What is a State Implementation Plan?
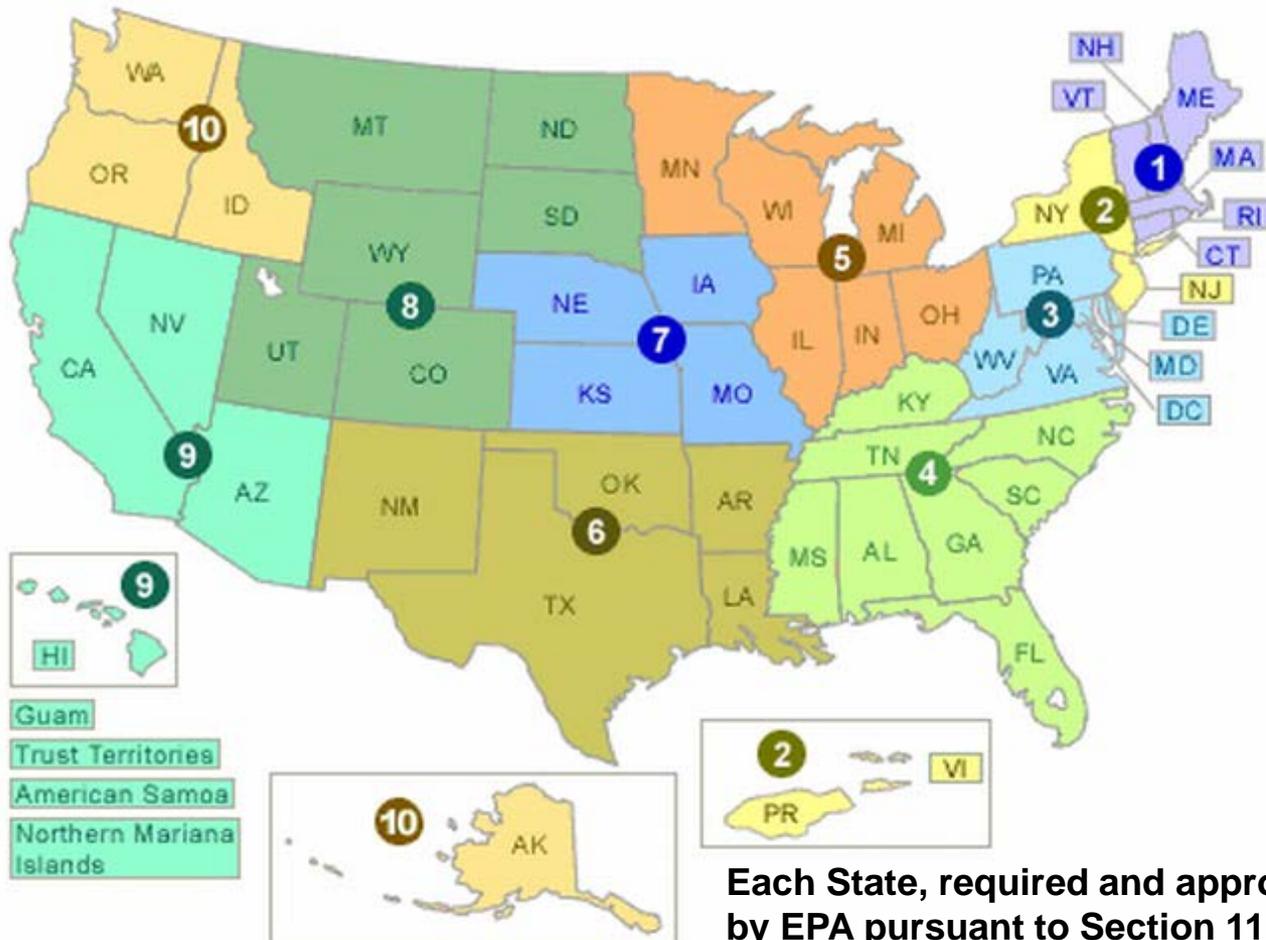
Leah Weiss

SIPs are plans that . . .

- Describe—generally and specifically—how a state will **attain** and **maintain** health-based primary NAAQS in their nonattainment areas (NAAs) by statutory deadlines

- Ensure that secondary NAAQS are met as expeditiously as practicable

- Are federally enforceable, once approved by EPA

SIPS must also . . .

- Ensure that no backsliding occurs (that the air stays clean)

- Ensure that no adverse impacts occur downwind

. . . Essentially, a roadmap and collection of programs and resources that are updated in response to revised NAAQS

Who is Required to Have a SIP?

Each State, required and approved by EPA pursuant to Section 110 of the Clean Air Act

Are SIPs Required for Anything Else Besides Criteria Pollutants?

Yes!

We will talk about that tomorrow (today's focus is ozone).

Key SIP Sections in Federal Law and Regulation

- Clean Air Act
  - Sec 110 (Implementation Plans) Title 1, Part A
  - Sec 172 (Nonattainment Plan Provisions, Title 1, Part D, Subpart 1)
  - Appropriate sections for Title 1, Part D, either Subparts 2, 3, 4, or 5 (depending on the pollutant)

- Regulations
  - 40 CFR Part 51 (Preparing Implementation Plans)
  - 40 CFR Part 52 (Approval of Implementation Plans)

General Types of SIPs (1)

- Infrastructure SIP (I-SIP)
  - Title I, Part A, Sections 110(a)(1) and (2)(A)–(M)
  - Required of all states and territories
  - Assures that the state's SIP contains the necessary **structural** requirements for implementing a new or revised NAAQS,
    - whether by establishing that the SIP already contains or sufficiently addresses the necessary provisions, or by making a substantive revision to update the SIP

General Types of SIPs (2)

- Infrastructure SIP (I-SIP), continued
  - Demonstrates that states have the infrastructure to monitor air quality and regulate/enforce NAAQS
  - Demonstrates states have **controlled any sources contributing significantly to nonattainment or interfering with maintenance** of NAAQS in other states ("Good Neighbor" or "Transport" SIP)
  - Due 3 years after promulgation of new/revised standard, per statute

General Types of SIPs (3)

- Nonattainment SIP (Attainment Demonstration)
  - Title I, Part D,
    - Subpart 1, sec. 172 and
    - Subpart 2, sec. 182 for ozone (and
    - Subparts 3, 4, or 5 for the other NAAQS)
  - Required of states that are part of a nonattainment area
    - Different states that are part of the same NAA may submit separate SIPs or jointly submit one

General Types of SIPs (4)

- Nonattainment SIP (Attainment Demonstration), continued
  - Presents and demonstrates how to attain a NAAQS
    - Includes control strategies
    - Primarily based on a modeling exercise
    - Includes contingency measures and mobile budget
  - Due 3–4 years after designation

General Types of SIPs (5)

- Maintenance SIP (Maintenance Plan)
  - Title I, Part D, Sec. 175A
  - Major component of a redesignation request
  - Actions to ensure that the area will meet the NAAQS for 10 years after redesignation (a 2nd 10-year maintenance SIP due before the end of the 1st period)

General Types of SIPs (6)

- Program SIPs
  - Implements programs or parts of programs required by the CAA
  - Examples: RACT SIP, Vehicle I/M SIP
- Rule SIPs
  - Adopted rules submitted as SIP revisions

What's in a SIP?

- Three main categories of SIP content
  - State-adopted control measures (regulatory)
  - State-submitted non-regulatory components
  - Additional requirements under CAA Title 1, Part A, Sec 110, and Part D

General Things that May Go into an Attainment SIP

- Technical support
  - Monitoring data
  - Emissions inventories
  - Modeling results
- Strategy to attain
  - Control programs descriptions, including staffing
  - Regulations
- Other CAA and EPA requirements
  - e.g., submittal letter, transportation conformity budget, contingency measures, public input process documentation

SIP Components (1)

- Monitoring program and data
  - A collection of monitoring devices throughout that provide measurements of the concentrations in the air.
  - Ambient air quality data is used (among other things) to determine an area's design value to assess designations and classifications.

SIP Components (2)

- Emissions Inventories
  - Compiled data of the sources and categories of emissions to the air for a given pollutant, and how much is emitted by each source or source category.

- Air Quality Calculations and Computer Modeling
  - Methods/tools to predict future trends and the effects of emissions reduction strategies; and to produce the attainment demonstration.

SIP Components (3)

- Control strategy studies
  - Determine how best (environmentally and cost/benefit wise) to reduce emissions in order to meet air quality standards.

- Formal adoption of measures/regulations
  - Ensure that the reductions deemed necessary in the planning process will be achieved
  - Enforceable by EPA, states, and citizen suits

- Documentation of public review
  - Including responses to public comments

SIP Components (4)

- Reasonable Further Progress (RFP) Plans and Demonstrations

- Reasonably Available Control Technology (RACT)

- Attainment Plan/Demonstration

- Reasonably Available Control Measures (RACM) Demonstration

- Contingency Plan/Measures

- Mobile source budgets (for conformity)
- Periodic Review (when necessary)

Contingency Measures

- Contingency Measures in Attainment and Reasonable Further Progress (RPF) Plans
  - Measures that would "automatically" go into effect if progress or attainment is not met by a required date or milestone date. May be implemented early (sec. 172(c)(9) and 182(c)(9))

- Contingency Measures in Maintenance Plans
  - An identified set of measures that would be adopted and implemented, should an area exceed/violate after it has been redesignated. May not be implemented early.

General SIP Process and Roles

- SIP Development
  - State, local, or tribal authorities develop SIPs in response to new or revised NAAQS, SIP Calls, new/revised state regulations, or changes in attainment status

- SIP Adoption and Submittal (by states)

- SIP Review and Approval
  - EPA Regional Administrators (RA) are delegated the authority to receive, return, approve, or disapprove SIPs

EPA's SIP Processing Options

- EPA decides the format
  - Sequential
  - Direct Final
  - Parallel Processing
- Sequential Rulemaking is most common
  - Notice of Proposed Rulemaking (NPR) → 30-day public comment period → Final Rulemaking Notice (FRN)

What Happens After EPA Approves a SIP?

- EPA amends its regulations in 40 CFR Part 52 to add the approved SIP

- Each state has a subpart in 40 CFR Part 52. See "Identification of Plan" (For example: Pennsylvania's SIP is located in subpart NN. 52.2020–52.2063)

- Once 40 CFR Part 52 is amended, **EPA has the same authority and responsibility to enforce it as the state.**

What Exactly is the SIP?

- Strictly speaking, it is everything that is codified in a state's subpart of 40 CFR Part 52

- "The Ozone SIP" is the attainment plan and all the SIP elements approved to control ozone precursors
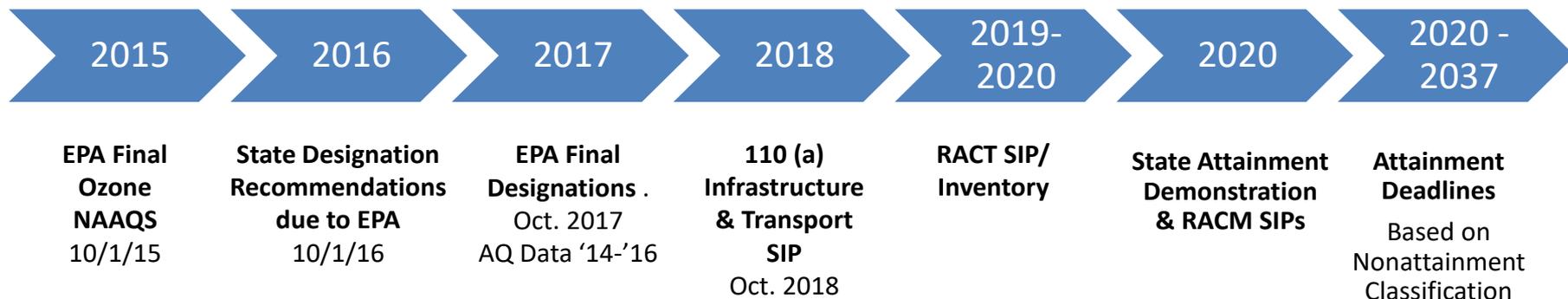
SIP v. SIP Revisions

- Original SIPs approved by EPA for all 50 states, 4 territories, and Washington DC on May 31, 1972 (37 FR 10842)

- Since 1972, numerous SIP revisions submitted by states in response to various CAA amendments and NAAQS revisions

- Technically, all SIPs after 1972 are SIP revisions

- Even if a State believes no updates are necessary to its SIP, it must provide for public participation on that determination

Approx. SIP Timeline of Regulatory Requirements

State Recommendations	Years After Promulgation…	**1**
Federal Designations		**2**
110(a) infrastructure & transport SIPs		**3**
RACT SIPS	Years After Designation…	**2-3**
Attainment Demonstration & RACM SIPs (All Nonattainment Areas)		**3**

Learn more about the 2015 70 ppb Ozone NAAQS at:

http://www.epa.gov/ozone-pollution/2015-national-ambient-air-quality-standards-naaqs-ozone

2015	2016	2017	2018	2019-2020	2020	2020 - 2037
EPA Final Ozone NAAQS 10/1/15	**State Designation Recommendations due to EPA** 10/1/16	**EPA Final Designations .** Oct. 2017 AQ Data '14-'16	**110 (a) Infrastructure & Transport SIP** Oct. 2018	**RACT SIP/ Inventory**	**State Attainment Demonstration & RACM SIPs**	**Attainment Deadlines** Based on Nonattainment Classification

Key Resources

- 40 CFR 51, Subparts F & G
  - Describe procedural and general requirements for control strategy SIPs (e.g., Rate of Progress (ROP), Attainment Demonstrations)

- 40 CFR Part 51, Appendix V
  - How to submit a complete SIP revision to an EPA regional office

Any questions or comments?