



2023

The mission of the NTAA is to advance air quality management policies and programs, consistent with the needs, interests and unique legal status of American Indian Tribes and Alaska Natives.



Status of Tribal Air Report



The National Tribal Air Association is funded through a cooperative agreement from the United States Environmental Protection Agency's Office of Air & Radiation (OAR)

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Audience and Background

The Status of Tribal Air Report (STAR) is designed to provide a national overview of air quality, Tribal air programs, and the successes and challenges that face Native American Nations in implementing the Clean Air Act as they address air quality and climate change. The report is designed to provide Elected Tribal Leaders, other National decision makers, and Tribal environmental professionals an annual snapshot of air quality and air quality programs across the country.

This report is compiled by the National Tribal Air Association (NTAA). The NTAA is a member-based organization with 156 member Tribes. The organization's mission is to advance air quality management policies and programs, consistent with the needs, interests, and unique legal status of American Indian Tribes and Alaskan Natives. As such, the NTAA uses its resources to support the efforts of all federally recognized Tribes in protecting and improving the air quality within their respective jurisdictions. Although the organization always seeks to represent consensus perspectives on any given issue, it is important to note that the views expressed by the NTAA may not be agreed upon by all Tribes. Further, it is also important to understand that interactions with the NTAA do not substitute for Nation-to-Nation consultation, which can only be achieved through direct communications between the federal government and American Indian Tribal Governments and Alaskan Native Villages.



*National Tribal Air Association Executive Committee and Alejandra Nunez,
U.S. EPA Office of Air and Radiation's Deputy Assistant Administrator for Mobile Sources,
May 2023*

Executive Summary



Deer in the Haze. Credit: Eric Baca

Recent years have seen an increase in the strength of Tribal air programs. In 2023, more Tribes received long-term funding, monitored ambient air, achieved Treatment as a State status, developed Tribal Implementation Plans, and celebrated improvements in air quality than in 2018. Indeed, case studies demonstrate the current work Tribes are doing to leverage funding sources, implement Clean Air Act programs, engage with Tribal communities, and develop and maintain partnerships.

Despite these achievements, challenges to Tribal air programs remain, and the National Tribal Air Association has identified priorities for national air quality policy to support Tribes. Particularly, long-term funding opportunities are necessary to provide capacity and resources to Tribal air programs, and early and often consultation on air policy is integral to the relationship between the federal government and Sovereign Tribal Nations.

This year's Status of Tribal Air Report provides an overview of the current state of Tribal air and air programs, features an emissions data highlight, summarizes the academic literature on the health impacts of air pollution, defines NTAA's air policy priorities, requests a suitable annual budget for Tribal air programs, and highlights the important air quality work being conducted in Indian Country.

National Tribal Air Program Statistics

There are many ways Tribes are involved in addressing air quality in Indian Country. Efforts related to ambient air quality include conducting air quality assessments (monitoring, emissions inventories, etc.), developing education and outreach programs, and regulating sources. Many Tribes also have programs to address indoor air quality (e.g. radon concentration) as it relates to protecting community health. Mobile sources and diesel emissions from community sources, such as trucks and school buses, are also addressed by many Tribes. Finally, planning for climate change impacts in Indian Country is also an important need.

The Clean Air Act Section 301 (d) and Tribal Authority Rule (TAR) allow the EPA to treat “Tribes in a manner similar to a State” but allow the Tribes to take on the implementation of the CAA programs in a modular approach to address their specific needs. This provides Tribes with the flexibility to focus their resources to address their needs but does not require Tribes to mandatorily take on aspects of the CAA that do not impact them. When comparing Tribal air programs (beginning in 1998 following the TAR) to state programs (beginning in 1970 following the CAA), it is important to recognize this flexibility and the budget and resource constraints on the Tribal air programs.



Equipment Calibration. Credit: Farley Ketchum Jr.

While state programs are mandated to implement all aspects of the National Ambient Air Quality Standards, the EPA may supplement CAA implementation in Indian Country when Tribes cannot provide full CAA implementation. As a result, most Tribes have either not found it necessary or appropriate to develop their own regulatory programs at this point or have been unsuccessful in their application to EPA to receive CAA funds to develop their programs. Despite limited CAA funds available, many Tribes are growing their programs and may develop more regulatory programs in the future. The following shows the current status of Tribal air programs and the range of activities they pursue.

Total Grants Received from EPA

Year	CAA 105	CAA 103	SIRG*
2018	40	82	2
2023	57	63	13

Comparing total CAA grants between 2018 and 2023 demonstrates slightly fewer total CAA grants over time but a significant increase in mature Tribal programs (i.e. Section 105 grants).

*State Indoor Radon Grant.

Tribes with Approved TAS

Year	Regulatory TAS	Non-Regulatory TAS
2018	9	52
2023	10	61

Under the Tribal Authority Rule and CAA Section 301(d), Tribes can be found eligible to have Treatment as a State (TAS) status for various aspects of the CAA, including receiving grants or for developing their own programs, such as a Tribal Implementation Plan (TIP). Tribes can have both regulatory and non-regulatory TAS and can add to TAS with additional CAA sections over time.

Total Approved Programs

Year	Tribal Implementation Plans	Delegated Programs (Implementing EPA rules)	Title V Permit Programs
2018	5	12	2*
2023	7	13	2*

*One of these programs is an approved program to independently regulate air within the reservation boundary, while the other only has delegation authority and acts in accordance with EPA's rules.

Tribes with Ambient Air Quality Assessments

Year	Ambient Monitoring*	NCOR	CASTNET	Emissions Inventories
2018	85	1	5	78
2023	94	1	8	78

*Ambient monitoring, including for the Air Quality Index, can be conducted by regulatory and nonregulatory monitors.

Indoor Air Quality Programs

A major indoor air quality program is the State and Tribal Radon Grants (SIRG) program, which provides grants to states and Tribes to investigate and test for radon. The number of Tribes with SIRG funding has grown from 2 in 2018 to 13 in 2023.

Many Tribes experience indoor air quality issues but often do not have stand-alone indoor air quality programs or grants, unlike ambient air quality programs that receive dedicated funding through CAA Section 103 and 105 grants. Instead, Tribes often incorporate indoor air quality into their existing 103 grants or GAP grants. As a result, aside from the SIRG program, there is not an accurate compilation of the number of Tribes with indoor air quality programs.

Air Quality Status in Indian Country

Region	Areas in Nonattainment*		Air Toxics Programs	
	2018	2023	2018	2023
Region 1	3	3	5	5
Region 2	1	1	1	1
Region 3	0	0	0	0
Region 4	0	0	3	3
Region 5	4	4	14	14
Region 6	0	1	2	0
Region 7	0	0	4	2
Region 8	3	3	8	2
Region 9	154	100	6	17
Region 10	1	1	22	30

*The change in areas in nonattainment from 2018 to 2023 may be the result of any singular criteria air pollutant or multiple. A decrease in areas in nonattainment (Region 9) demonstrates an improvement in air quality, while an increase in areas in nonattainment (Region 6) may indicate a decline in air quality and/or may reflect that NAAQS became stricter over the six-year period. More information regarding affected Tribes and the responsible pollutants can be found in the [U.S. EPA Green Book](#).

Other Air Programs Funded by EPA

Year	CPRG	DERA	IRA/ARP
2023	90*	0**	19***

*Over 200 Tribes received 90 Climate Pollution Reduction Grant planning grants.

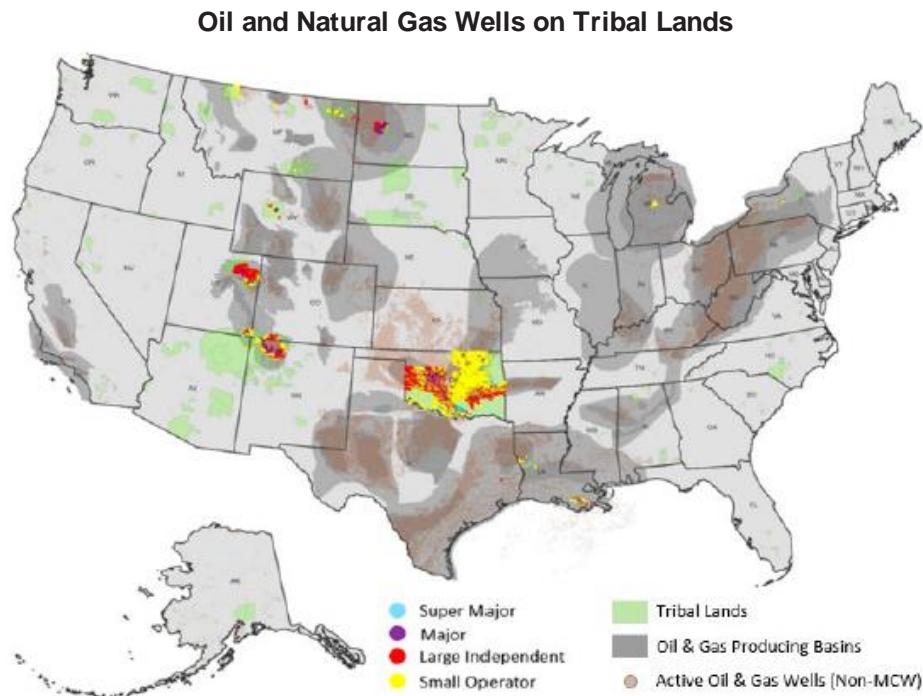
**Tribal and Territory Diesel Emission Reduction Act grants were not delivered to Tribes in 2023.

***Nineteen Tribes received an American Rescue Plan Enhanced Air Quality Monitoring Competitive Grant. Of these, nine were funded through the American Rescue Plan, and ten were funded through the Inflation Reduction Act.

Data Feature: Oil and Natural Gas Wells

Oil and natural gas wells are a prominent source of emissions, particularly on Tribal Lands. In 2023, 64,000 oil and natural gas wells producing up to 40 barrels of oil equivalent per day (BOED) operated on Tribal Lands.¹ The operation of these wells resulted in the daily production of 141,814 barrels (BBL) of oil or 1,417,468 one thousand cubic feet (MCF) of natural gas. Of the 64,000 wells, 57,000 are classified as marginal conventional wells, which produce less than 15 BOED. Small operators, particularly, which generate less than \$40 million annually, maintained over 49,000 oil and gas wells on Tribal Lands in 2023, producing 82,499 BBL of oil or 766,269 MCF of natural gas per day.

Oil and natural gas wells are prevalent on Tribal Lands in the central United States, particularly in Oklahoma, New Mexico, Colorado, Utah, North Dakota, and Montana.¹ Oil and natural gas wells are a prominent source of methane emissions, and plugging and abandoning marginal conventional wells, which do not provide prolific oil or natural gas production, may significantly reduce methane emissions on Tribal Lands. Identifying and addressing marginal conventional wells is a critical step toward protecting Tribal Lands and communities.

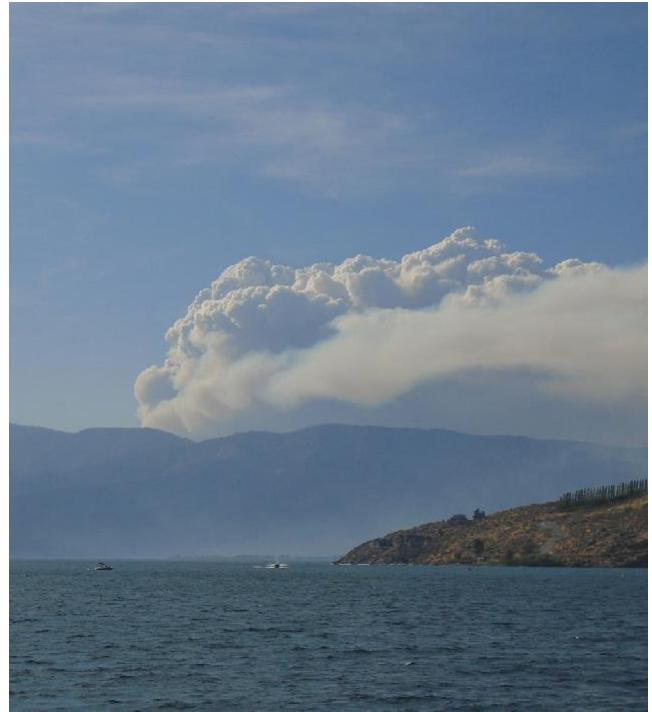


Credit: U.S. Department of Energy and U.S. Environmental Protection Agency¹

Air Quality Health Impacts in Indian Country

A recent study explored the disparate impacts of particulate matter (PM) on American Indian populations.² The study indicated that while PM levels improved across the country, reductions of PM in Indian Country occurred at a lower rate than on non-Tribal Lands. With many Tribal Nations already facing air-related hazards related to mining, fossil fuel processing, and climate change, the study further justifies strict air quality regulations and pollution prevention in Indian Country.

The study reinforces that one of the health effects of PM_{2.5} exposure is cardiovascular disease, which is the leading cause of death in Native American populations, and it occurs at significantly higher rates than in white populations. Additionally, minority populations, including people with pre-existing conditions and of low socioeconomic status, are susceptible and vulnerable to the effects of PM.³ American Indians or Alaskan Natives, particularly, have the highest prevalence of heart disease of any group in the United States.³ The incidence of cardiovascular disease as a result of air pollution is well documented.^{4,5}



Wildfire Smoke. Credit: Carolyn Kelly

Other health impacts from air pollution include:

Reproductive

Air pollution has been shown to negatively affect fertility and reproductive health. Following conception, air pollution may result in increased risk of miscarriage,⁶ and related studies have found correlations between air pollution and adverse perinatal events, such as preterm delivery,⁷ low birth weight,⁸ and small size for gestational age.⁹ A meta-analysis of the reproductive academic literature also found that exposure to air pollutants reduces pregnancy rates, IVF success rates, and sperm quality.¹⁰

Endocrine

Many studies have linked air pollution to disruption of the endocrine system. For example, polycyclic aromatic hydrocarbons and heavy metals, which are found in particulate matter from diesel exhaust, can cause human hormone levels to fluctuate.¹¹ In addition to diesel exhaust, emissions from unconventional oil and gas extraction (i.e., hydraulic fracturing) contains up to 21 pollutants that have been shown to disrupt the endocrine system.¹² In general, many endocrine disrupting compounds exist in both ambient and indoor air, and air pollution is likely only one pathway of exposure.¹³

Cognitive and neurological

A variety of air pollutants are known to cause cognitive or neurological damage. For example, long term exposure to PM, SO₂, and NO impedes cognitive performance in verbal and math tests, with the effects being more pronounced as people age, potentially even leading to Alzheimer's disease and other forms of dementia in the elderly.¹⁴ Additionally, the link between lead exposure and impaired brain development has long been established, and no safe level of lead exposure exists during human development.¹⁵ Mercury exposure also inhibits cognitive function, degrading fine-motor function, language, visual-spatial abilities, attention, and verbal memory.¹⁶ Mercury exposure and its effects is especially worrisome to American Indians and Alaska Natives, as Tribal members consume more fish than the general population due to a tendency toward a subsistence lifestyle.¹⁷ Specifically, exposure among specific subpopulations, including some Native Americans, may be more than twice as great as that experienced by the average United States population.¹⁸

Psychological

Many studies have found links between air pollution and psychological health. For example, exposure to high PM_{2.5} levels have been associated with increased psychological distress,¹⁹ and positive correlations exist between long-term exposure to PM₁₀, NO₂, and CO and subjective stress, poor quality of life, depressiveness, depression diagnosis by doctor, and suicidal ideation.²⁰ In general, poor air quality is correlated with high rates of depression and bipolar disorder²¹ and can induce behavioral issues caused by stress, depression, anxiety, shortened tempers, and mood swings.²²

Cancer and radionuclides

Radioactive materials occur in nature but can be considered air pollutants due to their role in causing a wide range of human health problems. Tribal members are exposed to radiation primarily by radon and uranium, which is often found on Tribal lands in the southwestern United States as waste from mining operations. Radon occurs in areas across the U.S. and has been shown to cause lung cancer,²³ while uranium can cause a host of health issues, including lung cancer, bone cancer, high blood pressure, kidney disease, and more.²⁴ The impacts of radon and uranium are multiplied in the bodies of smokers,²³ and since the rate of smoking in AI/AN people is higher than in other groups, involuntary exposure to radon or radionuclides is more impactful to Native people.

Pathogens and climate change

Climate change is causing shifts in areas of occurrence and exposures from pathogens on local, national, and international levels. The range of Valley fever, particularly, which occurs in soils near rodent burrows, has expanded due to rising temperatures and drought.²⁵ As soil dries and warms, any disturbances, such as construction, dust storms, and large wildfires, can mobilize the fungi and cause infection in humans. Many areas in the current range have seen exponential increases in Valley fever cases in recent years, and the range of Valley fever is expected to cover most of the western half of the country by 2065.

Priority Issues

It is important to recognize that all Tribes are unique, and therefore, each Tribe will have their own priorities. Despite these differences, common air quality-related issues exist across Indian Country. The following is a discussion of some of the nationally consistent priorities identified by Tribes. These priorities were identified through a national survey of Tribes conducted by NTAA in 2021.²⁶

Consultation

Tribes are Sovereign Nations, and the federal government has an obligation to consult with each Tribe. The EPA should continue to improve consultation with Tribes. It is appreciated that the EPA is more proactively looking to determine regulatory impacts on Tribes. However, EPA staff may not fully understand Tribal Sovereignty, treaty rights, or cultures, thus the EPA should always offer and conduct consultations with each rule whether or not it is believed it will affect Tribes.



TAMS Center Session. Credit: Mariko Blackbird

Consultation should not be considered a “check the box” activity by holding a webinar. Notification should be given to Tribes well in advance of releasing the policy, rule, or permit early and often. Consultation should always be held in accordance with each Tribe’s consultation policy on a Tribal Government-to-Federal Government basis.

Funding

In February 2022, the NTAA announced its FY2023 Air Budget Request for \$57.4 million to meet the current demand for Tribal air programs to address air quality in Indian Country.

This suggestion was an expansion from the current largely stagnant funding amount of \$12.5 million annual FY2022 appropriation authorized under the Clean Air Act (CAA) Section 103 and 105 for Tribal Air Grants. While the NTAA appreciates the EPA has requested \$23 million in funding for FY 2024 as indicated in the National Program Guidance, this remains well below the NTAA air budget request of \$57.4 million needed to address the continuation and growth of the base program for Tribes.

The NTAA is aware that opportunities through the IRA and ARP can be important resources to leverage funding, but this temporary funding cannot be used to sustain ongoing programs. In addition, they are special funds intended to support climate change and greenhouse gas reductions, which although very important to Tribes, do not support the equally important air quality work being done in Indian Country.

The result is that some Tribes may receive a one-time infusion of resources to conduct limited work but will, over time, lose the staff and capacity supported by this one-time funding. In addition, by not increasing the base program funding, Tribes will not only lose the capacity developed for climate change but may also lose staff capacity for the existing base CAA programs as staff are shifted from ambient air quality, indoor air quality and other base programs to support the IRA funded activities.

There are ongoing limitations for the development and sustainability of new Tribal air programs. The NTAA supports providing equitable access to IRA funding as well as substantially increasing STAG funding for growing and sustaining Tribal air quality programs. It is important to recognize that with the wide array of IRA grants from the EPA and other federal agencies, Tribes are required to track, apply, and manage all of these potential funding opportunities with

existing staff. In addition, many of these grant opportunities use the Climate and Economic Justice Screening Tool (CEJST) for determining “disadvantaged” communities, which inappropriately preclude many Tribes from accessing these important funds. For example, in Solar For All, no California Tribes were determined to be eligible for these funds. Therefore, without increased STAG funding, which would allow for additional staff and capacity, applying for these grants may be at the expense of existing project or program implementation.

Environmental Justice Definitions

The EPA must take care when conducting outreach to Tribal Governments on environmental justice issues. Definitions for environmental justice communities do not apply to Sovereign Nations in all respects and may not represent the definition a Tribe holds for itself. The EPA should continue to maintain and expand its relationship with Tribes without lumping Tribes into public community definitions for ease of dealing with issues or to “check a box.”

It is equally important that Tribes have access to environmental justice funding when appropriate. NTAA raised concern with EPA and the Council on Environmental Quality (CEQ) on how CEJST was being used to determine disadvantaged communities. The CEQ recognized that given the nature of the historic discrimination and marginalization in Indian Country, all Tribes would by default be identified as disadvantaged communities. However, in allocating some of the IRA funding, the EPA disregarded the CEQ’s determination and as a result, many Tribes were no longer eligible for funding, such as Solar For All. The NTAA encourages the EPA to engage with Tribes as programs and opportunities are developed.

Climate Change

Climate change is a top priority for many Tribes. Particularly, Tribes have identified the need for technical support on adaptation planning, access to renewable energy, impacts on cultural lifeways, relocation, and other climate change-related topics as issues. The NTAA urges the EPA to work closely with Tribes on climate change issues and concerns to address this increasing threat to the environment and to Tribal cultural lifeways. Dedicated funding to build Tribal capacity for climate change is needed. This includes funding specific to Tribes in future IRA and other Congressional funding programs.

Regulations

The NTAA Policy Advisory Committee develops Policy Resource Kits (PRKs) for Tribes on rules and EPA programs that impact them. PRKs include a fact sheet summarizing the issue, a template letter Tribes can use to draft comments to the EPA, and NTAA's comment letter to the EPA. This year, the NTAA reviewed 20 rules or programs.

Rules and Programs Reviewed by the NTAA PAC in 2023

Addition of PFAS to Resource Conservation and Recovery Act Hazardous Constituents

Air Emissions Reporting Requirements

Coal- and Oil-Fired Electric Steam Generating Units NESHAP

EPA Tribal Consultation Policy

Ethylene Oxide Sterilization Facilities NESHAP

Inflation Reduction Act Funding

Interim Final Good Neighbor Plan for the 2015 Ozone National Ambient Air Quality Standards

Iron and Steel Manufacturing Facilities NESHAP

Mandatory Greenhouse Gas Reporting Rule for Petroleum and Natural Gas Systems

Methane Emission Reduction Program

Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles

Mercury Air Toxics Standards

NSPS Liquid VOC Storage Facilities

Plywood and Composite Wood Products NESHAP

PM 2.5 NAAQS Revision

Primary Copper Smelting NESHAP

Reclassification of Major Sources to Area Sources (Once In Always In)

Regulating Greenhouse Gases from the Power Sector

Solar For All

Synthetic Organic Chemical Manufacturing NESHAP

Taconite Ore Processing NESHAP

Ambient Air Quality

Ambient air quality issues are a priority for many Tribes, including addressing existing nonattainment for all criteria pollutants. This coming year will be particularly important given the new lower standards for PM. As discussed previously, Native Americans have seen less improvement in particulate matter exposures than non-Native populations,² and given the disproportionate occurrence of cardiovascular disease in Indian Country, other underlying respiratory diseases, and often low socioeconomic status, it will be increasingly important for engagement with Tribes in addressing particulate matter.

Since the new PM NAAQS were finalized this year, many Tribes will be involved or impacted by the designations process in the next year. It is important that Tribes not only be provided the opportunity to participate in the designations to understand the impacts to air quality but to also assert Tribal Sovereignty. However, many Tribes lack the regulatory monitoring capacity to participate in the process. Tribes continue to place a priority in understanding their air quality through inventory development, monitoring, forecasting and communication and outreach to Tribal members.

a. **Permitting** – Permits, whether through New Source Review or Title V programs, are the mechanism by which the Clean Air Act is implemented, and states primarily issue CAA permits. Indeed, many Tribes are interested in or currently reviewing state issued permits, and in many cases, Tribes have been effective in engaging with the state on state issued permits. However, in other cases, Tribes may not be informed regarding the permitting of sources that impact them, or they lack the technical capacity to engage in these permits. As a result, there is an ongoing and growing need for technical support and training in permitting.

Permitting in Indian Country is conducted largely by EPA. In these cases, it is imperative that EPA consult with the Tribes before developing and issuing a permit. Many Tribes, though, implement their own permitting programs through approved or delegated Title V programs Tribal Implementation Plans. As such, many Tribes have expressed interest in developing and implementing their own permitting programs and the need for more technical support for permit review and program development.

Tribes also expressed interest in understanding the cumulative impact of multiple sources that surround them and building capacity to effectively review state issued permits. For example, Tribes highlighted the Institute for Tribal Environmental Professionals (ITEP) as a respected provider of air quality-related training, particularly the technical assistance ITEP provides to Tribes for reviewing permits.

b. **Support for Tribes in developing TIPs and permit programs** – In 2023, seven Tribes have approved Tribal Implementation Plans. Some of these plans, such as the Gila River Indian Community TIP, are comprehensive plans that cover all sources within the reservation. Many Tribes have developed more targeted plans, such as the Swinomish Tribe's burn permit program or the St. Regis Mohawk Tribe's and Mohegan Tribe's NSR or Minor Source permitting programs. These targeted plans demonstrate the modular approach Tribes may take in accordance with the CAA's TAR. This modular approach is a benefit, as it allows Tribes to develop specific plans and programs before building capacity to expand their programs over time. For example, the Mohegan Tribe's first TIP was a sole source TIP, which was eventually expanded to include NSR permitting (see page 17). EPA should continue to update TIP guidance to support Tribes interested in developing TIPs in Indian Country.

c. **Tribal monitoring, emissions inventory and data collection and management** – Understanding air quality on Tribal land is the foundation for all Tribal program development. It is also the basis for asserting Tribal Sovereignty by providing an understanding of potential medical, environmental and cultural impacts to Tribal members, empowering them to support ongoing program activities. As a result, emissions inventory development and air quality monitoring are critical to understand air quality in Indian Country. Currently, 78 Tribes have developed emissions inventories and 94 are conducting ambient monitoring.

There are common barriers Tribes face in monitoring and conducting inventories. Because of existing state monitoring networks, many EPA Regional Offices do not recognize the need for Tribal monitoring. However, Tribes have found that by conducting their own regulatory monitoring, they are able to participate in the designations process for new National Ambient Air Quality Standards, thus asserting Tribal Sovereignty. The expense of ongoing monitoring has also constrained Tribal monitoring programs, and many Tribes are using outdated equipment in need of replacing. Additionally, some Tribes conducting regulatory monitoring have been given limited access to the Technical Systems Audits required for certification of the data, and the EPA has lacked the capacity to approve the Tribal Quality Assurance Program.

With the implementation of sensor technology, Tribes have new opportunities for air quality assessments. Available ARP and IRA funding has improved access to these monitoring resources, yet these are both one-time infusions of resources that may allow for baseline assessments but do not support long-term, sustainable programs.

Air Toxics

Understanding the risk of sources of air toxics in their communities is a priority for many Tribes. There is an ongoing interest in identifying the impact of mercury on Tribal resources caused by exposure via fish consumption and deposition on medicinal resources.

Many Tribes have concerns about air toxics exposure from specific sources and categories, such as emissions from oil and gas development (including pipelines), power plants, and mining (including taconite and uranium).

As the climate continues to warm, wildfires are occurring across Indian Country at alarming rates, fueled by drought impacts and climate-based wind events. Air quality impacts related to health and safety as a result of PM_{2.5} emissions can be critical during fire events and can last for weeks or months. This is a growing concern and may be a new threat to many Tribes, particularly in Alaska, who have not experienced severe wildfires in the past.

Radon

The EPA encourages Tribes to apply for State and Tribal Indoor Radon Grants (SIRG) funding. However, the application process can be long and complicated for an under-staffed program to complete, so it should be streamlined to give Tribes an opportunity to apply. Additionally, many Tribes feel that the amount of funding received cannot fully support a program and may not be worth the time to apply. More technical assistance for the application and financial backing for the program are appropriate. Currently, only 13 Tribes receive SIRG funding.

Indoor Air

Tribes experience a range of indoor air quality exposures, including mold and moisture intrusion. Indoor air continues to be a priority for many Tribes and dedicated funding is needed for existing and new Tribal indoor air programs, particularly for indoor air training, monitoring, inspections, and remediation. Education and outreach to inform community members about the importance of addressing indoor air toxicity from wood burning, household chemicals, and pesticides is also a priority for some Tribes. Finally, many remediation activities need to balance with weatherization activities to ensure proper ventilation and healthy homes.

Mobile Sources

Road dust continues to be an issue in Indian Country, particularly in Alaska and in communities with unpaved roads. Road dust may even become a more prominent issue as a result of ongoing climate change and drought.

Many Tribes are interested in understanding and accessing vehicle electrification opportunities when available to lower their carbon footprint. The NTAA seeks to prioritize equitable mobility for Tribes by reducing emissions through the electrification of all power sectors, including heavy and light duty vehicles. Particularly, access to electric vehicle

infrastructure is important to many Tribes, yet access to electricity is limited in many areas of Indian Country .

Heightened exposure to pollutants from mobile sources is possible where major roads are located on or adjacent to Indian Country. Harmful pollutants include air toxics, ozone, PM_{2.5}, and more. The NTAA supports aggressive emissions standards for all mobile sources to help scale the electrification of heavy and light duty vehicles.

Regional Priority Table

The National Priorities discussed previously reflect common issues identified from NTAA member Tribes. However, Tribal issues also vary across the country. The following is a compilation of some of the issues represented in each of the 10 Regions and Alaska.

Region	Ambient air quality	Climate Change	Funding	Wildfires and emergency management	AQ assessment	Permitting	Program development/ TAS	Road dust Mobile sources	Oil and gas	HAPs/HG	Mining
1	X		X			X	X			X	
2	X		X			X		X		X	
3*											
4**											
5	X		X			X	X	X	X	X	X
6	X		X		X	X	X	X	X	X	
7			X		X	X	X	X		X	
8	X		X			X	X	X	X		
9	X		X		X	X	X	X	X	X	
10	X		X		X			X		X	
AK	X		X		X			X	X	X	

*No Tribe in Region 3 has an active air quality program at the time this report was written.

**No data was provided from Tribes in Region 4.

Budget Request

In February 2022, the NTAA suggested a Tribal Air Budget of \$57.4 million from the National Tribal Caucus for Tribal air quality programs. However, after the NTAA Baseline Needs Assessment results were analyzed in 2022, the NTAA found that the need was \$79 million. This amount reflects a very conservative estimate of the Tribal need to provide for new Tribal air programs and allow for maintenance and growth of existing Tribal air programs.

The NTAA recognizes that there was a small increase in the Tribal STAG funds of \$3 million in 2023, creating a current funding level of \$15.5 million for Tribal air programs. The discrepancy between the suggestion for \$79 million and the current funding level of \$15.5 million demonstrates the need for a \$63.5 million increase in Section 103 and 105 funding for air quality programs.

In addition, the NTAA suggested between \$9 and \$12 million for climate change programs in April 2022. This amount was based on the assumption that a minimum of 120 Tribes, the number of Tribes with air grants, would pursue long-term climate change programs. The NTAA further assumed a minimum of one staff member and requisite support would require, on average, an initial annual cost of \$80,000 to \$100,000 per full-time equivalent per Tribe per year. The resulting suggestion would offer Tribes the ability to hire staff to begin a climate change program at \$9.6 to \$12 million per year.

The NTAA acknowledges the availability of ARP and IRA funding. While ARP funding provided grants to a limited number of Tribes and allowed for the establishment of time-limited projects, it is not recurring funding and cannot sustain programs. Similarly, IRA funding is important and useful for addressing climate change activities, but it is also not recurring funding and will not allow Tribes to sustain programs. Although Congress appropriated significant IRA funding, the NTAA is concerned with the limited Tribal access to these funds and the structure of the grants. For example, only a few Tribes might receive a one-time infusion of resources, build capacity, and begin programs, but over time, they may be forced to lose these staff and programs due to the lack of ongoing resources. Additionally, applying for the funding requires staff to use limited time and resources to track funding mechanisms, develop applications, and liaise with their leadership to be responsive to the grant applications.

As a result, the NTAA is suggesting a total increase in STAG allocation for both air quality and climate between \$71.6 and \$75.5 million for the Tribal STAG for air quality and climate change programs for FY25. Despite stagnations in STAG allocations over the past two decades, there has been significant growth of interest in Indian Country in protecting air quality. That demand is greatly outstripping the available resources. This has limited the ability of Tribes to access funds for new Tribal programs but also to allow for the maintenance and growth of existing air programs. By providing this increase in funding, the EPA would uphold the Biden Administration's commitment to respect Sovereignty and self-governance of American Indian Tribes and Alaska Natives and meet their Tribal trust obligations. This funding increase would assist more Tribes in building their Clean Air Act programs at a critical time when the impacts of health challenges, the economy, racial injustice, and climate change disproportionately harm Native Americans.

Tribal Case Studies

Particulate Matter Monitoring on or around the L'Anse Reservation

Teal Sackett, Keweenaw Bay Indian Community

The Keweenaw Bay Indian Community (KBIC) is located in the Upper Peninsula of Michigan in a rural area on the shores of Lake Superior within the Ceded Territory of 1842. The Reservation encompasses over 55,000 acres, 17 miles of Lake Superior, 80 miles of streams and rivers, 15,000 acres of lakes, and 3,000 acres of wetlands. KBIC has a progressive Natural Resources Department that is responsible for the protection, preservation, and enhancement of our local resources. These include mitigation of all environmental concerns that affect our health, culture, and lifeways. Protecting local air quality is an important component in maintaining the rights that we hold to enjoy the sacred land where we live, subsist, and honor our history.

In 2022, KBIC received funding from the U.S. EPA to set up Purple Air PM_{2.5} Outdoor Air Monitors, as KBIC is situated in an area that experiences multiple stressors. The historical legacy pollutants due to mining and current industrial facilities operating within the area, including a permitted Title V point source, act together to create health disparities for our Native American population. This project officially kicked off after the Quality Assurance Project Plan was completed. KBIC has four Purple Air monitors stationed throughout Baraga and L'Anse. The first sensor to be set up is at a childcare facility that is built near the Title V facility. After this sensor was operational, a sensor was set up at KBIC's Natural Resources Department Fish Hatchery as it is located farther away from that facility. A sensor was installed at KBIC's Tribal Center due to its proximity to Michigan state highway 38 and the Ojibwe Casino. Lastly, there is a sensor at KBIC's Health Clinic in Baraga that is anticipated to be connected to Wi-Fi shortly.

This project has been greatly beneficial during the 2023 wildfire season in Canada, as for the first time in Michigan history, there was a statewide smoke alert. The Air Quality Program was able to direct concerned community members to the AirNow Fire and Smoke Map to view real-time air quality indices from our monitors. We have received positive feedback from community members regarding these sensors and we hope to be able to expand our air monitoring capability in the future.

Indoor Air Quality Activities for Students

Robin Bouschor, Sault Ste Marie Tribe of Chippewa Indians

The Sault Ste Marie Tribe of Chippewa Indians air program includes many facets. From the inception of the air program, it became apparent that outreach plays a pivotal role in enlightening our Tribal and community members about the importance of air quality. Consequently, the program embarked on establishing a rapport with our local Tribal school to engage the younger generation. This relationship has fostered a collaboration that encompasses an array of ventures, such as a captivating social media TikTok project with middle school students, presentations to the elementary students, and the privilege of being invited to take part in their annual Middle School Camp Daggett.

Camp Daggett was a three-day camp that incorporated a variety of educational activities and sessions. Over the last few years, the program was asked to run our own session during the camp. In 2023, we conducted a mock indoor air quality assessment with eight to twelve students per session. This included a presentation to the students on indoor air quality and common factors that can deteriorate indoor air quality. We then showed them some equipment that is used to assist in assessing a residence. Once that was completed, the students split into two groups and assessed two different cabins. Prior to this, the cabins were stocked with hand warmers and cold packs that were hidden for students to find using our department's infrared cameras. In addition, common household items that could be potentially hazardous to air quality, including candles, paints, sprays, and fragrant dispensers, were placed in the cabins. Their objective was to find all the hand warmers and cold packs and list any other item they believe would be harmful to air quality. Each group received a prize when completed.

It was fascinating to see the students work together and discuss if they thought an item posed an air quality risk or not. Some groups even found items that were not intentionally placed in the cabins that could pose a risk to air quality! Once completed, we discussed their findings and why they thought each item could be hazardous.

We learned that kids love activities where they get to move around and be part of the lesson, and as a result, we received many compliments from the students regarding how fun the activity was. It is paramount to engage local schools and build a relationship with teachers and administrative staff. By building up our air program, we were invited to participate in the camp and hopefully inspire the next generation of “airheads.”

Tribal Implementation Plan Efforts for New Source Review

Jean McInnis, Mohegan Tribe of Indians of Connecticut

The Mohegan Tribe of Indians of Connecticut was one of the first Tribes with an approved Tribal Implementation Plan (TIP). The original TIP was a sole source TIP putting requirements in place for the Tribe’s casino boiler. In March 2022, the U.S. EPA approved an expanded New Source Review TIP, which was effective in May 2023. Qualifying combustion sources named in the final emissions inventory were both Tribal and casino sources, as well as those sources permitted by rule (both gas stations) using fuel throughputs and a spray paint booth operated by Engineering.

To support the implementation of the TIP and the resulting permitting, the Tribe undertook an effort to develop and implement a new Excel-based emissions tracking database for all minor New Source Review (NSR) pollutants and Hazardous Air Pollutants (HAPs). This can be used by the Mohegan Tribal Gaming Authority to input fuel usage to calculate emissions on reservation property to facilitate permitting for qualifying combustion sources named in the final emissions inventory. This database will track annual greenhouse gas emissions for submittal to EPA. In addition, the Mohegan Environmental Protection Department’s application for approval of plans to construct, install or modify fuel burning equipment was updated into an online, fillable form to reflect the expanded pollutants list for minor NSR sources added to our Policy and Procedures manual for contractors. This effort was supported by a CAA 105 grant to the Mohegan Tribe of \$18,146.

Air Quality Equipment and Continued EPA Partnership

Staff, Tribal Air Monitoring Support (TAMS) Center

In 2021, the NTAA and the Tribal Air Monitoring Support (TAMS) Steering Committee co-authored a letter to the EPA stressing the importance of the TAMS Center and its equipment loan program. In anticipation of the American Rescue Plan (ARP) funding that would be available in 2022, the letter requested that \$327,000 of the ARP funding be allocated directly to the TAMS Center to replace outdated equipment and increase the availability of ambient air monitoring equipment to Tribes through the TAMS Center’s equipment loan program. EPA concurred with NTAA and the TAMS Steering Committee and awarded the TAMS Center the requested portion of ARP funding when it became available. In FY2022 and FY2023, the TAMS Center was able to procure many new pieces of air monitoring equipment and supporting items. This included at least 8 new ambient air monitoring systems for particulate matter, 4 new air flow calibrators, 5 dataloggers, and a meteorological weather station. Additionally, the TAMS Center was able to secure 3 Hydrogen Sulfide (H₂S) UV fluorescence gas analyzers, cleaning kits, and supporting tool kits. The addition of new equipment strengthens the program’s ability to support Tribal environmental programs.

The Virgil Masayesva Environmental Learning Center is part of the EPA National Center for Radiation Field Operations and is funded and staffed through the EPA and the American Indian Air Quality Training Program (AIAQTP) cooperative agreement. In 2023, an initiative was taken to replace old student and instructor computers with new computers. The outdated computers were not Windows 11 compatible and could not meet the EPA computer security policy standards. The TAMS Center invested in new computers and supporting equipment to provide a safe and secure learning environment. In addition, ITEP and TAMS also offered 11 air quality courses with 159 completions from 146 Tribes. Four of those courses were offered at the TAMS Center with 66 completions from 65 Tribes. Additionally, AIAQTP and TAMS staff hosted 43 office hour sessions with 416 attendees.

In FY2023, the TAMS Center's equipment loan program was able to provide various air monitoring equipment to 15 different Tribes. Some of the equipment loan agreements were for short term loans of 30-60 days, while most of the equipment loan agreements were up to a year. The types of equipment include ambient air monitors for particulate matter, sensors for wildfire smoke detection, and equipment for conducting indoor air quality assessments. Equipment that was loaned out included beta attenuation monitors, particulate sensors, airflow calibration instruments, infrared thermal imaging cameras, moisture meters, and various other instruments.

Multiple Grant Applications for Program Development and Implementation

Charlie Lippert, Mille Lacs Band of Ojibwe

Mille Lacs Band of Ojibwe made an effort to access multiple funding opportunities to support air quality and climate change activities for the Tribe.

The Mille Lacs Band of Ojibwe requested \$1,000,000 under the Environmental Justice Government to Government (EJG2G) for a comprehensive assessment of air and water pollution impacts from nickel mining operations in the Mille Lacs Band of Ojibwe Community. Additionally, the Mille Lacs Band of Ojibwe requested \$30,222 of Clean Air Act Section 103 Funding for sensing for PM in the Mille Lacs Band Air Shed. This grant was tied to the EJG2G grant, and EPA and Mille Lacs agreed to put this on hold until the EJG2G recipients are announced. Finally, the community requested \$201,382 BIL Section 40101(d) funding for preventing outages and enhancing the resiliency of the electric grid.

These efforts of the Mille Lacs Band of Ojibwe is an illustration of how Tribes can be creative at leveraging and accessing multiple pathways to fund air quality and climate change programs.

Tribal Networking Brings Radon Resources to Indian Country

Anonymous entry, Tribes nationally

A radon industry representative reviewed the 2022 edition of the Tribal Air Resources Journal. While this representative supplied radon test kits to a few Tribal programs over the last 25 years, they were amazed by large number of Tribal programs operating just in EPA Region 5. It was apparent that there are many important problems being addressed, though only a few of the Tribal programs were able to address radon due to limited funding and staff capacity. The representative began to wonder how many Tribes would address radon if given the chance.

That opportunity came a few months later when a test kit production error created thousands of surplus kits. The representative recalled the Tribal Air Resources Journal and the need they identified, and instead of adding these kits to the waste stream, they were offered to Tribes via NTAA's listserv and other outlets. Through connections and announcements through the Tribal Air Program network, the radon kit lab was flooded with requests from Tribes across the country. In total, 14,900 test kits were shipped to 48 programs!

This case study demonstrates that publishing information about your Tribal program, including achievements, obstacles, and needs, can pay off. The laboratory was excited to put the surplus kits to good use and to build Tribal radon testing, mitigation, and awareness programs as a result.

CASTNET in Rural Communities

Heidy Estrada, La Posta Band of Mission Indians

Our most current project is working with CASTNET, which is a network of a hundred regulatory monitoring sites, many of which are located in national parks. The La Posta Band of Mission Indians is the eighth Tribal CASTNET site and the first southern California site.

The La Posta CASTNET site is capable of monitoring ambient air, sulfate, nitrogen, chloride, ozone, and average hourly temperatures. Data is uploaded and available on AirNow and AQS. The La Posta CASTNET site also houses an

ammonia gas monitor that is part of the Ammonia Monitoring Network, which provides a consistent, long-term record of ammonia gas concentrations across the United States.

CASTNET monitoring provides valuable information, and more regulatory sites are needed in rural areas. For example, levels of ozone, $PM_{2.5}$, and PM_{10} at La Posta are often characterized differently on websites showing “representative” regulatory monitoring. These websites take information from nearby areas that have different climates and many more sources of air pollution and do not accurately represent the air quality at La Posta.

This case study is important for other Tribes who believe the State’s regulatory monitors do not accurately represent their areas. Our data is now available on the AirNow website, and searching for a nearby CASTNET site may provide more accurate air quality and pollution information.

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List of Acronyms

ARP	American Rescue Plan
BIL	Bipartisan Infrastructure Law
CAA	Clean Air Act
CASTNET	Clean Air Status and Trends Network
DERA	Diesel Emissions Reduction Act
EPA	Environmental Protection Agency
EV	Electric Vehicle
FTE	Full-Time Equivalent
GAP	General Assistance Program
GHG	Greenhouse Gas
IRA	Inflation Reduction Act
ITEP	Institute for Tribal Environmental Professionals
MATS	Mercury and Air Toxics Standards
NAAQS	National Ambient Air Quality Standards
NSPS	New Source Performance Standards
NTAA	National Tribal Air Association
OTAQ	Office of Transportation and Air Quality
PM	Particulate Matter
QAPP	Quality Assurance Program Plan
RTR	Residual Risk and Technology Review
SIRG	State and Tribal Indoor Radon Grants
STAG	State and Tribal Assistance Grants
STAR	Status of Tribal Air Report
TAMS	Tribal Air Monitoring Support Center
TAR	Tribal Authority Rule
TAS	Treatment in the similar matter as a state
TIP	Tribal Implementation Plan