# MARAMA SIP Development Workshop

# Types of SIPs

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# *Designation Reminders*

- **Attainment**
  - Area that meets the NAAQS
- **Nonattainment**
  - Area that does not meet primary and secondary NAAQS for a specific pollutant
- **Unclassifiable**
  - Area with insufficient data to determine the status for that area

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# *Nonattainment Classifications*

- **Ozone**
  - Marginal
  - Moderate
  - Serious
  - Extreme
- **Carbon Monoxide and $PM_{2.5}$**
  - Moderate
  - Serious
- **$PM_{10}$**
  - All nonattainment areas – Moderate
  - Missed attainment deadline - reclassified to Serious
- **Lead and $SO_2$**
  - Nonattainment

# *Fun Fact for Trivia Night*

- Original SIPs were approved by EPA for all 50 states, 4 U.S. Territories, and Washington D.C. on May 31, 1972 (37 FR 10842) – aka, known as “mother” SIPs.
- Technically, all SIPs after 1972 are SIP revisions.
- You can all thank me later… beer accepted

# Where to Find What Makes Up a State's SIP?

- Current Reference(s):
  - CFR 40, Parts 51 and 52
  - CAA Title I, Part A, Sec. 110 (Implementation plans)
  - CAA Title I, Part D, Sec. 171-192 (Plan Requirements for Nonattainment Areas)
- https://www.epa.gov/environmental-topics/air-topics
- https://www.epa.gov/air-research

# The World of SIP Types

1. Infrastructure (I-SIP)
2. Attainment
3. Maintenance
4. Transport/Good Neighbor
5. Conformity
6. Control Measure
7. Regional Haze
8. CAA Section 110(l) Noninterference Demonstrations
9. Tribal and Local Implementation Plan (TIP/LIP)
10. Exceptional Events (sort of a SIP)
11. Advance Program (not a SIP)
12. Clean Data Finding (SIP relief)
13. Federal Implementation Plan (FIP)

# 1. Infrastructure SIP (I-SIP) CAA 110(a)(2)

- Required from all States and U.S. Territories within three years after promulgation of a new or revised NAAQS.
  - DC Circuit Court decision determined a NAAQS is promulgated on the date it was signed by the EPA Administrator and made publicly available.
  - Other SIP-related effective dates are tied to *Federal Register* actions.

# Basic I-SIP Requirements

1. What air quality monitoring program is in place for the NAAQS?
2. What authority and resources the state has for jurisdiction over air quality?
3. Information about the state's technical programs, such as data collection/analyses/modeling systems.
4. What authority the state has for developing, implementing, and enforcing control measures?
   - An I-SIP does not address what control measures will be needed to attain the NAAQS.
5. What public review process(es) the state uses?
6. More to come on Day 3…

# 2. Attainment Demonstration SIP

- A collection of documents that demonstrate what the state plans to do that will result in an area attaining the NAAQS. Plans are due to EPA 18+ months after the effective date of the NAAQS designation, depending on the severity of designation.
- Plan includes:
  - Monitoring data
  - Emissions inventories
  - Modeling summaries
  - Control strategies (could include RACT, RACM, BACT, BACM, PSD, NSR)
  - Compliance & enforcement authorities
  - Administrative requirements, such as public notice and comment

# 2a. Rate of Progress (ROP) SIP (Ozone only)

- **1990 Clean Air Act Amendments required for Moderate and above Ozone nonattainment areas.**
- **15% ROP Plan**
  - Due to EPA in 1996 to reduce VOC emissions by at least 15% from a 1990 baseline.
- **Post-1996 ROP Plan**
  - Reduce VOC emissions by a minimum of a 3% average per year, across 3-year running averages beginning November 1996 until the ozone attainment date is reached.
  - NOx emission reductions can be substituted for VOC reductions.
  - Emission reductions from some motor vehicles control programs are excluded from the ROP plan.

# 2b. Reasonable Further Progress SIP

- **Ozone moderate or higher designated areas**
  - If attainment date is <= 5 years from designation, RFP is met by attainment demonstration SIP emissions reductions and no additional SIP is required.
  - If attainment date is > 5 years from designation, the RFP SIP provides 15% NOx or VOC emissions reductions within 6 years of designation; proportional reductions between the end of the first increment and attainment.
- **PM requires quantitative milestones be identified that will be achieved every 3 years until attainment**.

# 2c. Ozone Rural Transport Areas (CAA 182h)

- **New (old) option with 2015 Ozone NAAQS.**
  - Four areas were classified for 1979 1-hour ozone NAAQS.
- Applicable for areas designated nonattainment that are not part of or adjacent to a metropolitan statistical area (MSA).
- State must complete a marginal area attainment demonstration SIP to show that local NOx and VOC sources don't contribute significantly to high ozone in the rural transport area or other areas.
- **If EPA approves, area can be redesignated to attainment.**

# 3. Maintenance SIP (CAA 175A)

- **Applies to any NAAQS.**
- **Reinforces that area will remain in attainment for at least 20 years after redesignation to attainment.**
  - 1st SIP covers 10 years.
  - 2nd SIP covers additional 10 years after the end of the first maintenance period.

# 4a. Transport/Good Neighbor SIP

## CAA Title 1 Part A, 110(a)(2)(D)(I)
## CAA, Title 1, Part D, 176(A)

- States must show their emissions do not contribute significantly to “downstream” areas or if they do, what measures will be put in place to reduce the applicable emissions.

- The CAA 176A allows for transport regions to be created – the Ozone Transport Commission was formed to address northeast U.S. issues.

# 4b. International Transport (CAA 179b)

- For areas that would attain an Ozone, CO or $PM_{10}$ NAAQS but for emissions emanating from outside the U.S.
- State must prepare and submit a SIP with relevant technical work and control measures developed for the areas.
- Nonattainment designation remains, but attainment deadlines do not apply.

# 5. Conformity SIPs (CAA 176)

- Activities funded by or approved by federal agencies must conform to a state's attainment or maintenance area SIP.
- "Conform" is defined as:
  - activities that will not cause or contribute to new air quality violations, worsen existing violations, or delay attainment of air quality standards.

# 5. Conformity SIPs (CAA 176)

- **Transportation Conformity**
  - Applies to Federal Highway and Transportation actions.
  - Applies to transportation-related criteria pollutants:
    - Ozone
    - PM
    - CO
    - $NO_2$
- **General Conformity**
  - Applies to all other federal actions, such as approval of airports (FAA), defense facilities (DOD), freight rail (FRA), etc.
  - Applies to above pollutants was well as $SO_2$, Ammonia, and Lead.
- **More Tomorrow……**

# 6. Control Measure SIP

- **Some control strategies are complex enough to warrant their own SIP Revision**
  - Vehicle Inspection and Maintenance SIP (I/M SIP)
  - Required in ozone moderate and above areas (CAA 182(b) and (c)), CO serious areas (CAA187)
- **Prevention of Significant Deterioration/New Source Review (PSD/NSR SIP)**
  - Nonattainment New Source Review (NNSR)
  - Clean Fuel Programs
    - Required in ozone and CO serious and above areas

More tomorrow, only if Earth continues to turn….

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# 7. Regional Haze SIP (CAA 169A)

- **All states are required to show progress toward natural visibility conditions in Class I areas by 2064**
  - Class I areas are national parks, wilderness areas, national forests and monuments. Not all states have Class I areas, but all need a Regional Haze SIP
- **Reasonable Progress**: SIPs required every 10 years, interim progress reports (not a SIP) every 5 years.
  - Round 1 SIPs included consideration of retrofit controls on existing large stationary sources: BART (Best Available Retrofit Technology)
- **More to come on Day 3…**

# 8. CAA Section 110(l) Noninterference Demonstrations

- Air agency must demonstrate that any modification to its SIP will not interfere with attainment and maintenance of any of the NAAQS, RFP, or any other applicable requirement of the CAA.

- Examples:
  - Remove a control measure from a SIP
  - Reduce the geographic coverage of a control measure in a SIP

- **More to come on Day 3…**

# 9. Tribal Implementation Plan (TIP)

- Tribes have similar authority as states in the CAA
- Although not a requirement, Tribes can be the authority for the air quality program with their own boundaries.
- The Tribal Authority Rule (TAR) provides regulatory framework for developing TIPs.
- Like SIPs, TIPs must demonstrate that Tribes have the necessary resources and authority to implement the CAA.

# 9.1 Local Implementation Plan (LIP)

- Some local agencies have similar authority as states in the CAA
- Although not a requirement, local agencies can be the authority for the air quality program within their own boundaries.
- Like SIPs and TIPs, LIPs must demonstrate that local agencies have the necessary resources and authority to implement the CAA.

# 10. Exceptional Events Plan

- Currently applicable to ozone and PM.
- Provides that states can demonstrate that monitoring values that contributed to a violation of the NAAQS could not have been avoided. Results from unusual or naturally occurring events that cannot be reasonably controlled, such as fireworks, volcano eruptions, wildfires, etc.
- If EPA concurs with the state's argument, the monitoring values are removed from an attainment determination.
- WESTAR project

# 11. Advance Program

- Applicable to ozone and $PM_{2.5}$ Attainment Areas
- Provides a tool for working with communities to put into place action/programs that can help avoid nonattainment designations.
- Several areas across the country are participating.
- www.epa.gov/advance

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# 12. Clean Data Findings

- When a nonattainment area monitors attainment prior to the SIP submittal deadline or the CAA deadline
  - Three years of violation-free monitored data required.
- Finding may be initiated via state request or EPA initiation.
- Relieves the state from some SIP requirements, such as RFP and an Attainment Demonstration.
- Area retains a nonattainment designation status until redesignation has occurred.

# 13. Federal Implementation Plan

- When an agency has not gotten an approved SIP in place, EPA can impose a Federal Implementation Plan (FIP)

# Due Date Timeframes

| Program | Infrastructure SIP Due | Due Date to EPA | Attainment |
|---|---|---|---|
| Criteria Pollutant | Promulgation of NAAQS + 3 years | Designation date + 18 - 48 months | Designation date + up to 5 (or more) years |
| Regional Haze | n/a | 2008, 2021 and 2028 and every 10 years after (reasonable progress demos) | 2064 (natural conditions) |
| Exceptional Events Plan | n/a | Prior to attainment deadline | n/a |
| Ozone (and PM2.5) Advance Plan | n/a | Prior to nonattainment designation | n/a |

# *QUESTIONS?*

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