



NAAQS Implementation Updates

Spring 2020

Air Quality Policy Division

Office of Air Quality Planning and Standards

Scott Mathias, Acting Director



Overview

- EPA Strategic Plan Priority Goals
 - Nonattainment Areas
 - SIP Process Improvements
- NAAQS Implementation Updates
 - Ozone
 - Sulfur Dioxide (SO₂)
 - Fine Particulate Matter (PM_{2.5})
 - Lead (Pb)
- Advance Program
- Exceptional Events
- Startup, Shutdown & Malfunction
- Regional Haze

EPA Strategic Plan Foundation



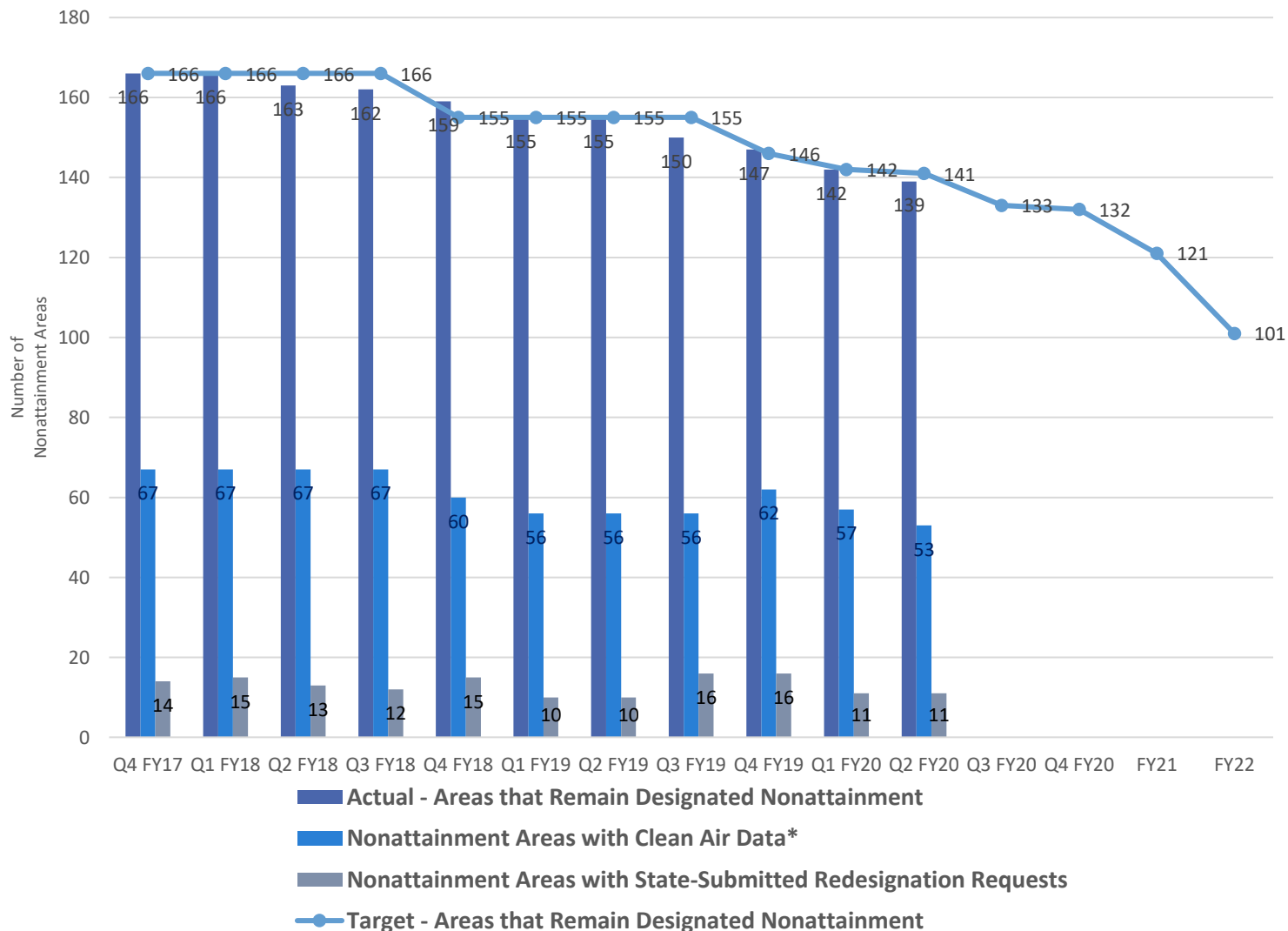
Goal 1: A Cleaner, Healthier Environment. Deliver a cleaner, safer and healthier environment for all Americans and future generations by carrying out the agency's core mission.

Goal 2: Provide certainty to states, localities, tribal nations and the regulated community in carrying out shared responsibilities and communicating results to all Americans.

Goal 3: Increase certainty, compliance and effectiveness by applying the rule of law to achieve more efficient and effective agency operations, service delivery and regulatory relief.

Reducing Number of Nonattainment Areas

Agency Priority Goal: By September 30, 2022, EPA, in close collaboration with states, will reduce the number of nonattainment areas to 101 from a baseline of 166.

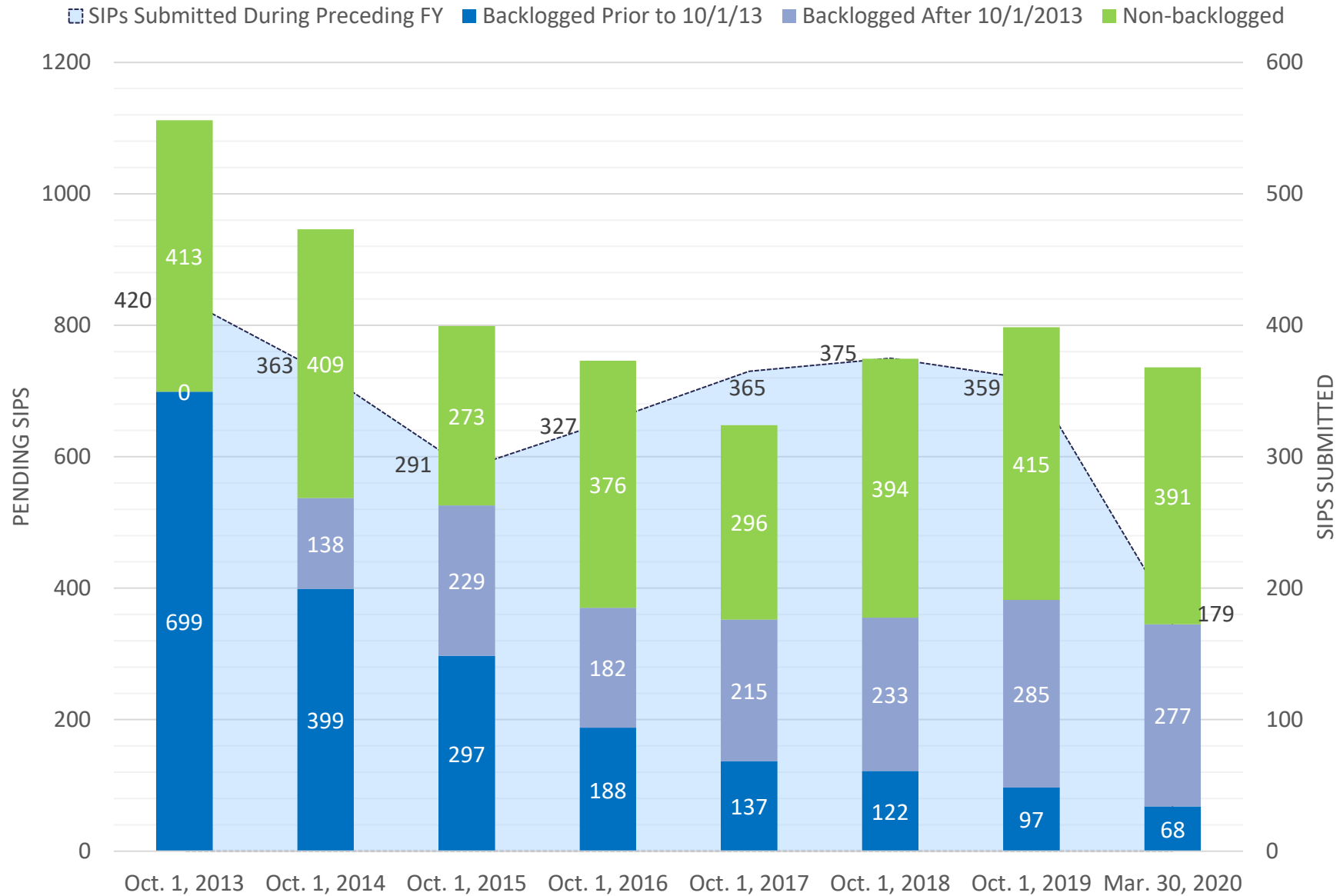


**Clean air data is a key step to redesignation to attainment, which can occur once an area's air quality attains the federal standard.*



Improving State Implementation Plan Reviews

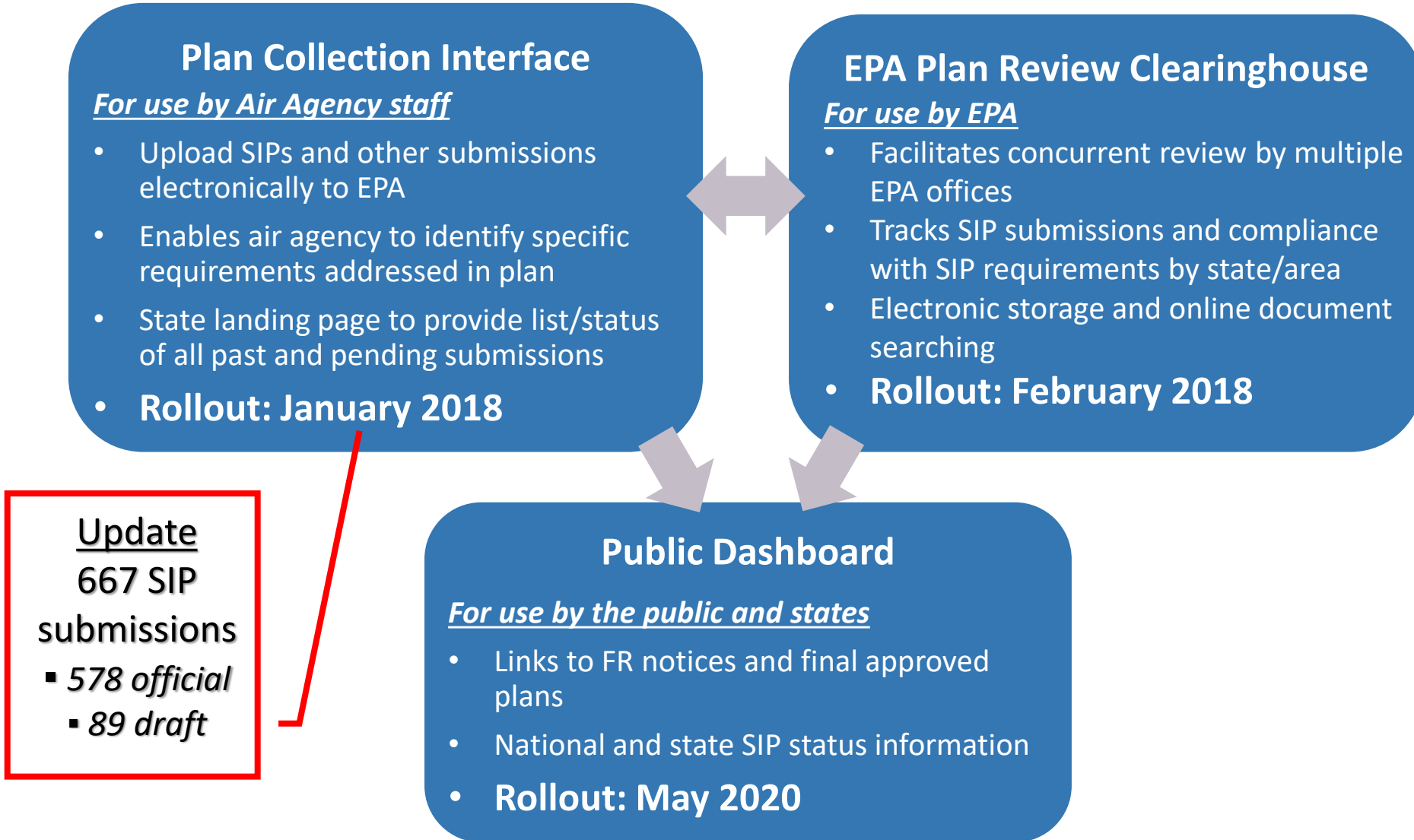
SIPs Pending EPA Review – 2013 to March 2020



SIP Process Improvements

- Early engagement during SIP development
- SIP Lean Toolkit - <https://www.epa.gov/air-quality-implementation-plans/state-implementation-plan-sip-lean-toolkit-collaboration-between>
- Ongoing activities:
 - Undertaking backlog reduction techniques for the most difficult SIPs including withdrawal and disapproval (letters sent in late 2019 followed by 1:1 conversations with states)
 - Updates to www.epa.gov/sips
 - State Plan Electronic Collaboration System (SPeCS) development

State Plan Electronic Collaboration System (SPeCS) for SIPs



Pollutant-Specific Implementation Updates

Ozone, SO₂, PM_{2.5}, Pb

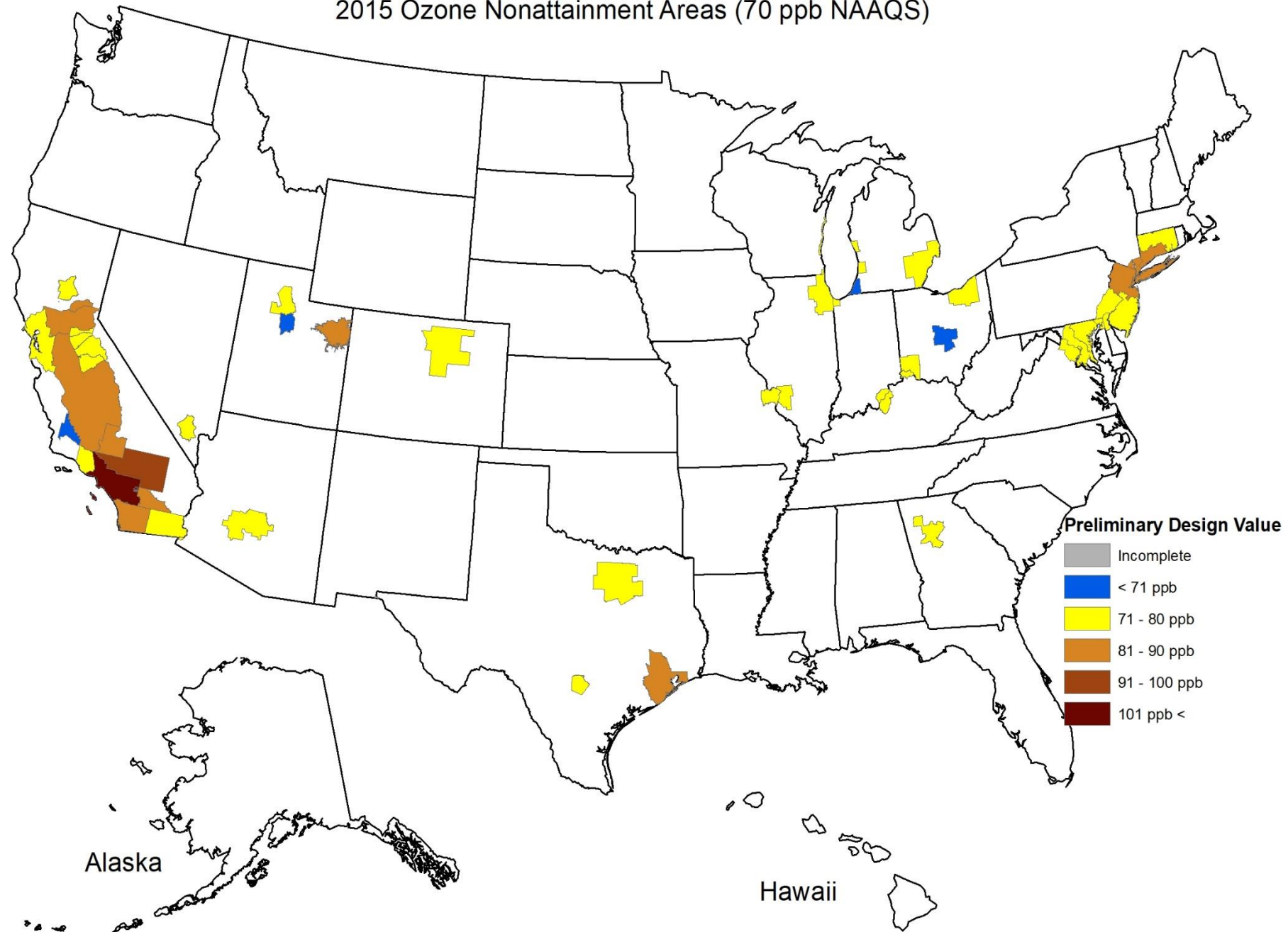
2015 Ozone NAAQS Implementation Update

- 52 areas initially designated nonattainment:
 - 51 areas (excluding San Antonio) effective August 3, 2018 (83 FR 25776; 6/04/18)
 - San Antonio, Texas area effective September 24, 2018 (83 FR 35136; 7/25/18)

| Classification | Number of Areas | Attainment Deadline (years) | Attainment Date |
|---|-----------------|-----------------------------|-----------------------------------|
| Marginal | 39 | 3 | August 3, 2021* (2018-2020 DV) |
| Moderate | 5 | 6 | August 3, 2024 |
| Serious | 2 | 9 | August 3, 2027 |
| Severe-15 | 2 | 15 | August 3, 2033 |
| Extreme | 2 | 20 | August 3, 2038 |
| Rural Transport (Marginal) | 2 | N/A | --- |
| TOTAL | 52 | | |
| * Sep 24, 2021 for San Antonio, TX area | | | |

- Columbus, OH area redesignated to attainment (84 FR 43508; 8/21/19); redesignation proposals for Door County, WI and Berrien County, MI areas anticipated Spring 2020
- Initial SIP submittals (emissions inv./statements) due August 3, 2020

Preliminary 2017 - 2019 Design Values for 2015 Ozone Nonattainment Areas (70 ppb NAAQS)



2015 Ozone NAAQS Implementation Update (cont.)

- Infrastructure SIP update
 - SIPs were due October 1, 2018
 - As of April 2020, EPA has received 39 full submittals and 9 partial submittals
- Litigation on 2015 Ozone NAAQS SIP Requirements Rule
 - Final rule published December 6, 2018 (83 FR 62998)
 - Petitioners' brief filed July 22, 2019:
 - NNSR interprecursor trading
 - RFP requirements: milestone compliance demonstrations
 - RFP requirements: alternative baseline year
 - Early implemented contingency measures
 - Oral arguments Fall 2020 earliest

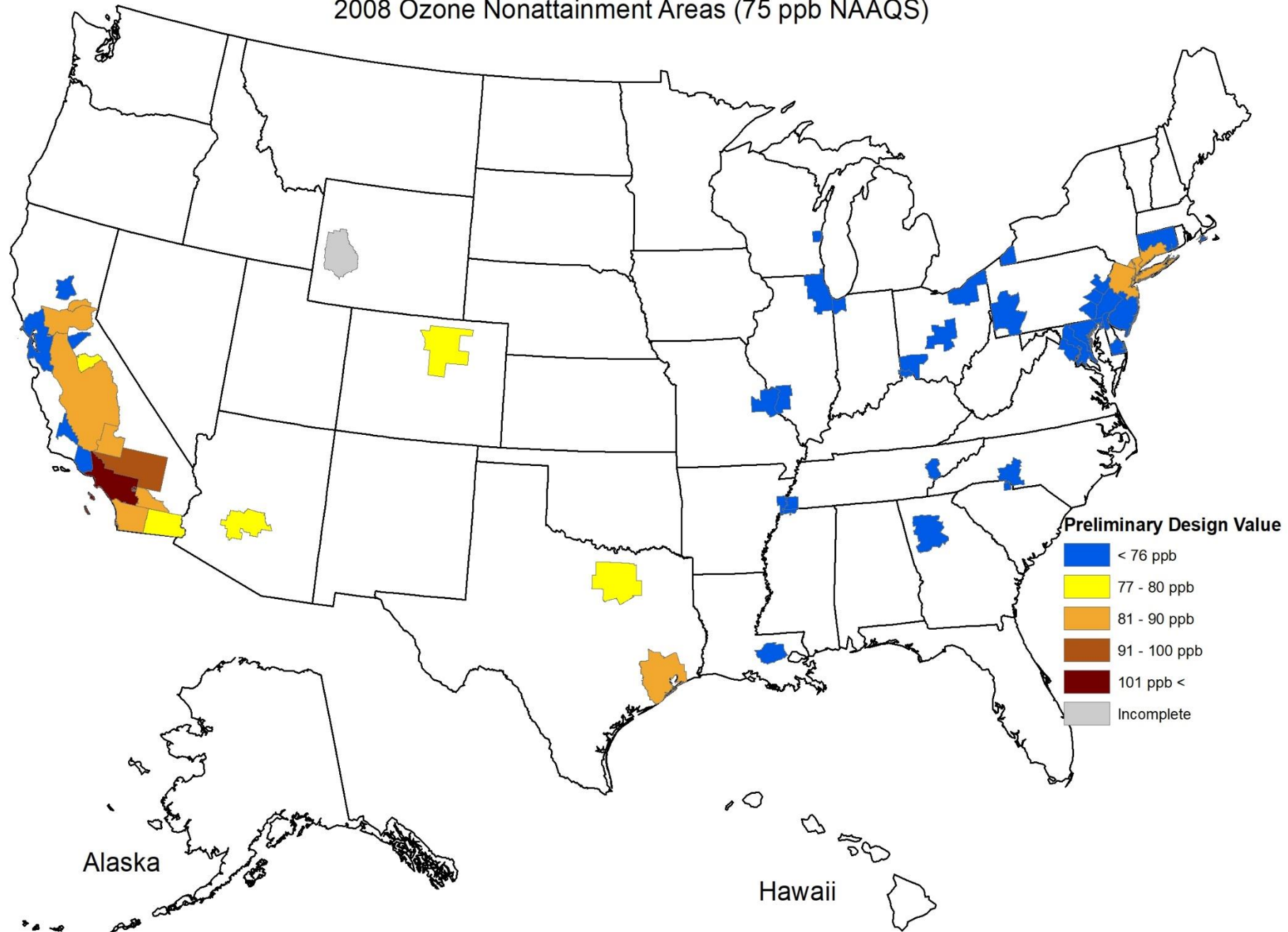
2015 Ozone NAAQS Interstate Transport

- EPA is actively reviewing submitted 2015 ozone NAAQS transport SIPs
 - Received 46 of 56 states/jurisdictions
 - Finalized approval action on 5 SIP submissions
 - Proposed approval on an additional 13 submissions
- Findings of Failure to Submit (FFS) outstanding interstate transport SIPs that were due October 1, 2018
 - On November 22, 2019, EPA issued an FFS finding that 7 states failed to submit interstate transport SIPs for the 2015 ozone NAAQS.
 - 2 states have since submitted
- EPA reviewing a section 176(a) petition from Maine regarding a partial withdrawal from the Northeast Ozone Transport Region; submitted February 24, 2020

2008 Ozone NAAQS Implementation Update

- Moderate Area Update
 - Moderate area Determinations of Attainment by the Attainment Date (DAAD) published August 23, 2019 (84 FR 44238), effective September 23, 2019
 - Separate related final actions for Phoenix, AZ (Nov 2019); Denver, CO (Dec 2019); and Imperial County, CA (Feb 2020)
 - DAAD action established new SIP submittal and RACT implementation deadlines for newly-reclassified Serious areas
 - Oil and Gas CTG RACT SIPs due October 27, 2018
- 2008 Ozone NAAQS Interstate Transport
 - **CSAPR Update** – September 13, 2019, D.C. Circuit decision on *Wisconsin v. EPA* ruled for EPA on a number of issues but concluded that EPA's interpretation of the Good Neighbor Provision was unreasonable with regard to the timing of upwind emissions reductions. The court remanded the CSAPR Update without vacatur. We are working to address the remanded issues.
 - **CSAPR Closeout** – October 1, 2019, D.C. Circuit decision on *New York v. EPA*, was to vacate and remand the CSAPR Close-Out because it did not address states good neighbor obligations with respect to the next applicable attainment date in 2021.

Preliminary 2017 - 2019 Design Values for
2008 Ozone Nonattainment Areas (75 ppb NAAQS)



1997 Ozone NAAQS Implementation Update

- The February 2018 South Coast II ruling reversed several antibacksliding approaches for the revoked 1997 ozone NAAQS, including:
 - not reclassifying areas upon failure to timely attain;
 - “redesignation substitute” mechanisms to terminate antibacksliding controls; and
 - excusing 2nd 10-year maintenance plan obligation for “orphan maintenance areas”
- The ruling held that to remove antibacksliding requirements, areas that were designated nonattainment for the 1997 NAAQS at time of revocation needed to meet all redesignation requirements under CAA section 107(d)(3). Region 6 finalized new redesignation actions:
 - Houston-Galveston-Brazoria, TX area (85 FR 8411; 2/14/20)
 - Dallas-Fort Worth, TX area (85 FR 19096; 4/06/20)
- We plan to update 40 CFR part 52 to reflect certain nonattainment areas that previously attained the 1997 NAAQS by their respective attainment dates (direct final rule anticipated mid-2020).
- We plan to update 40 CFR Part 51 regulatory text to reflect the vacatur.

2010 SO₂ NAAQS Implementation Update

- Round 1 nonattainment areas:
 - EPA has approved attainment plans for 18 areas (out of 29); one area has a CDD
 - EPA is under consent decree to take final action on submitted plans for 1 area by April 30, 2020 and for 8 other areas by October 30, 2020
 - Regional Offices are working with HQ and states on addressing approvability issues for all remaining attainment plans and acting quickly on redesignation requests
- Round 2 nonattainment areas:
 - EPA issued Findings of Failure to Submit attainment plans for two areas in a FR notice dated September 20, 2019, with an effective date of October 21, 2019
 - Attainment plans were due March 12, 2018
- Round 3 nonattainment areas:
 - Attainment plans were due October 9, 2019
- Interstate transport:
 - EPA continues to make good progress approving submitted SO₂ interstate transport SIPs and continues to work with states to submit approvable SIPs addressing the good neighbor provision.

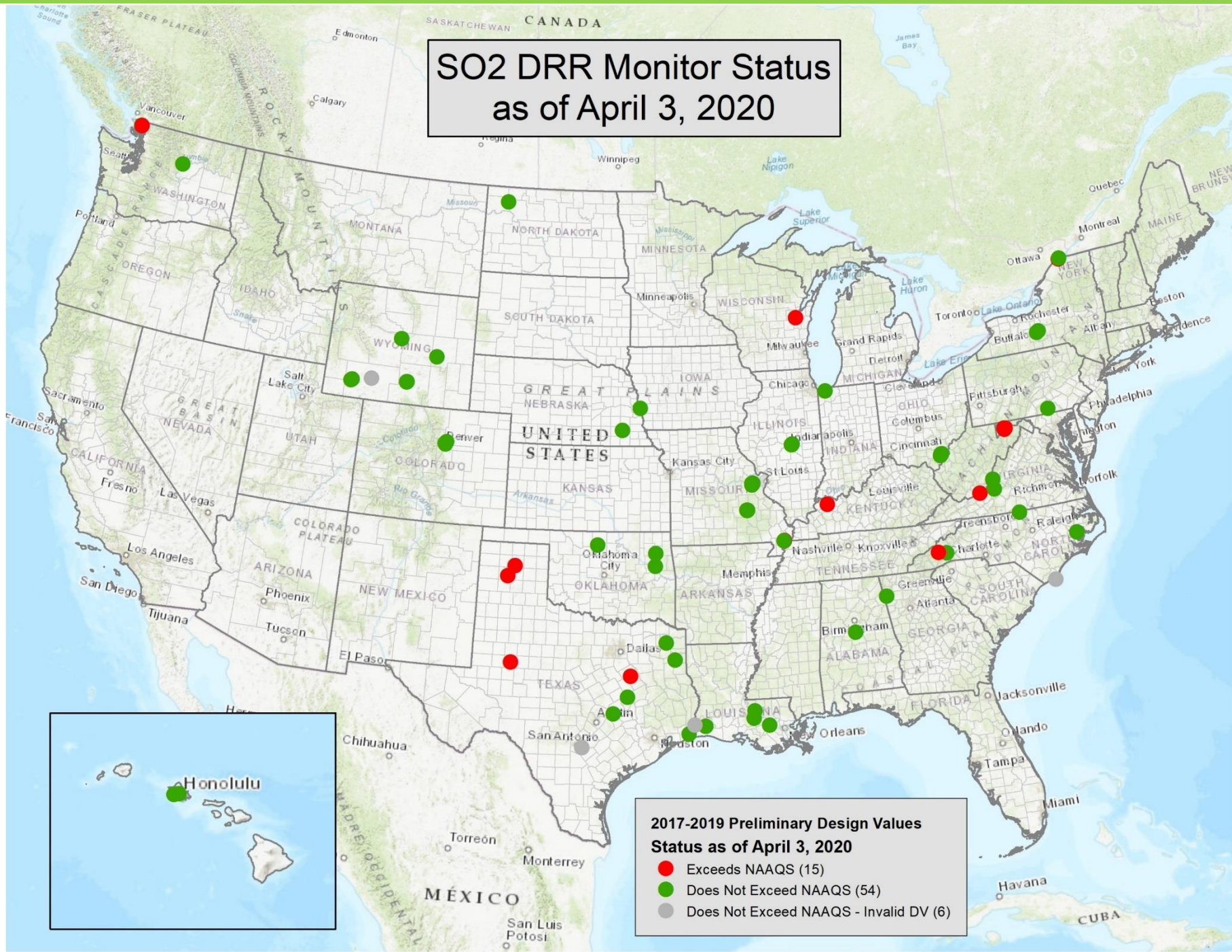
Round 4 SO₂ NAAQS Area Designations

- EPA must designate all remaining portions of the U.S. by December 31, 2020.
- Round 4 Process Guidance Memo issued September 5, 2019.
- The next major milestones are on May 1, 2020.

| Milestone | Date |
|---|---|
| States and tribes certify 2019 SO ₂ monitoring data | No later than May 1, 2020 |
| States and tribes may submit updated recommendations and supporting information for area designations to EPA* | No later than May 1, 2020 |
| States submit exceptional events demonstrations for event-influenced SO ₂ monitoring data from 2017-2019 | No later than May 1, 2020 |
| EPA notifies states and tribes concerning any intended modifications to their recommendations (120-day letters) | On or about August 13, 2020 |
| EPA publishes public notice of state and tribal recommendations and EPA's intended modifications, initiating a 30-day public comment period | On or about August 26, 2020 (No later than 120 days prior to final designations) |
| End of 30-day public comment period | On or about September 25, 2020 |
| In response to EPA's intended designations, states and tribes submit additional information, if desired, to demonstrate why EPA's proposed modification in the 120-day letter to the state's recommended designation or boundary is inappropriate | No later than October 16, 2020 |
| EPA signs notice promulgating final SO ₂ area designations for Round 4 | On or about December 17, 2020 (No later than December 31, 2020) |

* For any remaining undesignated area (i.e., those areas that installed and began operating EPA-approved SO₂ monitoring networks pursuant to the DRR and that have not been previously designated).

SO2 DRR Monitor Status as of April 3, 2020



**2017-2019 Preliminary Design Values
Status as of April 3, 2020**

- Exceeds NAAQS (15)
- Does Not Exceed NAAQS (54)
- Does Not Exceed NAAQS - Invalid DV (6)

Progress on PM_{2.5} NAAQS Attainment

(as of March 31, 2020)

| | 1997 PM _{2.5} (2005 Designations) | 2006 PM _{2.5} (2009 Designations) | 2012 PM _{2.5} (2015 Designations) |
|------------------------------------|---|---|---|
| Initial Nonattainment Areas | 39 | 32 | 9 |
| Areas Redesignated to Attainment | 35 | 18 | 3 |
| Current Nonattainment Areas | 4 | 14 | 6 |
| Attainment Deadlines | Serious 11/2021 | Serious 12/2019 | Moderate 12/2021 |

PM_{2.5} NAAQS Implementation: 2019 Actions

| NAAQS | DATE | STATE | AREA | ACTION |
|-------|------------|-------|--------------------------|--------------------------------|
| 1997 | 5/28/2019 | IL | St. Louis | Final Redesignation |
| | | | | |
| 2006 | 4/10/2019 | UT | Provo (Serious) | Final Clean Data Determination |
| 2006 | 9/29/2019 | UT | Salt Lake City (Serious) | Final Clean Data Determination |
| 2006 | 10/03/2019 | AZ | West Central Pinal | Final DAAD |
| | | | | |
| 2012 | 4/12/2019 | OH | Cleveland | Final Redesignation |
| 2012 | 9/30/2019 | PA | Lebanon County | Final Redesignation |
| 2012 | 9/30/2019 | PA | Delaware County | Final Redesignation |

Lead (Pb) NAAQS Implementation Update

- Of the 22 areas designated nonattainment for the 2008 Pb NAAQS, 11 have been redesignated to attainment
- All areas have fulfilled attainment planning requirements
- Current focus:
 - Remaining redesignations
 - Monitor removal issues

Exceptional Events Update

- EPA has concurred on 34 state demonstrations that were submitted since EPA revised the Exceptional Events Rule in September 2016
- Guidance documents to help right-size demonstrations and facilitate the exceptional events process:
 - Stratospheric Ozone Intrusion Guidance – Released November 2018
 - Updated High Wind Dust Event Guidance – Released April 4, 2019
 - Clarification Memo on Data Modification – Released April 4, 2019
 - Prescribed Fire Guidance – Released August 9, 2019
- SPeCS for Exceptional Events is under development and expected to be deployed this summer
- EPA's exceptional events webpage provides additional resources, including example demonstrations for Ozone and PM, and will continue to be updated as new materials become available
 - <https://www.epa.gov/air-quality-analysis/treatment-air-quality-data-influenced-exceptional-events>

ADVANCE

www.epa.gov/advance

- A collaborative program for states, tribes and local governments to achieve ongoing emission reductions in areas designated as attainment/maintenance for ozone or PM_{2.5}
 - 40 current partners with 360+ counties and 45 million population
 - Forum for stakeholder collaboration, monthly info on grants and training opportunities, access to EPA technical assistance
 - Provide annual plan updates to EPA describing relevant programs (e.g., mobile sources, transportation, energy efficiency, renewable energy, stationary, woodsmoke, education)
 - Plans for current partners are on the EPA website
- There are a significant number of other areas with air quality values that are approaching the level of the ozone and PM_{2.5} NAAQS and may be good candidates for Advance
 - We would be happy to schedule a presentation with your organization
 - Contact Rich Damberg (damberg.rich@epa.gov) for more info

Provisions Concerning Start-Up, Shutdown and Malfunction (SSM) Events in SIPs

- In 2015 EPA finalized the SSM SIP Action. That action included: (1) a response partially granting and partially denying Sierra Club's petition for a SIP call; (2) updating, restating, and consolidating SSM policy; and, (3) a SIP Call applying that policy and directing several states to revise SSM-related provisions for exemptions and affirmative defenses in their SIPs. Litigation in the D.C. Circuit challenging that action was put in abeyance in April 2017.
- EPA Region 6 announced an alternative interpretation and withdrew the SIP call for Texas with respect to affirmative defense provisions.
 - Final action published in the Federal Register on February 7, 2020
 - On April 7, 2020, a group of environmental and public health organizations led by Sierra Club filed a petition in the D.C. Circuit for review of EPA's action withdrawing the SSM SIP call issued to Texas
- EPA Region 4 announced an alternative interpretation and withdrew the SIP call for North Carolina with respect to automatic and director's discretion exemptions
 - Final action signed by the Regional Administrator on April 2, 2020

Regional Haze Program: Ongoing Work

- Moving forward as described in the September 11, 2018, Regional Haze Reform Roadmap and supporting states for the second and future implementation periods:
 - 2018 Technical Guidance on Tracking Visibility Progress (completed December 2018)
 - Guidance on Regional Haze State Implementation Plans for the Second Implementation Period (completed August 2019)
 - 2028 Modeling including estimates of U.S. and international source contributions for Class I Areas (completed September 2019)
- Second planning period SIPs due by July 31, 2021
- EPA remains engaged in SIP development
 - We encourage early engagement on all SIPs
 - Regional Offices are available for questions or preliminary feedback

Questions and Comments



Appendix

NAAQS Reviews: Status Update

(May 2020)

| | Ozone | Lead | Primary NO ₂ | Primary SO ₂ | Secondary (Ecological) NO ₂ , SO ₂ , PM ¹ | PM ² | CO |
|---|--|-------------------------|----------------------------|----------------------------|--|---|------------|
| Last Review Completed (final rule signed) | Oct. 2015 | Sept 2016 | April 2018 | Feb 2019 | Mar 2012 | Dec 2012 | Aug 2011 |
| Recent or Upcoming Major Milestone(s) | <u>Sept 2019</u> Draft ISA ³ <u>Oct 2019</u> Draft PA <u>Summer 2020</u> Proposal <u>Late 2020</u> Final | <u>TBD</u> ⁴ | <u>TBD</u> | <u>TBD</u> | <u>TBD</u> Final ISA; draft REA/PA | <u>Dec 2019</u> Final ISA <u>Jan 2020</u> Final PA <u>April 30, 2020</u> Proposal <u>Late 2020</u> Final | <u>TBD</u> |

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

¹ Combined secondary (ecological effects only) review of NO₂, SO₂, and PM

² Combined primary and secondary (non-ecological effects) review of PM

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

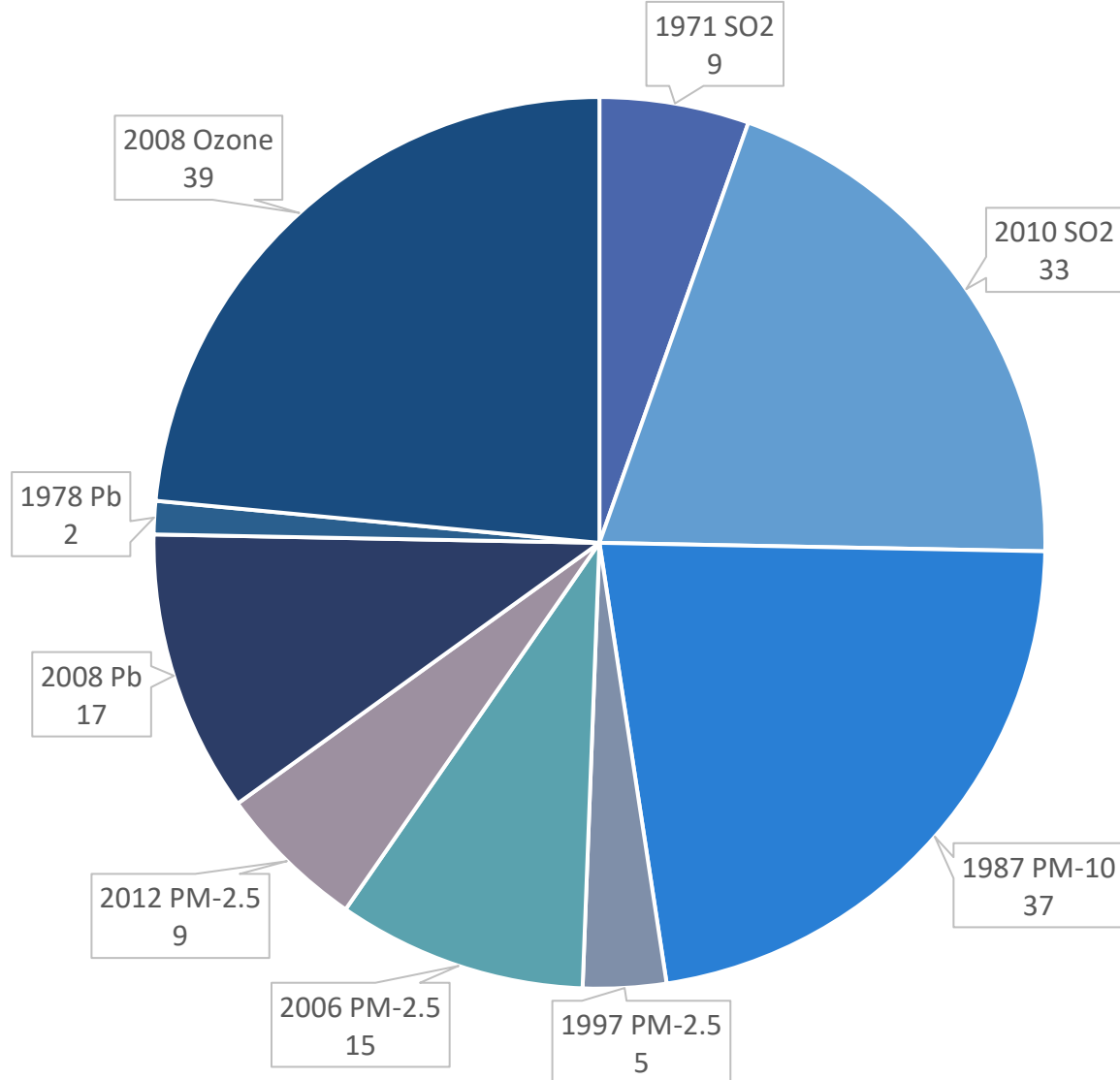
⁴ TBD = To be determined

NAAQS Implementation Milestones (February 2020)

| Pollutant | Final NAAQS Signature | Nonattainment Designations Effective | Infrastructure SIP Due | Attainment Plans Due | Attainment Date |
|----------------------------------|-----------------------|--|------------------------|---|--|
| PM _{2.5} (2006) | Oct 2006 | Dec 2009 | Oct 2009 | Dec 2014 | Dec 2015 (Moderate) Dec 2019 (Serious) |
| Pb (2008) | Oct 2008 | Dec 2010-2011 | Oct 2011 | June 2012-2013 | Dec 2015-2019 |
| PM _{2.5} (2012) | Dec 2012 | Apr 2015 | Dec 2015 | Oct 2016 (Moderate) | Dec 2021 (Moderate) Dec 2025 (Serious) |
| NO ₂ (2010) (primary) | Jan 2010 | Feb 2012 | Jan 2013 | N/A | N/A |
| SO ₂ (2010) (primary) | June 2010 | Oct 2013, Sept 2016, Apr 2018 (early 2021) | June 2013 | Apr 2015, Mar 2018, Oct 2019 (mid 2022) | Oct 2018, Sept 2021, Apr 2023 (early 2026) |
| Ozone (2008) | Mar 2008 | July 2012 | Mar 2011 | July 2015-2016* | July 2021-2032 |
| Ozone (2015) | Oct 2015 | Aug 3, 2018 (Sep 24, 2018 for San Antonio, TX) | Oct 2018 | Aug 2021-2022 | Aug 2021-2038 |

* January 2017 for areas reclassified from Marginal to Moderate. August 2020 for areas reclassified from Moderate to Serious.

Nonattainment Areas for Non-revoked NAAQS as of October 1, 2017 (166)



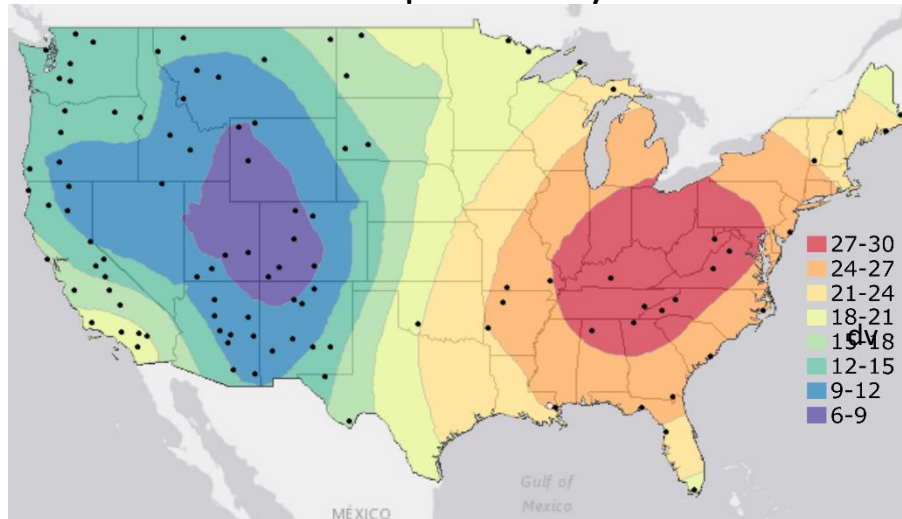
EPA Priority Goal: Reduce Number of Nonattainment Areas

- Work with states to prioritize redesignation request submissions.
- Ensure states have necessary rules, guidance, and tools.
- Improve the efficiency and effectiveness of the SIP/TIP process, including EPA's review process, to maximize timely processing of requested SIP/TIP actions.
- Take federal oversight actions, where necessary.
- For EPA to approve a state's requests to redesignate a nonattainment area, the request must meet the minimum Clean Air Act requirements, which include:
 - A demonstration that the area has air quality that is attaining the NAAQS;
 - Establishing that pollution reductions are due to implementing permanent and enforceable measures;
 - A 10-year maintenance plan that includes contingency measures to be triggered in the event of a re-violation of the NAAQS; and,
 - Satisfying any other applicable and outstanding attainment planning and emissions control requirements.

Regional Haze Program First Planning Period: Visibility is Improving

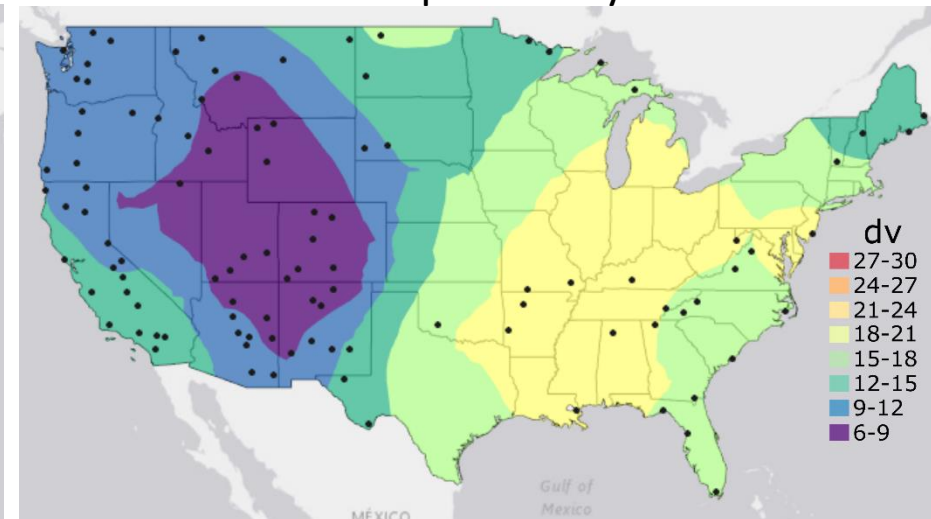
2000-2004

Visibility (dv) on 20% most
impaired days



2013-2017

Visibility (dv) on 20% most
impaired days



- Between 2000 and 2017, state and Federal emissions control programs, including the 1st implementation period of the Regional Haze Program have reduced total SO₂ emissions by 13.6 million tons per year (-84%) and total NO_x by 11.7 million tons per year (-52%)
- EPA estimates that visibility has improved significantly with the average visual range increased by 20 – 30 miles in Class I areas