

Clean Air Act 50th Anniversary Report

Presented to the Clean Air Act Advisory Committee for Approval

October 18, 2021

Work Group

Co-chairs

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Process

Charge from EPA

Input

- survey**
- outline**
- committee meetings**

Writing Process: Successes, Opportunities, Challenges, Recommendations

SECTION TITLE:

Attainment and Maintenance of the
National Ambient Air Quality
Standards (NAAQS)

RECOMMENDATIONS – ATTAINING/MAINTAINING NAAQS

1. Improve the NAAQS Review Process
 1. Reduce uncertainty on timing and finality of NAAQS reviews
 2. Synchronize NAAQS reviews with common precursors
 3. Ensure accounting of protection needed for EJ communities in NAAQS reviews
 4. Evaluate forms and averaging times for O₃ and PM NAAQS to account for weather trends
 5. Account for International Transport in Reviewing the NAAQS
2. Make better use of full range of authority in area designation process

RECOMMENDATIONS – ATTAINING/MAINTAINING NAAQS

3. Consider requiring more interstate air pollution abatement
4. Improve implementation of exceptional events rule and interstate transport provisions
5. Modify approach to SIP requirements and classifications for nonattainment areas
6. Ensure timeliness of actions related to SIPs
7. Consider issuing “early action” SIP calls to address problems maintaining the NAAQS
8. Consider updating transportation conformity policies and practices

SECTION TITLE:

Developing and Utilizing High Quality Data

RECOMMENDATIONS - DEVELOPING AND UTILIZING HIGH QUALITY DATA

1. Request more funding for monitoring
2. Address NAAQS monitoring requirements
3. Increase funding for community monitoring
4. Maintain and expand expertise in sensor technology
5. Improve understanding of remote sensing measurements
6. Document large-scale exceptional events
7. Improve utility of 5-year monitoring network assessment
8. Conduct a comprehensive review of emission factors
9. Conduct a comprehensive review of EPA databases
10. Expand integration of ambient monitoring data

SECTION TITLE:

Section 112: Hazardous Air Pollutants

RECOMMENDATIONS: SECTION 112

1. Completing the risk reviews: Endeavor to complete as expeditiously as practicable remaining risk reviews; communicate to Congress the challenges of completing these reviews in the allotted time frames.
2. Timely technology reviews: Be timely in technology reviews; communicate to Congress the challenges of completing these reviews in the allotted time frames.
3. Communicate EPA's views of proper review timing: Advise Congress of appropriate frequency of updates given resources and pace of technology advancements expected.
4. Promote innovation: Consider ways to ensure innovative compliance approaches can be allowed to reduce costs and potentially provide even greater emissions reductions.
5. Complete and apply learning from cost studies: Apply lessons from retrospective cost analysis comparisons to improve cost/benefit forecasts.
6. Simplify regulations: Attempt to simplify Section 112 standards to facilitate understanding, compliance, enforcement. Continue EPA's "plain language" efforts.

SECTION TITLE:

Stationary Source Programs: Major &
Minor NSR, Title V Operating Permits, New
Source Performance Standards

RECOMMENDATIONS – MAJOR/MINOR NSR, TITLE V, NSPS

Guidance: Rationalize/reconcile thousands of NSR guidance documents to facilitate understanding which guidance applies; eliminate conflicts.

Processing time: Help expedite permits and applicability determinations.

PALs: Continue to encourage use of PALs.

SILs: Address problems with SILs.

Implementation rule timing: Adopt NAAQS implementation rules addressing NSR implications at same time as issuing revised NAAQS.

Monitors: Enhance air quality monitoring networks and explore PPP to support this effort.

Study of relative benefits: Conduct study to assess relative benefits of NSR permitting compared with costs; recommendations as to whether additional streamlining is possible under current statutory framework.

Specific Recommendations – Stationary Sources

- EPA should rationalize and reconcile NSR guidance documents
- Consistent with periods for public review, EPA should take steps to expedite both permits and applicability determinations
- EPA should continue to encourage plant-wide applicability limits
- EPA should further address issues stemming from caselaw on significant impact levels
- EPA should promulgate related NSR rule changes and guidance in tandem with any revised NAAQS
- EPA should enhance air quality monitoring networks

Specific Recommendations – Stationary Sources

- EPA should study relative benefits of NSR permitting compared with costs and should explore public/private partnerships to support this effort
- EPA should implement remaining majority recommendations from CAAAC Title V task force report
- EPA should reduce timeframe for responding to Title V petitions
- States and EPA should ensure appropriate fees are being collected
- EPA should work with states to improve timeframe for permit modifications and renewals
- EPA should make efforts to streamline technology reviews under CAA section 111(b)(1)
- EPA should evaluate expanded use of alternative means of emission limitation when issuing or revising NSPS

SECTION TITLE:

Visibility and Regional Haze

RECOMMENDATIONS – VISIBILITY AND REGIONAL HAZE

1. EPA should create a Regional Haze resource webpage/clearinghouse
2. EPA should consider retrospective analysis for degree to which BART reductions versus other programs have contributed to visibility improvements in last 20 years
3. EPA should examine opportunities for non-BART reductions that may be needed to achieve further visibility improvements moving forward

SECTION TITLE:

Mobile Sources

OVERARCHING RECOMMENDATIONS:

1. EPA should review its authority (including any lack thereof) to adopt different approaches under the Clean Air Act in order to address vehicle and engine emissions.
2. EPA should also define its' authority under the Clean Air Act, if any, to address related vehicle infrastructure issues associated with greater adoption of electric, hydrogen or other alternative-fueled vehicles.
3. EPA should develop the necessary analytical infrastructure to more precisely assess the relative impact of different vehicle types on generation of criteria and greenhouse gases.
4. EPA should examine how past regulatory mechanisms allowing for compliance flexibility may be utilized in new rulemakings for criteria and GHG standards.
5. EPA should address how it will balance efforts between mobile sources of GHGs and other sources subject to control under the Clean Air Act.

Greenhouse Gas Emissions and Climate Change

RECOMMENDATIONS

- 1. EPA Should Reassess and Further Define its CAA Authority to Address GHGs and Climate Change**
 - EPA Should Issue New ANPRM or Similar Public Document Analyzing Available CAA Authority to Address GHGs Under the CAA, Soliciting Public Comment
 - EPA Should Clearly Articulate What Implementation Methodologies May Be Available to Include Cap-and-Trade, Financial Mechanisms and Incentive Programs
- 2. EPA Should Continue to Focus on Major Sources of GHGs**
- 3. EPA Should Define How Implementation of CAA GHG Programs Can Occur in Connection With State and Local Programs Designed to Address GHG Emissions, Including Potential Conflicts**
- 4. EPA Should Consider Regulatory Mechanisms Which Can Incentivize Behavior**

RECOMMENDATIONS

- 5. EPA Should Issue A NODA Regarding Measurement and Accounting Methods for GHG Emissions, Including Lifecycle Emissions and Embodied Carbon**
- 6. EPA Should More Explicitly Address Expected Co-Benefits from Controlling Criteria and Other Non-GHG Air Pollutants**
- 7. EPA Should Proactively Address Potential GHG Issues with Respect to Imported Products**
- 8. EPA Should Enhance Web-Based Information on GHG Standards to Include Full Regulatory History and Supporting Documents**

Title IV, Acid Rain Program

RECOMMENDATIONS

1. Future amendments to the Clean Air Act should strive for precision

- Precise legislative language on amount of reductions, schedule, regulatory structure and allowance program avoided uncertainty in implementation.

2. Science serves a vital role in program development and implementation

- Studies prior to program helped to define problem and dedicated monitoring and testing allowed near-concurrent measurement of efficacy.

3. EPA should further assess what elements of the Acid Rain Program were not needed

- Title IV provides a “test case” and examples of allowance program structure and implementation over time.

Title VI – Stratospheric Ozone Protection

RECOMMENDATIONS

- 1. EPA should conduct a formal “lessons learned” exercise from implementation of Title VI of the CAA utilizing an allowance-based system.**
- 2. EPA should define how implementation of Title VI programs affecting HFCs will interact with implementation of the AIM Act.**
- 3. EPA should articulate how Title VI programs and other CAA authorities addressing GHGs interact.**

SECTION TITLE:

Tribal Air Issues

TRIBAL RECOMMENDATIONS

- **1. Invest in Tribal Capacity**

1. Invest in Tribal Air Quality Management capacity through adequate and consistent funding.
2. Provide [timely approval of applications for Treatment as a State from Tribes](#).
3. Provide resources for additional Tribes to have their own air quality management programs.
4. Encourage Tribes to apply for Tribal authorities, including Class I redesignation.
5. [Avoid directing Tribes towards “informational monitoring” with low-cost sensors, versus investing in Tribal use of Federal Reference Methods](#).
6. Invest in Tribal regulatory monitoring equipment so that Tribes operate as partners with local, regional, and state air quality agencies.
7. Continue to strengthen Tribal ability to set air quality standards for Indian Country, as authorized by the Tribal Authority Rule.
8. Provide [new funding to Tribes to keep pace with the increased amount of work in permitting new stationary sources and to review permits](#) issued by states and EPA.
9. Assist Tribes with wildland fire response.

- **2. Improve Government-to-Government Consultation with Tribes**

1. EPA should work to ensure [meaningful of Government-to-Government Consultation](#), especially when considering delegating authority to states.
2. Tribes are sovereigns and should be provided opportunities for direct consultation with EPA rather than EPA relying only on consultation with the National Tribal Air Association.
3. Develop and implement training of new and existing EPA Air staff on the 1984 Indian Policy, the Government-to-Government relationship, and the intent and procedures of Tribal consultation.

TRIBAL RECOMMENDATIONS

- **3. Special Consideration of Tribal Concerns and Recommendations.** Given their status as sovereign entities, EPA should give special consideration to Tribal concerns and policy recommendations on implementation of the Clean Air Act. Tribal governments that provided input to this report made broader recommendations on implementation of the Clean Air Act. These included support for measures to controlling greenhouse gases, reconsideration of the 2020 PM and O₃ NAAQS reviews, review of the cost/benefit and transparency in science rules promulgated in recent years, building the agency's EJ program, and reducing emissions from oil and gas. Many CAAAC members support some or all of these recommendations, while others may not support any of them. (NEW) Regardless of our own views on these issues, we recognize a) special consideration that EPA and other stakeholders owe to Tribal perspectives on overall national air quality policies, b) the treaties entered into by the US that require the US to provide for tribal communities and native peoples, c) that Tribes across Alaska and the lower 48 states are experiencing acute disruption to their treaty-protected resources as a result of climate change, and d) that the Tribes concur with the 2021 report issued by the United Nations Intergovernmental Panel on Climate change, which declared a code red for the planet and noted its impact on Tribal and indigenous peoples.
- **Other Recommendations:**
 1. Continue to [support diesel emissions reduction grants to Tribes](#), including the Tribal set-aside in the Diesel Emissions Reduction Act (DERA) program. (*Drop of Match Requirement*)
 2. If a [Wood Heat Emissions Reduction Act \(WHERA\)](#) is approved by Congress, the agency should establish a Tribal set-aside in the WHERA program as well.

SECTION TITLE:

Environmental Justice

ENVIRONMENTAL JUSTICE RECOMMENDATIONS

1. Incorporate EJ more extensively and transparently into key risk assessment analyses

- Strengthen its understanding of multi-pollutant exposures.
- Improve emissions inventories for sources that would significantly impact EJ risk characterization.
- Incorporate EJ-specific risk assessment and analysis into the NATA.
- Incorporate EJ considerations into NAAQS reviews and should include more neighborhood-scale analyses in order to ensure consideration of these factors in setting appropriate NAAQS.
- Support methods for mapping community vulnerability to climate-related air quality events.
- Use EJSCREEN and other analytical tools to incorporate EJ considerations into other agency air quality analyses to the extent possible.

ENVIRONMENTAL JUSTICE RECOMMENDATIONS

2. Expand and Enhance Air Pollution Monitoring in EJ Communities.

- Conduct an analysis of the current regulatory monitoring network to adequately characterize air pollution exposure in EJ communities.
- Explicitly account for EJ considerations in approval of monitoring network plans and reviews.

3. EPA should work to expand the capacity of EJ organizations.

- Increase Clean Air Act funding for community-based programs through grants and cooperative agreements. This will help build capacity to engage as stakeholders in air quality regulation, monitoring and policy, as well as to advise on air quality matters that they have prioritized.

SECTION TITLE:

Voluntary Programs

RECOMMENDATIONS – VOLUNTARY PROGRAMS

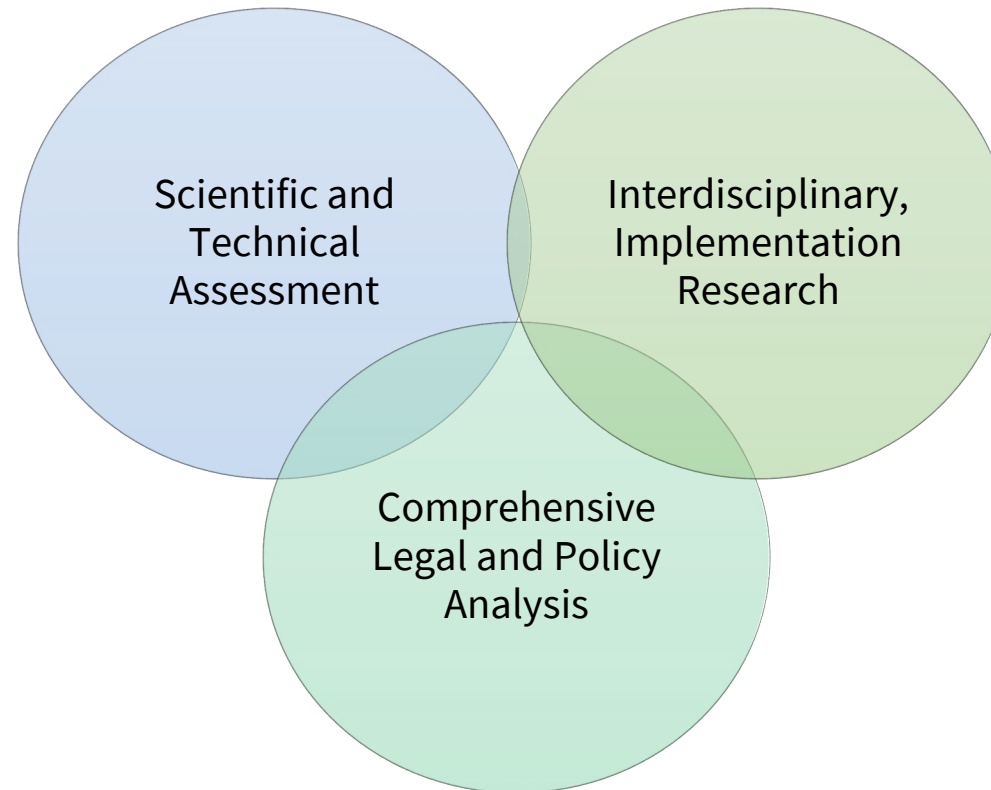
1. Grant credit in “Transport SIPs” for implementation of voluntary measures
2. Expand opportunities for SIP credits for voluntary measures
3. Provide tangible benefits to areas voluntarily reducing emissions
4. Continue to support DERA, Energy Star, SmartWay, and other voluntary programs
 1. DERA: request maximum funding authorized, focus funding on sources/areas that would most benefit from *federal* funding (i.e., sources that cross state lines like long-haul trucks, locomotives, and ships, and state/tribal entities that lack capacity to field their own DERA-like program)
 2. Other Programs – continue to support; seek CAAAC input on design and implementation

SECTION TITLE:

Indoor Air

INDOOR AIR RECOMMENDATIONS

- EPA should consider a multi-pronged framework to guide their research and analysis.



INDOOR AIR RECOMMENDATIONS

1. Study the [extent to which high concentrations of criteria or hazardous air pollutions outdoors lead to increased concentrations of these pollutants indoors](#) and assess whether existing integrated science assessments and risk assessments, respectively, do or do not account for indoor air pollution exposure.
2. Evaluate those [methodologies and quantitative standards used by other countries](#) who have adopted reference values, air quality limits and exposure guidelines.
3. Review and assess the impact and potential adaption of other non-EPA federal regulatory measures on indoor air quality.
4. Perform a [policy analysis of state and local “clean indoor air” laws](#) (e.g., ordinances that prohibit smoking in public spaces) to assess the results of such efforts, exploring the efficacy and impact of these laws, including issues related to enforcement and implementation.
5. Consider [approaches for coordinating current non-CAA EPA authority](#) applicable to indoor environments, which are generally pollutant-specific (e.g., lead, radon, asbestos) and scattered across a variety of statutes, including TSCA, FIFRA, CERCLA, and consumer product laws.

INDOOR AIR RECOMMENDATIONS

6. Continue to [collaborate with ventilation and building industries](#), and other federal agencies (e.g., CDC, DHHS, HUD) to review standards for ventilation in residential buildings (e.g., ASHRAE Standard 62.1 and 62.2).
7. (NEW) [Monitor emerging issues in indoor air chemistry](#), through collaboration with the research community, to address the interaction, sources and sinks of ambient pollutants in the wide range of indoor environments, and the impact of energy efficiency measures on building tightness, ventilation, and filtration.
8. (NEW) [Monitor and communicate those indoor air risk factors at the intersection of climate and environmental justice](#), a product of housing with limited or inefficient ventilation, filtration, heating, and cooling systems.

Conclusion

1. EPA should communicate with Congress and the public regarding the human health, environmental, and economic impacts of air pollution, along with the benefits, costs, challenges, and opportunities presented by the CAA, as described in this report.
2. EPA should make more extensive, regular, and timely use of the CAAAC when important issues regarding implementation of the CAA are in the pre-proposal or comment phase in order to obtain broad and informed stakeholder input.
3. EPA should consider establishing a CAAAC workgroup to develop legislative options and recommendations for updates to the CAA that may either be needed to address challenges and opportunities identified in this report.
4. EPA should actively and timely engage the CAAAC on these recommendations.

CAAAC STEWARDSHIP OF THE REPORT

1. At EPA's request, CAAAC members developed, reviewed, commented and after today, will have elected whether to adopt it.
2. If approved, CAAAC will have a key role in serving as the steward of the report.
3. As stewards, CAAAC should entertain ways it can make this a living document, such as:
 - Requesting that the different offices and programs report to the CAAAC, annually, on their progress or challenges in implementing these recommendations.
 - Establishing a CAAAC sub-committee with a charter to monitor progress, provide sector-specific or industry-specific feedback to EPA on progress, and serve as a sounding board for EPA as they encounter implementation issues.