub> (2010) (primary) | Jan 2010         | Feb 2012                        | Jan 2013               | N/A                                 | N/A                              |
| SO <sub>2</sub> (2010) (primary) | June 2010        | Oct 2013, Sept 2016 (+2 rounds) | June 2013              | April 2015, March 2018 (2019, 2022) | Oct 2018, Sept 2021 (2023, 2026) |
| Ozone (2008)                     | Mar 2008         | July 2012                       | Mar 2011               | Mid 2015-2016                       | Mid 2015-2032                    |
| Ozone (2015)                     | Oct 2015         | Dec 2017                        | Oct 2018               | Dec 2020-2021                       | 2020-2037                        |

## Ozone NAAQS

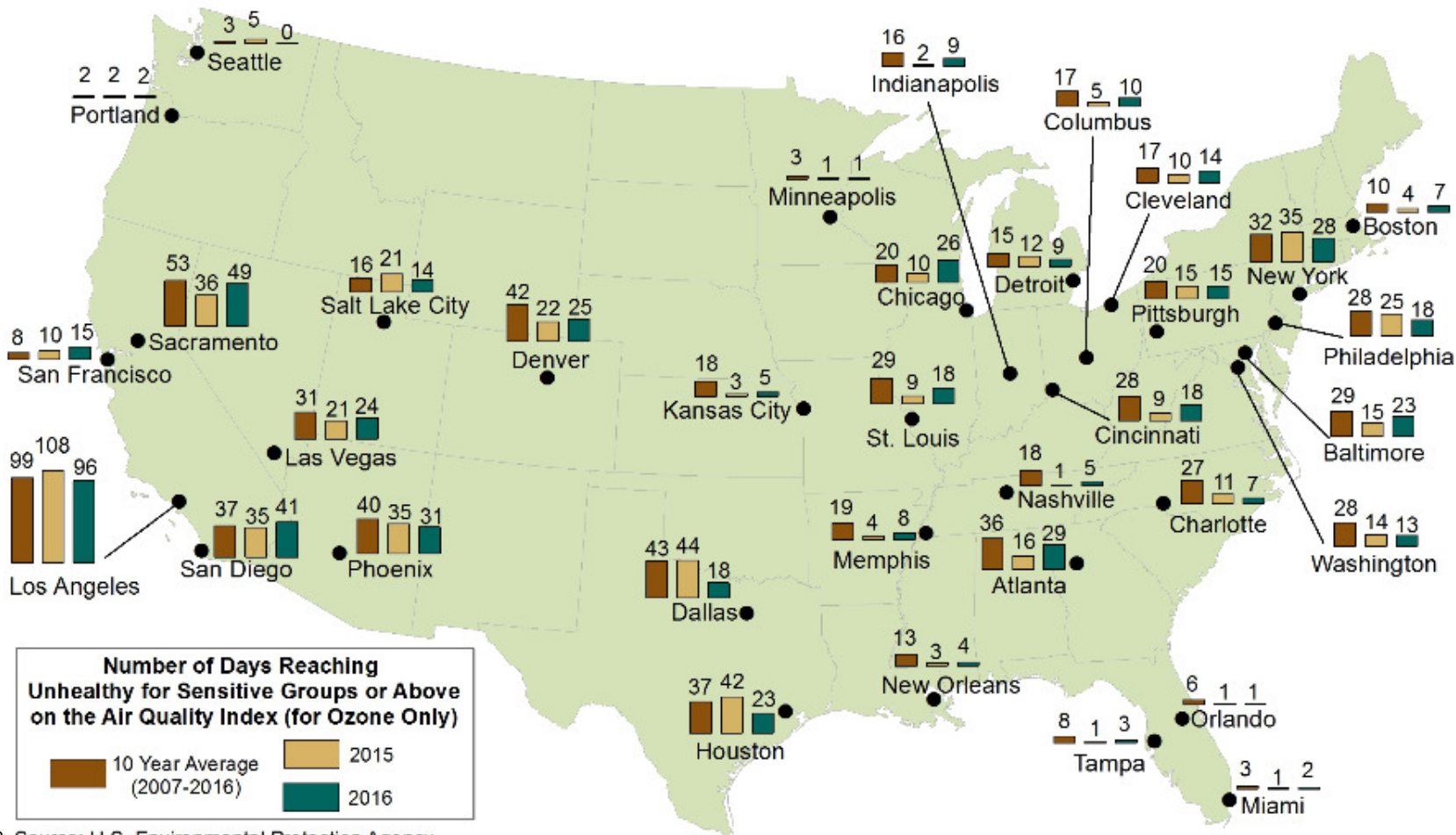
- Lowered from 75 ppb to 70 ppb in 2015. **Litigation on hold so new EPA can review.**
- Due to improved air quality from 2014-2016, it may not have as widespread an impact as previously thought, but it makes it that much harder for current nonattainment areas to come into attainment.
- Could have impacts on the next revision to the Cross State Air Pollution Rule (CSAPR) – to date, EPA has not needed reductions from industrial sources, but as the NAAQS is lowered, reductions from large industrial boilers, heaters, and furnaces could be required.
- NAAQS are currently on a 5-year review schedule.

# Counties With 2014-2016 Air Monitoring Data Not Meeting the 2015 Ozone Standard





# A Look Back: Ozone in 2016



Pre Source: U.S. Environmental Protection Agency

Note: This map shows preliminary air quality data as reported to EPA's Air Quality System and AirNow.gov

## 2015 Ozone NAAQS Designations Timeline

| Milestone  | Date   |
|--|--|
| The EPA promulgates 2015 Ozone NAAQS rule  | October 1, 2015  |
| The EPA issues designations guidance   | February 25, 2016  |
| Air agencies submit exceptional events demonstrations for data years 2014-2015   | No later than the date recommendations are due to EPA (October 1, 2016)      |
| States and tribes submit recommendations for ozone designations (and exceptional events demonstrations for data years 2014-2015) to EPA                      | No later than October 1, 2016  |
| The EPA notifies states and tribes concerning any intended modifications to their recommendations (120-day letters)  | No later than June 2, 2017 (120 days prior to final ozone area designations) |
| The EPA publishes public notice of state and tribal recommendations and the EPA's intended modifications, if any, and initiates 30-day public comment period | On or about June 9, 2017   |
| End of 30-day public comment period  | On or about July 10, 2017  |
| States and tribes submit additional information, if any, to respond to the EPA's modification of a recommended designation                                   | No later than August 7, 2017   |
| The EPA promulgates final ozone area designations  | No later than October 1, 2017  |

## CSAPR NODA for 2015 Ozone NAAQS

- Section 110(a)(2)(D)(i)(I) requires states to submit SIPs to address interstate transport within 3 years of promulgation of a new NAAQS
- On January 6, 2017, EPA published a NODA containing preliminary interstate transport data relevant to the 2015 ozone NAAQS to help states prepare for transport SIPs.
- NODA contained projected ozone design values for 2023 (attainment year for moderate nonattainment areas) for individual monitoring sites, nationwide; projected 2023 ozone contributions from individual states to each monitoring site, nationwide.
- EPA requested comment on the projections and contributions. CIBO submitted comments in April.



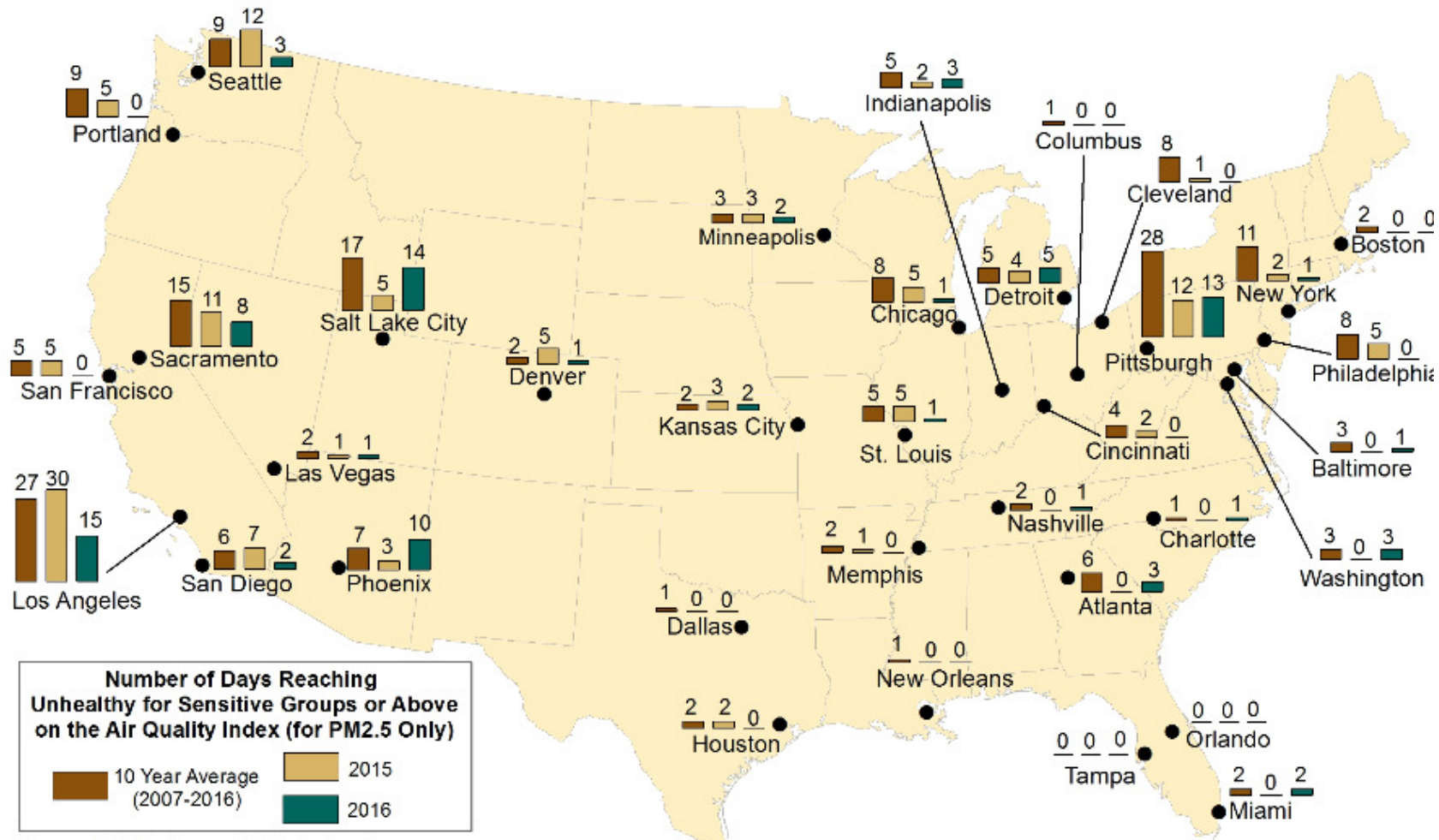
## 2010 1-hour SO<sub>2</sub> NAAQS

- EPA designated 29 areas as nonattainment on July 25, 2013 (Round 1)
- On June 30, 2016, EPA finalized designations for 61 areas for “Round 2”
  - 4 nonattainment areas, 41 unclassifiable/attainment areas, and 16 unclassifiable areas
- December 31, 2017 - The EPA must complete an additional round of designations for any area a state has not established a new monitoring network by January 1, 2017 per the provisions of the SO<sub>2</sub> Data Requirements Rule
- December 31, 2020 - The EPA must complete designations of all remaining, undesignated areas (expected to be areas where states elected to monitor per the provisions of the DRR)

## Progress on PM<sub>2.5</sub> NAAQS Designations

|                                     | 1997 PM <sub>2.5</sub><br>(2005<br>Designations) | 2006 PM <sub>2.5</sub><br>(2009<br>Designations) | 2012 PM <sub>2.5</sub><br>(2015<br>Designations) |
|-------------------------------------|--|--|--|
| Initial Nonattainment Areas         | 39   | 32   | 9  |
| Areas Redesignated to<br>Attainment | 31   | 16   | 0  |
| Current Nonattainment Areas         | 8  | 16   | 9  |
| Clean Data<br>Determinations        | 5  | 8  | 1  |
| Proposed Redesignations             | 0  | 0  | 0  |

# A Look Back: PM2.5 in 2016



Source: U.S. Environmental Protection Agency

Note: This map shows preliminary air quality data as reported to EPA's Air Quality System and AirNow.gov

## Revisions to Air Quality Modeling Guidelines

- Effective date of recent revisions to 40 CFR 51, Appendix W, modeling guidelines was extended by new administration to May 22, 2017.
- Many of the updates were wanted and needed by industry; however, EPA also finalized first time guidance for modeling ozone and precursors as a result of a Sierra Club suit. Procedures are not clearly defined and could be onerous (and inconsistent between regions) for projects triggering PSD review for VOC, NO<sub>x</sub>, or PM<sub>2.5</sub>.
- Model Clearinghouse Approval is also required for non-standard techniques – can delay processing/approval of permit applications.

## Appendix W Revisions

- Science improvements to AERMOD Modeling System
  - ADJ\_U\* options to address technical concerns and improve model performance under extremely light winds and stable conditions
  - Enhanced treatment of horizontal and capped stacks
  - Addition of a buoyant line source option
  - Updates to the NO<sub>2</sub> screening techniques, including a new Tier 2 Ambient Ratio Method (ARM) and revised Tier 3 Plume Volume Molar Ratio Method (PVMRM)
  - AERSCREEN as the recommended screening model for simple and complex terrain for single sources
- Long Range Transport (LRT) screening approach
- Single-Source Impacts on Ozone and Secondary PM<sub>2.5</sub>
- Removal of BLP, CALINE, and CALPUFF as EPA preferred models
- Provide for use of prognostic met data in dispersion modeling for PSD compliance demonstrations

## Evaluation of Single Source Secondary PM<sub>2.5</sub> and Ozone Impacts

- EPA finalized a two-tiered demonstration approach for addressing single-source impacts on ozone and secondary PM<sub>2.5</sub>.
  - Tier 1 demonstrations would involve use of technically credible relationships between emissions and ambient impacts based on existing modeling studies or results deemed sufficient for evaluating a project source's impacts.
    - MERPs and SILs
    - EPA proposed guidance outlining procedures to develop thresholds that relate VOC and NO<sub>x</sub> to ozone, SO<sub>2</sub> and NO<sub>x</sub> to secondary PM<sub>2.5</sub> formation
  - Tier 2 demonstrations would involve case-specific application of chemical transport modeling to evaluate a project source's impacts.

## Resources

- [https://19january2017snapshot.epa.gov/climatechange\\_.html](https://19january2017snapshot.epa.gov/climatechange_.html)
- [http://unfccc.int/paris\\_agreement/items/9485.php](http://unfccc.int/paris_agreement/items/9485.php)
- <https://www.epa.gov/criteria-air-pollutants/naaqs-implementation-process>
- <https://www.epa.gov/scram>

# Questions?

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