

**Tribal Air Quality Priorities
and the Resources to Address those
Priorities:**

*Key Findings of the National Baseline Needs
Assessment Among American Indian and
Alaska Native Communities*



A Report of the National Tribal Air Association
for the National Tribal Caucus of the National
Tribal Operations Committee

May 2022

KEY FINDINGS



THE FEDERAL INVESTMENT IN TRIBAL CLEAN AIR

The federal investment in Tribal natural resource and environmental protection programs is appreciable, originating in part from the federal trust responsibility to Tribes. This federal funding, while not ever able to compensate for the ecological and cultural impacts of colonization, has enabled many Tribes to become highly-skilled, autonomous, and culturally-led natural resource stewards and co-managers, paralleling the capacities of local and state governments. Though Clean Air Act funding is comparatively young relative to other federal grant programs, Tribes with CAA grants have built impressive air quality management capacities and programs. CAA-funded Tribes exhibit a high degree of air quality technical, scientific, and program management capacities.

The federal investment in Tribal air programs is accelerated and expanded by the national reach of Tribal consortia and training organizations, including the National Tribal Air Association (NTAA), the Institute for Tribal Environmental Professionals (ITEP), and the Tribal Air Monitoring Support Center (TAMS). Alaskan Tribes are supported by air quality training from the Alaska Native Tribal Health Consortium (ANTHC), and Tribes receive indoor air/healthy homes support from the Tribal Healthy Homes Network (THHN).

Yet despite the visible and valuable impact of the federal investment in Tribal air quality, chronic underfunding is evident.

In this Baseline Needs Assessment (BNA), key findings on the overall federal investment include:

22% The proportion of Tribes who currently receive any form of Clean Air Act funding. In 2021, 22%¹ of Tribes (127 out of 574) received EPA Clean Air Act funding. In contrast, 100% of states received Clean Act Funding.

3% The proportion of federal investment in Tribal Air Quality programs as compared to Tribal Natural Resource funding. In 2022, the Bureau of Indian Affairs provided \$395.8 million to Tribes under the “Within Trust—Natural Resources Management” Program². For EPA, CAA 103 and CAA 105 funding for Tribes totaled \$13.54 million.

2% The proportion of federal investment in Tribal Air Quality programs as compared to Tribal Housing funding. In 2021, US Housing and Urban Development (HUD) provided \$450 million to the Indian Housing Block Grant (IHBG) Program and another \$100 million for the IHBG Competitive Program³. For EPA, CAA 103 and CAA 105 funding for Tribes totaled \$13.54 million.

42% The proportion of surveyed Tribes who report that while they receive CAA funding, the grant does *not* fully fund their Air Quality needs. 📌 In the BNA, 33 of the 79 Tribes who reported that they currently receive CAA 103 or CAA 105 funds stated that the grant *does not* fully fund their air quality work.

76% The percent of federally recognized Tribes that did not respond to this NTAA BNA. While 169 respondents provided insightful information on their air programs, 76% of all 574 Tribes did not respond reflecting the need for greater outreach to more Tribes to learn more about the funding needs of all Tribes across all regions.

85% The percent of time that Tribes reported non-Clean Air Act funding was obtained but insufficient to fund their Air Quality needs. Sources of non-CAA funding that Tribes reported receiving included the EPA Performance Partnership Grant, Bureau

¹ NTAA BNA Report 2022

² FY 2022 Interior Budget in Brief, Bureau of Indian Affairs

³ HUD Office of Native American Programs

of Indian Affairs, Administration for Native Americans, Department of Energy, Housing and Urban Development, CARES (American Rescue) Act, EPA Diesel Emissions Reduction Act (DERA) Volkswagen Settlement Act, or Settlement Agreement funds.

\$22 million The estimated air quality funding needs reported by 165 Tribal respondents in the 2021 NTAA BNA survey. Of the 89 currently CAA-funded Tribes and 76 currently unfunded Tribes who responded to this BNA question, a total of \$22 million was totaled to reflect adequate funding for their air quality activities.⁴

\$76.6 million The amount necessary to provide minimum baseline funding of \$133,484 to all 574 federally recognized Indian Tribes. Of the 89 currently CAA-funded Tribes and 76 unfunded Tribes who responded to this BNA question, they estimated a combined total of \$22 million to adequately fund their air quality activities. While this averages \$133,484 across the 165 respondents to this survey question, individual Tribal

⁴ Survey question #26 asked those Tribes who do not receive CAA 103 or 105 air quality grants to estimate their desired annual grant amount. 76 survey respondents answered this question, selecting from a value range. Respondent count for each range: \$25k-\$49k (n=4), \$50k - \$74k (n=13), \$75k - \$99k (n=14), \$100k - \$124k (n=18), \$125k - \$149k (n=11), \$150k - \$174k (n=5), \$175k - \$199k (n=5), \$200k - \$224k (n=0), \$225k - \$249k (n=3), \$250k - \$274k (n=0), \$275k - \$299k (n=0), \$300k or greater (n=3). The mid-point value in each range was used, then multiplied by the number of respondents in that range. As example, 4 respondents indicated a total grant need of \$25,000 - \$49,000. The mid-point value in this range, \$37,499.50, was multiplied by 4 (number of respondents in this value range), for a total of \$149,998.00. This formula was then applied to all of the value ranges, for a combined total of \$9,087,464.

Survey question #28 asked those Tribes who currently receive CAA 103 or 105 air quality grants to estimate their total desired annual grant amount (the sum of their current funding plus their unmet funding needs). 89 survey respondents answered this question, selecting from a value range. Respondent count for each range: \$25k-\$49k (n=6), \$50k - \$74k (n=6), \$75k - \$99k (n=17), \$100k - \$124k (n=16), \$125k - \$149k (n=13), \$150k - \$174k (n=4), \$175k - \$199k (n=8), \$200k - \$224k (n=4), \$225k - \$249k (n=3), \$250k - \$274k (n=1), \$275k - \$299k (n=1), \$300k or greater (n=10). The mid-point value in each range was used, then multiplied by the number of respondents in that range. As example, 6 respondents indicated a total grant need of \$25,000 - \$49,000. The mid-point value in this range, \$37,499.50, was multiplied by 6 (number of respondents in this value range), for a total of \$224,997.00 This formula was then applied to all of the value ranges, for a combined total of \$12,937,461.

The \$22,024,924 request is thus the combined total of the 76 currently unfunded Tribes request of \$9,087,464, and the 89 currently funded Tribes request of \$12,937,461.

funding needs may be below this level, or may be considerably higher, depending on their unique air quality challenges.

19% If Congress and EPA increased Tribal Clean Air Act funding from the existing \$12.5 million to \$76.2 million, this would still only represent 19% of the annual BIA Natural Resource funding for Tribes or 14% of the annual HUD Housing funding for Tribes.

9.7 million The number of people who identified in the 2020 census⁵ as American Indian and Alaska Native (AI/AN), across regions with diverse air quality issues. 78 percent of AI/AN reported living outside of Tribal reservations or lands, while the remaining 22 percent of AI/AN reporting living on trust lands or reservations. The 2020 census also shows that 60 percent of AI/AN live within a metropolitan area.



THE IMPACT OF UNDERFUNDING ON TRIBAL HEALTH, WELFARE AND TREATY-PROTECTED RESOURCES

The majority of Tribes participating in the BNA reported that limited air quality funding had far-reaching impacts. It is important to acknowledge however that approximately one third of Tribes did not view limited funding as a major barrier to protecting their health, welfare, and treaty-protected resources. This suggests that EPA's investment in Tribal air quality programs is impactful, and that while a significant funding gap remains, CAA 103 and 105 grant programs are a vehicle for building Tribal capacity.

Key findings on funding deficits include:

79% The proportion of Tribes who agreed or strongly agreed in the BNA that insufficient air quality funding impacts the health and welfare of their people.

⁵ [United States 2020 Census: American Indian/Alaska Native population data](#)

80% The proportion of Tribes who agreed or strongly agreed in the BNA that insufficient air quality funding impacts their Tribe's capacity to prevent adverse health impacts, such as asthma, allergies, lung, and heart disease.

68% The proportion of Tribes who agreed or strongly agreed in the BNA that insufficient air quality funding impacts their Tribe's ability to test for and mitigate radon gases and lead contamination, which contribute to lung cancer and learning disabilities.

72% The proportion of Tribes who agreed or strongly agreed in the BNA that insufficient air quality funding impacts their Tribe's ability to address the ecological impact of air pollution on their treaty-protected natural and cultural resources.

72% The proportion of Tribes who agreed or strongly agreed in the BNA that insufficient air quality funding impacts their Tribe's ability to assert and exercise their sovereignty and government-to-governmental relationships.



HUMAN RESOURCE NEEDS

To build and operate successful Tribal air quality programs, significant monetary increases are needed to close the gap in federal spending on Tribal air quality. This funding gap was evident in the section of the BNA that asked Tribes about their human resource issues and needs. Tribes who already have an air quality program reported that while they have access to training and equipment, their work is adversely impacted by staff turnover, lack of competitive pay, or difficulty finding candidates in remote and rural areas. Among Tribes who do not have an air quality program, many reported that to build an air quality program will require not just funding, but training in grant writing and familiarity with grant opportunities.

Many Tribes reported in the BNA that they are only able to address air quality issues through a portion of time from their environmental staff. For these staff members, a major challenge is building and operating an air quality program while simultaneously trying to write grants,

attend trainings and acquire equipment or resources. These activities are conducted on top of their other environmental program responsibilities.

While limited funding for air quality staff is a barrier, the corollary is also true. CAA funding for Tribal air quality programs has been shown to be an important facilitator of Tribal capacity. When Tribes can hire dedicated air quality staff, those staff have been able to secure other grants that improve air quality. As example, since 2009, 31 different Tribes have administrated a total of 55 Diesel Emissions Reductions Act (DERA) grants from EPA, incorporating 18.8 million into cleaner air, local jobs, and safer industry.

Key findings on Human Resources include:

3 out of 4 Tribal staff responding to the BNA's Human Resource questions who said they have *other environmental program responsibilities besides air quality*.

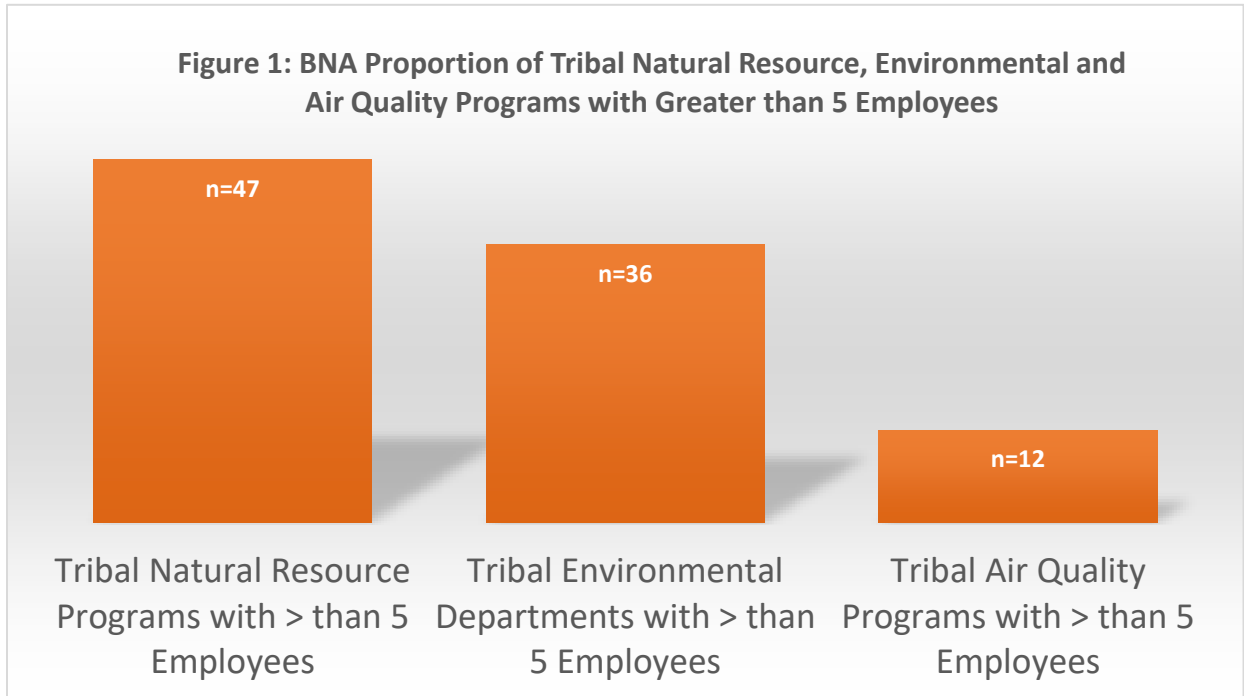
1 in 3 The proportion of Tribes responding to the BNA's Human Resource questions who reported that *not having experienced air quality staff made them less competitive when applying for grants*.

1 in 5 The proportion of Tribes responding to the BNA's Human Resource questions who reported that a major barrier to obtaining air quality funding was *not having a formal grant writer*.

1 in 4 The proportion of Tribes responding to the BNA's Human Resource questions who reported that a major barrier to obtaining air quality funding was having an *overloaded grant writer*.

1 in 4 The proportion of Tribes responding to the BNA's Human Resource questions who reported that a major barrier to obtaining air quality funding was the *administrative and time burden of grant applications*.

Just 14% of Tribes with an Air Quality program reported having greater than 5 employees (n=12). In contrast, 47 Tribes reported having a Natural Resource program with greater than 5 employees, and 36 Tribes reported having an Environmental Program with greater than 5 employees. (Figure 1)



Challenges Reported by Tribes in Staffing an Air Quality Program

#1 Employee turnover can negatively impact the continuity of air quality Programs (79% of respondents agreed or strongly agreed with this statement).

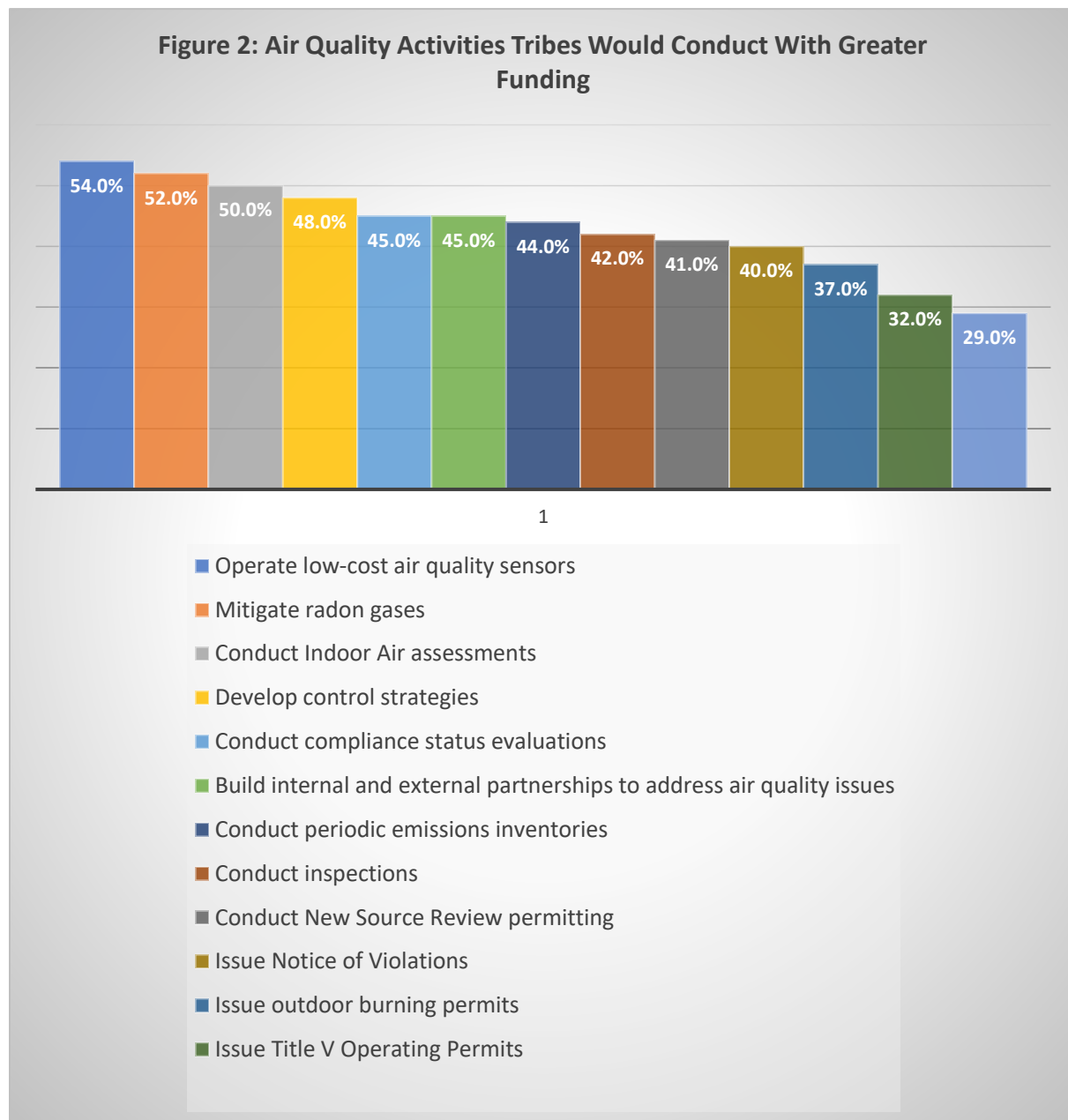
#2 Finding and retaining candidates interested in air quality can be difficult (67% of respondents agreed or strongly agreed with this statement).

#3 Salaries are not competitive enough for job retention (64% of respondents agreed or strongly agreed with this statement).

#4 Current funding levels are not sufficient to fully fund the employees needed for their Tribal air quality programs (60% of respondents agreed or strongly agreed with this statement).

How Tribes Would Expand their Air Quality Programs if They Had Increased Funding

The results of the BNA indicated that Tribes have a range of air quality activities they would like to conduct or expand upon if funding were available (Figure 2). *Given the nature of most of these air quality activities, it is evident that not only are human resources required, but that full-time and dedicated air quality staff are a prerequisite.*





THE AMBIENT AIR POLLUTION SOURCES TRIBES REPORT AS IMPACTFUL

Tribal communities and their treaty-protected resources span a broad geographic region, from rural to urban, arctic to desert, to high mountain and coastal. It is thus not surprising that Tribes are impacted by most all types of ambient air pollution. In the BNA, Tribes were asked to identify specific ambient air pollutants of concern and to rank their priority. Though wildfire smoke is increasingly impactful, Tribes report being impacted by a multiple of long-standing air quality issues. Diesel emissions and mobile emissions in general continue to impact Tribal air quality, and notably, woodsmoke remains a widespread concern.

Air toxics are also an ongoing concern from the historic and inequitable practice of siting hazardous operations or facilities on Indian reservations. More than 400 major sources are sited on Tribal lands, including mines (Lewis et al., 2017), hazardous waste incinerators, landfills, and industrial facilities. In 2020, EPA's Toxic Release Inventory (TRI) recorded 180 million pounds of chemical releases on or within 10 miles of Tribal lands, of which 56 million pounds of those chemical releases were airborne.

Key findings around ambient air quality issues include:

62% of Tribes report that wildfire smoke has become impactful to their community. In the last decade, some of the worst wildfires in history took place, particularly in the western US, where the majority of Tribes experienced episodes of “thick density” smoke in the 2019-2020 fire season.

7 The average number of individual ambient air pollution sources that Tribes reported as impactful to their community.

22% of Tribes report experiencing extensive cumulative impacts. 29 of the 129 Tribes responding to the question about impactful air pollution sources listed more than 10 different sources.

63% of Tribes report being impacted by diesel emissions, from on and off-road vehicles, port activities, marine vessels, and cruise ships.

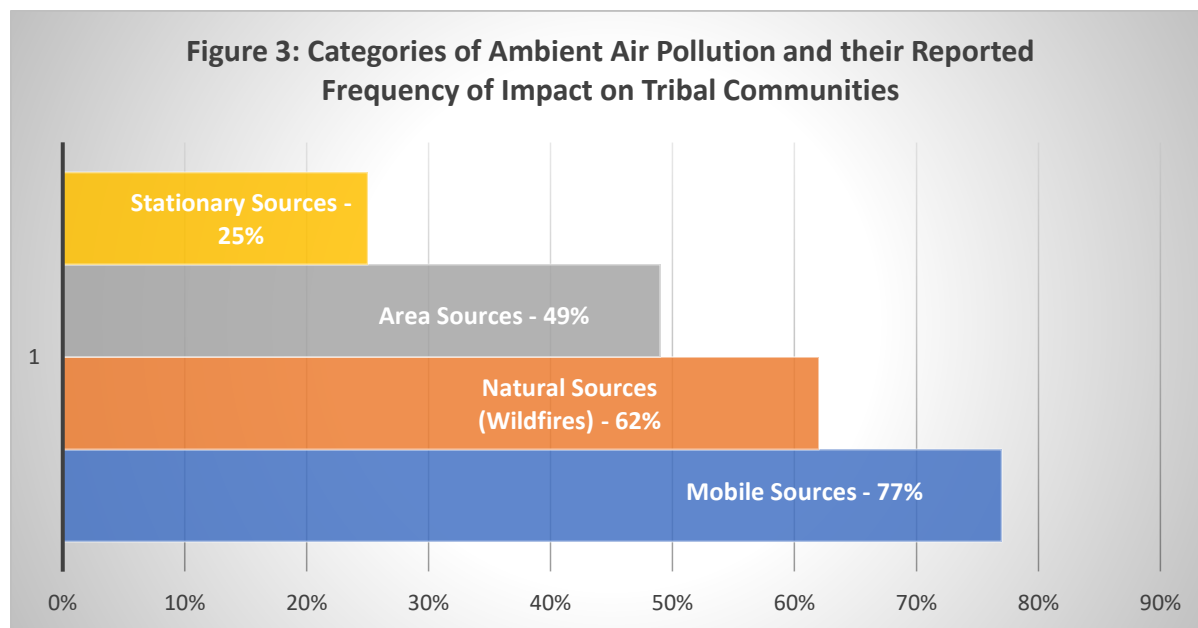
Wood-burning devices were reported as an impactful air pollution source by 54% of Tribes. In contrast, the US Energy Information Administration estimated that in 2021, just 1.3% of all US households used wood as a primary heating source, with an additional 8% using wood as a secondary heating source. This suggests that Tribes, often with limited access to affordable energy sources, are disproportionately impacted by the use of wood heating and subsequent woodsmoke air pollution.

Over half of survey respondents (56%) indicated that they did not know whether Hazardous Air Pollutants (HAPs) were impacting their Tribe's health, natural resources or cultural resources, an indicator of insufficient Air Quality staffing and funding.

Among the 21% of Tribes who responded that they were aware of HAPS and other air toxics, exposure concerns included *uranium, and uranium tailings, polychlorinated biphenyls (PCBs), mercury, asbestos, radon, radon progeny, styrene, and 2-Butanone.*

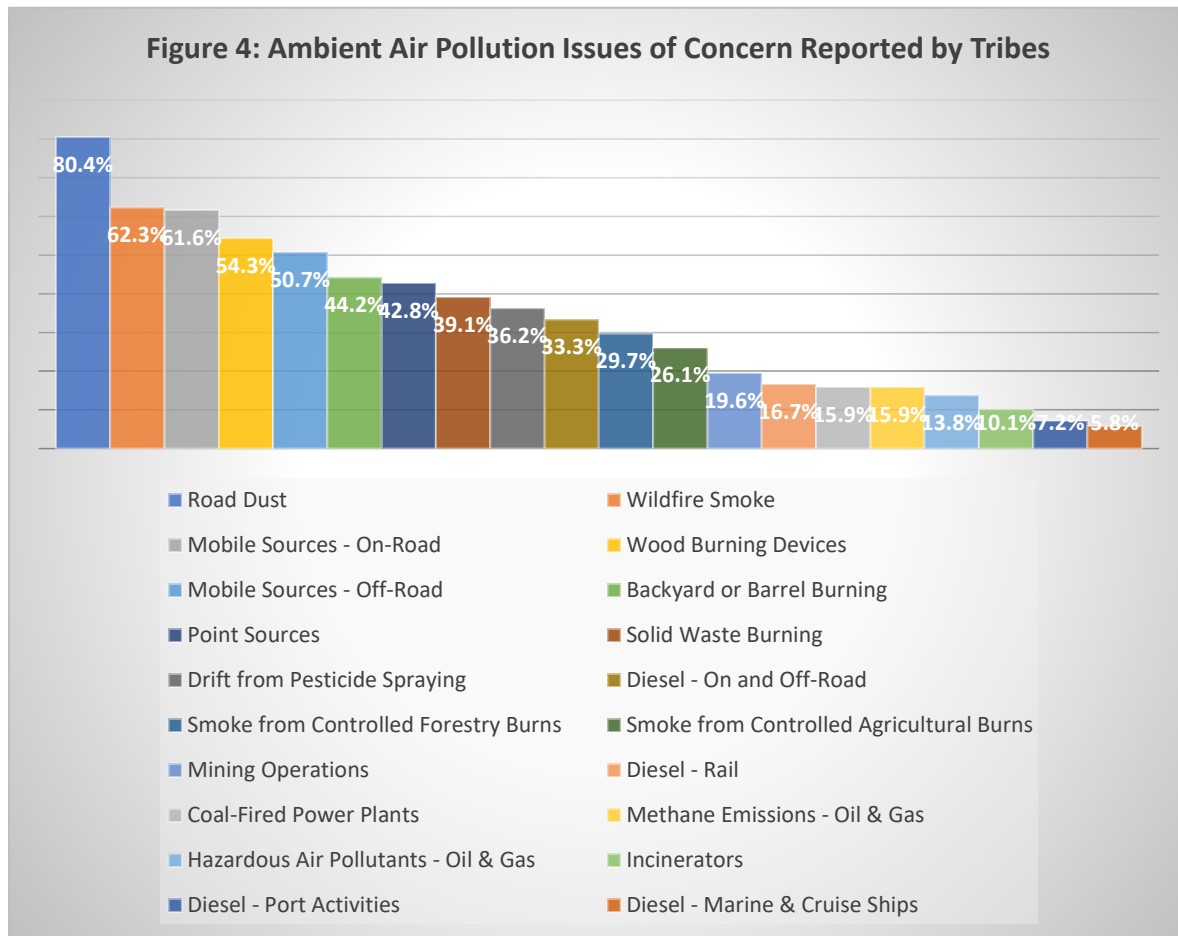
400 The estimated number of major sources⁶ sited on Tribal lands. At the same time, 78% of American Indian/Alaska Natives live outside of Tribal reservations or lands and are thus exposed to major sources across the US.

77% The proportion of Tribes who reported being impacted by mobile source emissions from on and off-road vehicles, including diesel emissions from on- and off-road vehicles.



⁶ Major sources are defined by EPA as “a stationary source or group of stationary sources that emit or have the potential to emit 10 tons per year or more of a hazardous air pollutant or 25 tons per year or more of a combination of hazardous air pollutants.”

80% The proportion of Tribes who report being impacted by road dust, a challenge for many rural and Alaska Native Tribes, but a concern in urban areas as well. Rural road dust can include a host of hazardous airborne particles, including pathogens, tire fragments, chemicals from use of dust suppressants, and microbial contamination in communities without sewer and water (Barnes et al., 2020). University of Alaska Fairbanks researchers found that “a lightly traveled 2-mile stretch of unpaved road can produce nearly 11,000 pounds of dust each month.” Fugitive dust from urban roads has been shown to have a high concentration of harmful industrial chemicals (Kahn and Strand, 2018)





THE INDOOR AIR POLLUTION SOURCES TRIBES REPORT AS IMPACTFUL

Indoor air pollution is an increasing issue of concern for many Tribes, in particular as climate events, such as high heat, hurricanes and wildfires are driving people to spend a greater portion of their time indoors. Key

findings in the Indoor Air Pollution survey section include:

90% The proportion of Tribes who report that *mold* is an indoor air pollutant of concern in Tribal housing. This is followed closely by *asthma and allergy triggers* (78%).

48% of Tribes reported that funding for *mold remediation* is an urgent issue.

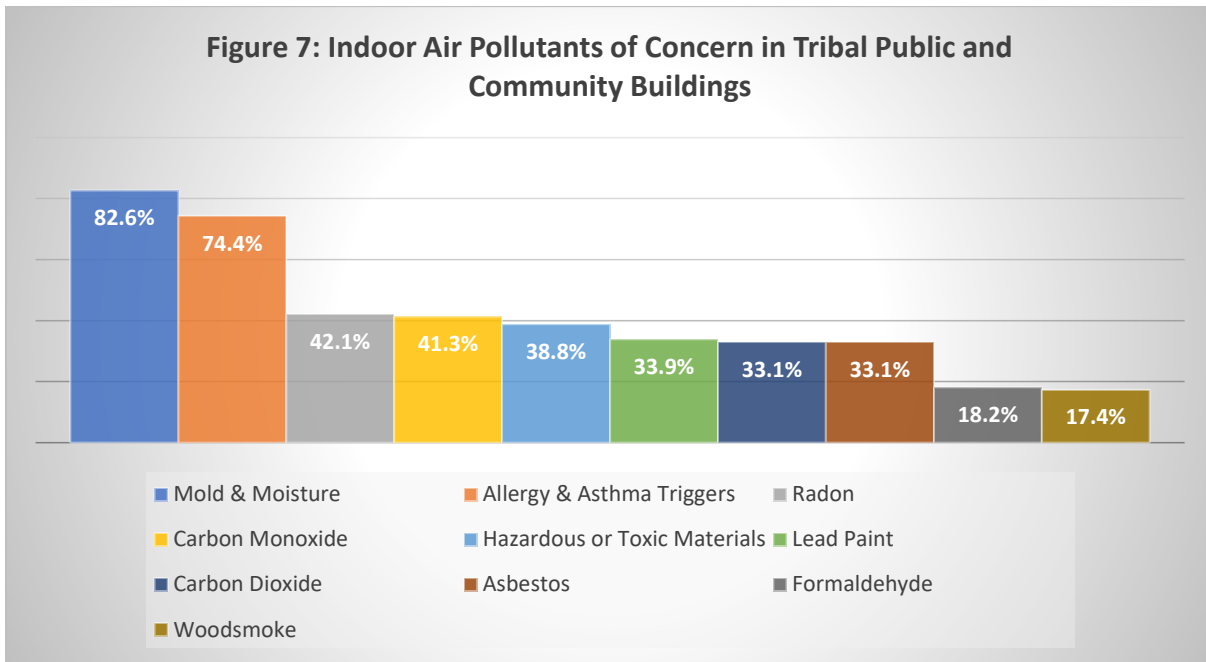
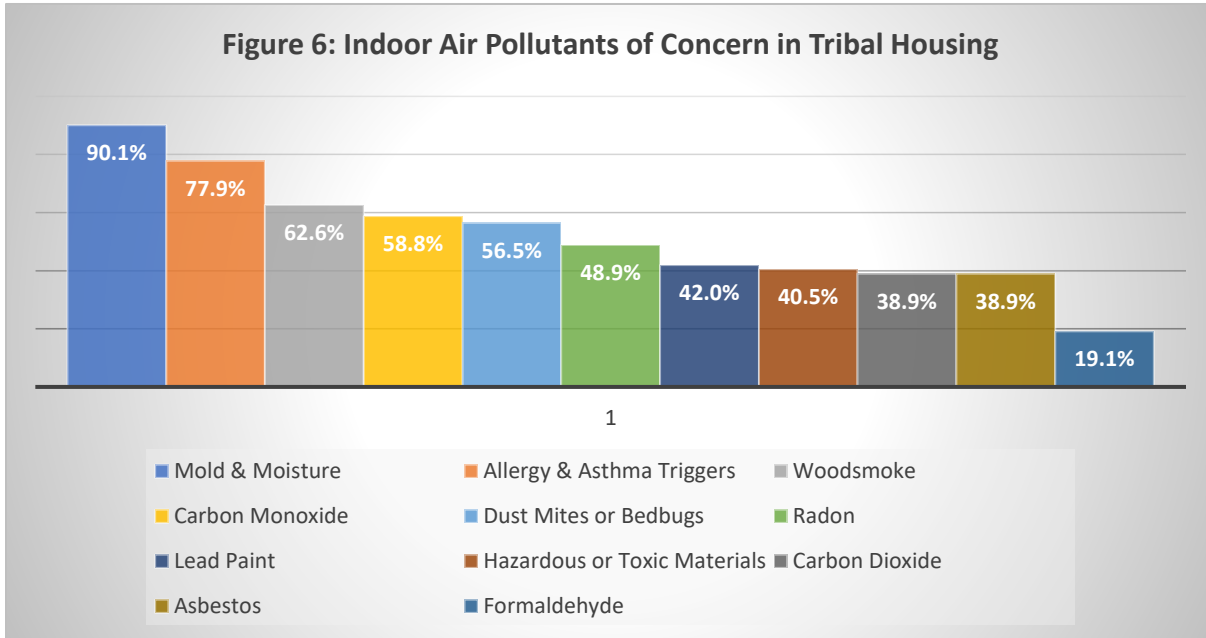
Radon. *Almost half of all Tribes responding to this survey question reported that radon was a concern* (49%). The American Association of Radon Scientists and Technologists reports that fewer than 2% of the 574 Tribes received a State and Tribal Indoor Radon Grant (SIRG) in 2020 though many Tribes still perform radon work.

Woodsmoke. 63% of Tribes responding to this survey question reported that woodsmoke in Tribal housing was a concern. Replacing uncertified woodstoves with new, cleaner-burning woodstoves is a priority for many Tribes and there are multiple grants that fund change-outs. Yet for Tribes without an air quality program, it may be more challenging to find staff in other Tribal departments who can set aside time to apply for woodstove change-out funding.

Indoor Air Filtration through HVAC systems or Air Cleaners was reported as an urgent funding priority, with 40% of respondents reporting that funding need is urgent, and another 53% reporting that funding would be useful.

Energy efficient heating and cooling was reported by 94% of Tribes responding to this survey question, with 51% reporting that funding would be useful and 43% reporting that funding needs are urgent.

Indoor Air pollutants of concern in Tribal housing are shown in Figure 6 and Indoor Air pollutants of concern in Tribal Public and Community Buildings are shown in Figure 7.



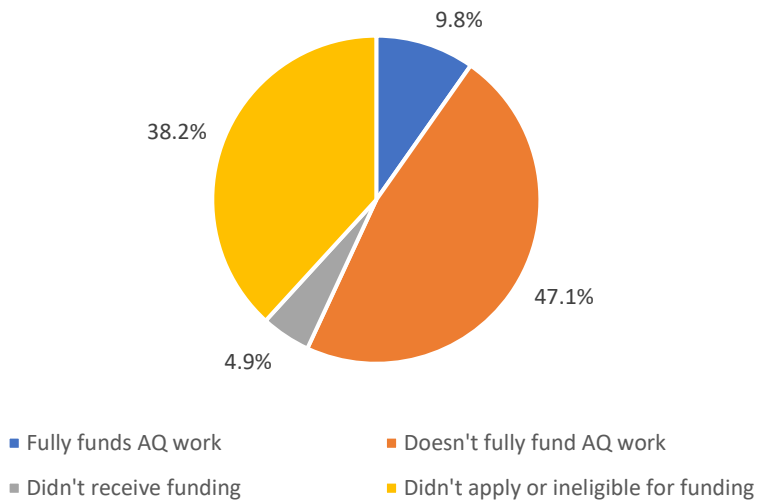
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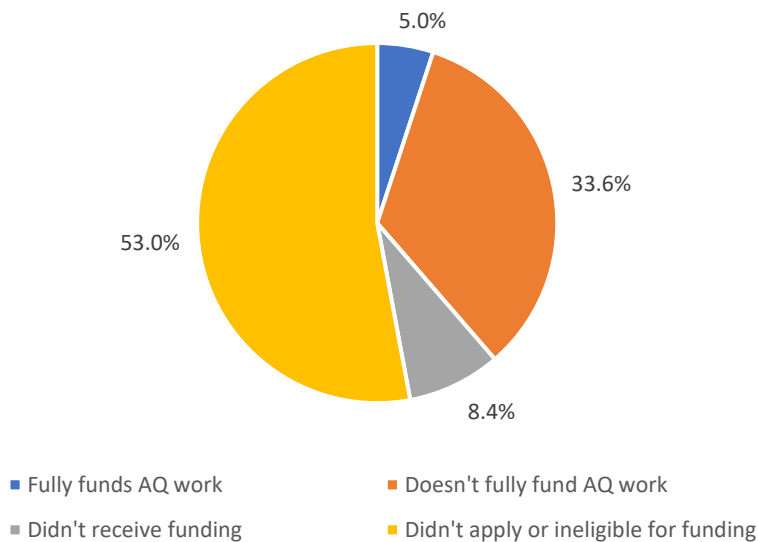
APPENDICES

Appendix A. Other federal funding sources used to help Tribes address air quality.

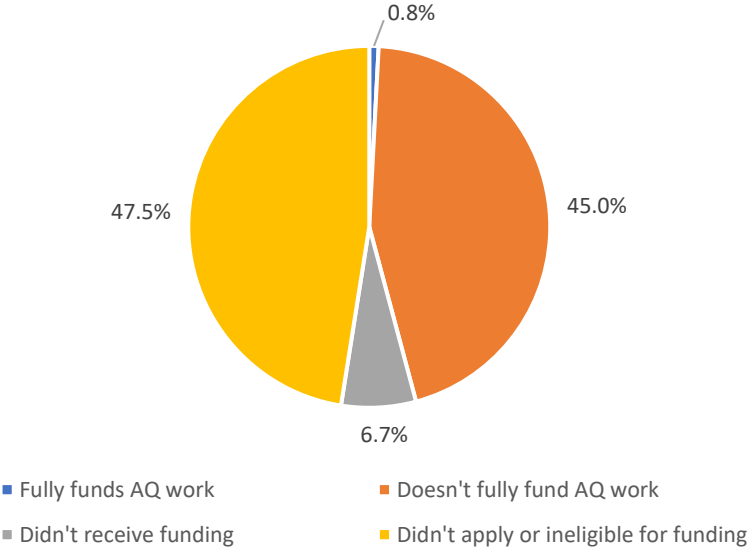
Tribes' EPA Performance Partnership Grant (PPG) funding status. (n = 123)



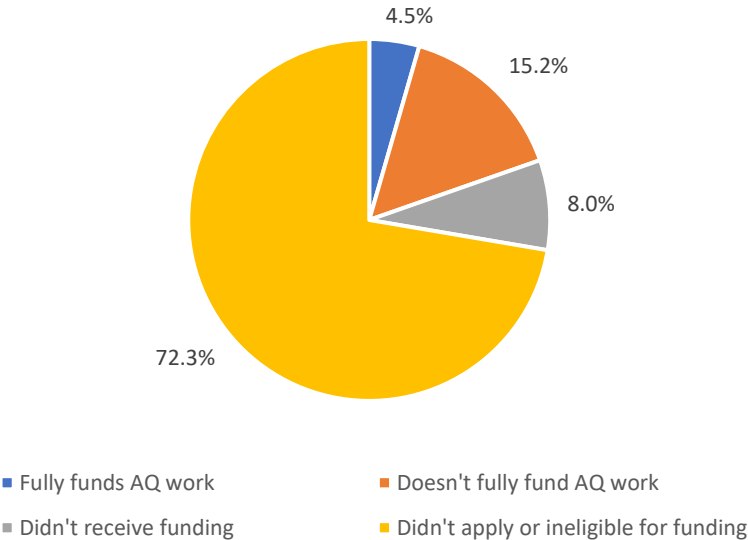
Tribes' Bureau of Indian Affairs funding status. (n = 119)



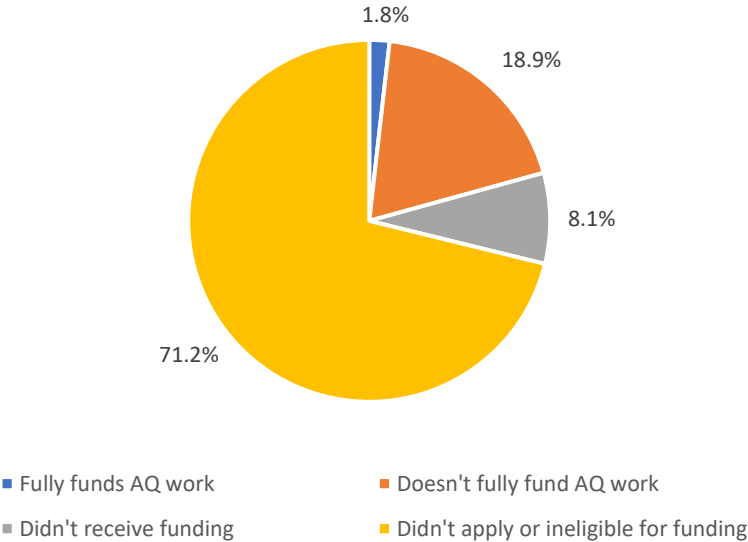
Tribes' CARES Act/American Rescue Plan Act funding status. (n = 120)



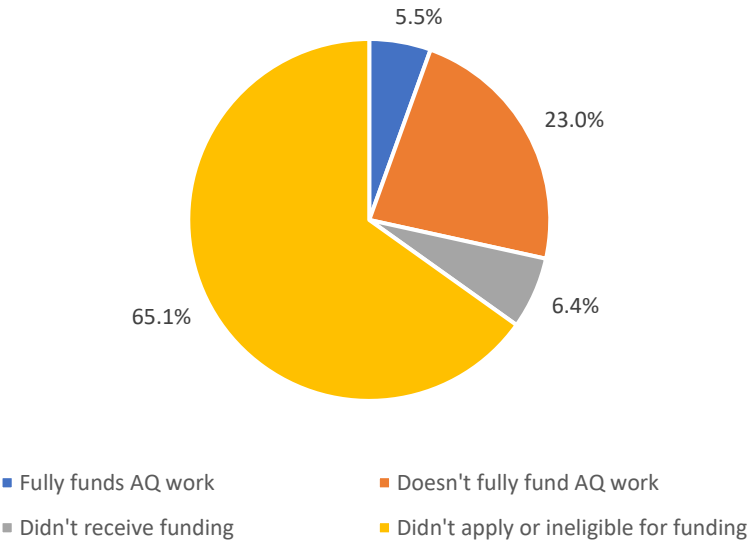
Tribes' Administration for Native Americans funding status. (n = 112)



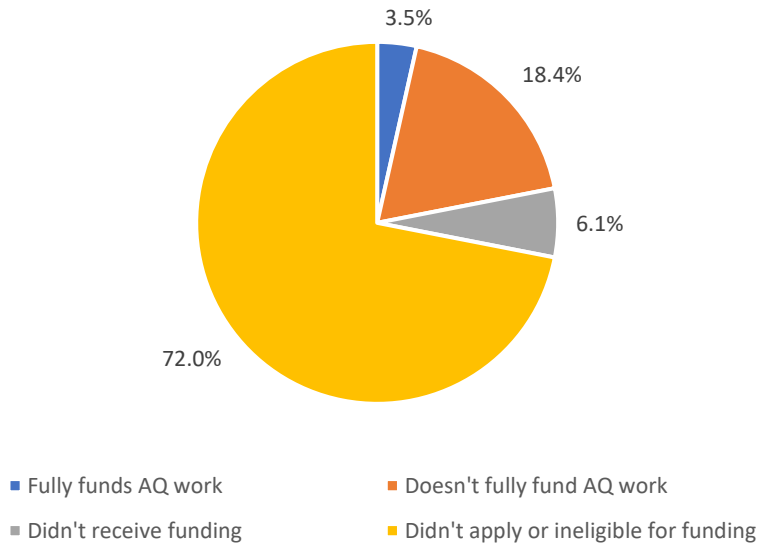
Tribes' Department of Energy funding status. (n = 111)



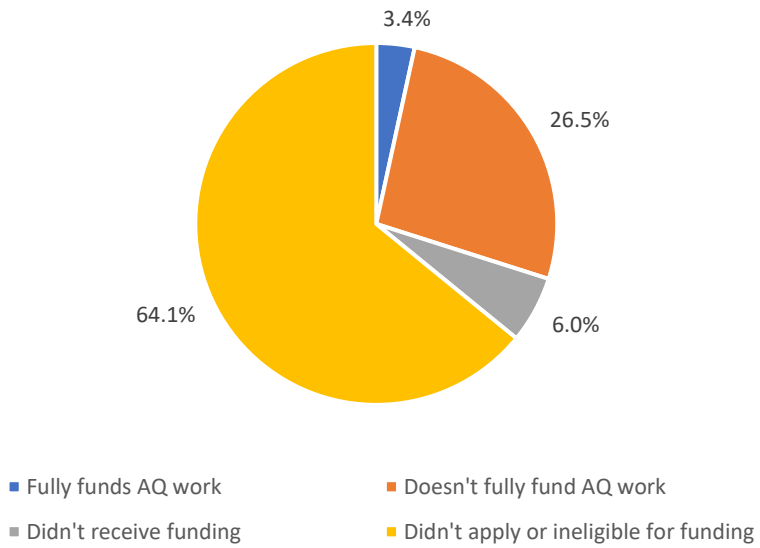
Tribes' Housing and Urban Development funding status. (n = 109)



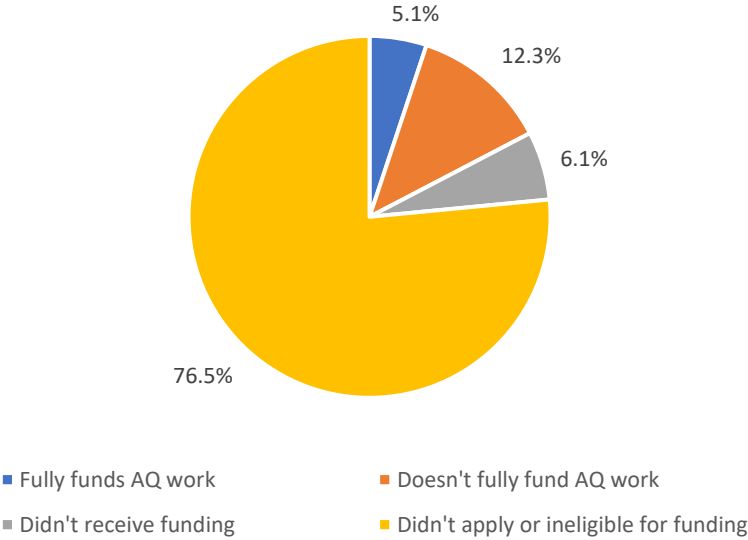
Tribes' Diesel Emissions Reduction Act funding status. (n = 114)



Tribes' Volkswagen Settlement Act funding status. (n = 117)



Tribes' settlement agreement funding status. (n = 98)



Appendix B.

Other sources of funding (e.g., state grants, private foundation grants, mini-grants) that Tribes received to conduct air quality activities. (n = 27)

Multi-Purpose Grant
EPA Multipurpose Grant (MPG) provides funding for one of our air program sites
We have received free radon kits from the New Mexico environment department to conduct our annual radon testing in community buildings and homes.
only EPA CAA 103 program funds the Air program. we have received numerous grants but nothing that funds the Air.
EPA Radon Grant
Cherokee Preservation Foundation
EPA Multipurpose Grant within PPG
ARP
CRCPD radon mini grants
we have received EPA Radon funding in the past, American Lung Association for IAQ
Some partnership activities with state and colleges
Alaska Native Tribal Health Consortium
Partner on Environmental Justice Grant
California Air Resources Board
Air Quality mini-grant from ANTHC, by awareness on secondhand smoke. Also, we had some commitments under our GAP workplan that did air quality awareness activities.
We have used EPA grant funding in the past to do outdoor air quality and have applied for mini grants through ANTHC for air monitoring outside air in the past and now have applied for indoor air monitoring funds
Non-profit group for IAQ project.
CARB AB 617 Community Air Grant
State funding
State funding
EPA DITCA, EPA SIRG, EPA STAR, NIEHS, EPA MPG, EPA Air Toxics, NPAIHB (Northwest Portland Area Indian Health Board, Department of Energy,
CARB AB617 for air and meteorological monitoring
Multi-Purpose Grant through EPA to fund Class 1 Airshed Activities. Also, Imminent Threat Grant for Radon to fix 20 homes in the High range.
We have used Exchange Network grants to purchase new data loggers for a few sites.
State funding
Small grant
State funding

Appendix C.

Additional information Tribes wanted NTAA to know about their air quality funding needs. (n = 46)

The funding sources are meager and it's not easy to hire someone for part time work with minimal benefits/salary and keep them on staff.

We live in one of the lowest air quality areas in San Diego and are looking for funding to help develop an air quality monitoring program here on the reservation.

As a federal agency engaged with tribes and the welfare of tribes EPA has fiduciary responsibility to fund such vital programs without a tribe having to seek elsewhere. Tribes have allowed EPA to escape their responsibilities long enough. The rent is due. EPA needs to argue for more funding during the budgeting process.

We have no grant writer/writing experience and have internet that "sometimes" works.

We need funding to do a regional air quality study to coherently disseminate information to our citizens.

EPA Region 7 needs to become more up to date within their own program, they are completely out of touch with tribal needs and the reality of their programs, It is easier to work with other EPA Regions that 7.

Yes, I worked really hard doing trainings from the GAP and finally got an EI Grant to led up to air monitoring the match is what's going to hold us back from receiving funds to continue. OG&E coal powerplant is my tribes backyard.

We need at least two more FTE

funding that allows for air permit review by a contracted engineer.

Need a stronger base to build and expand program capacity

Running an EPA regulatory site is very expensive due to the number of staff and total staff time required for the program.

Not enough funds to fully operate a CAA program.

Emissions from wildfires in the western United States can have important consequences for air quality both regionally and at sites hundreds of miles from the fires. Wildfire activity in the western United States is largely controlled by temperature and precipitation and driven largely by earlier spring snowmelt and increasing spring and summertime temperatures. Records of wildfire in the western United States show the annual area burned by large wildfires (>1000 acres) over the past decade (2008-2018) is six times that of the previous decade (1998-2008). Community smoke exposures resulting from these wildland forest fires have been associated with increased emergency department and hospital admissions for chronic obstructive pulmonary disease, bronchitis, asthma, and chest pain. Especially at risk are young children and the elderly. As these large-scale and costly incidents become a perennial challenge for the Hoopa people, the key for government organizations is to evolve from reactive strategies to proactive ones. By understanding location-specific air quality data related to wildfires, communities can be better equipped to prepare for, respond to and recover from them.

Tribal Air programs of Tribes with limited land base need air programs. Also, the Tribe's air quality priorities need to be the first consideration, not what will 'fit' into EPA's framework. For example, EPA determined that an air monitor that was over 50 miles away and much different air patterns due to landscape was close enough and would only fund the work that focused on modeling. Now we are not able to monitor for localized air quality impacts from developments and agricultural practices nearby the Community.

We have received equipment from TAMS loaner Program which has been helpful and great for very limited baseline needs, but we have not been able to purchase actual equipment.

105 basically pays for administrative position, not for technician to needed to perform work

I work as the air quality specialist that works with ANTHC funds for a single project when applied. We have applied for it a few times for a radon assessment & testing, an indoor air quality healthy homes assessment, but not consistently due to the other programs that our department covers as well.

Had not been a priority yet.

We had funding that built a weather station but there was no funding for continued operation or upgrades. Station has failed and been removed at this time. We have two oil refineries adjacent to Tribal Lands and are concerned with increased smoke days due to wildfires.

Non-competitive funding opportunities are prioritized.

We are still building government capacity and are still developing an air quality program, so it is unknown how much funding will be needed.

We do not receive specific AQ grant money but use GAP funds when needed.

need dust control measures taken with the rise in respiratory diseases

Need more people in the office; a Grant Writer

we do need funding

50% of homes need HVAC to prevent mold issues

It would be a good program to develop. There is over-crowding in some homes. We do have residents who do use wood-burning stoves as a secondary heat source. We do have a high number of infants contracting RSV, and other respiratory sickness's.

Would like to learn more about developing an air assessment

we do have a number of elders with breathing issues and a large amount of dirt roads. I would like to look at funding to do lung assessments among our elders. I have talked to other neighboring tribes who would also like testing of their tribal members made available

The amount of funding within the PPG-GAP program only covers a small amount of the funding needed to have a fully functional and data collecting air quality program. We have an approved level IV air inventory and a few sensors, but desire to have more. The funding amounts in 26 and 27 are less than the lowest amount within each question.

What's available

where to get funding for indoor in homes

We have some baseline data for road dust, but it would be great to continue that to be able to see some patterns and maybe help to know when it is best to put on a palliative

If a tribe has established a monitoring program and the data is used by AIRNOW and forecasters, the site should get set aside that is continuous. The tribe does provide data for what otherwise would be a data gap.

There is no ambient air monitoring within 100 miles. Our program only does indoor air.

Funding needs to be consistent with the needs of the tribe. the small amount we do get doesn't help us with filling the part time position. it also puts a burden on upper management to look for other sources of funding to pick up the short fall.

We need more FTE funding for indoor air work.

We are not able to cover vehicle O&M costs for vehicles used in air quality work. It would be nice if we could cover more than just mileage.

Our biggest need is funding for manpower. Another need we have is for mobile monitoring capabilities so that we can protect our communities which are spread out as far as 200miles from our office.

We would like to see more funding for services in Indoor Air quality so that we can provide a service to our Tribal Citizens.

We would like to have more indoor air grants from EPA like the ARPA or CARES

We recently switched from 103 to 105 funding and successfully applied for a match waiver.

Would need enough funds to support an additional position since staff are overburdened

Would like to expand monitoring

Need people, only one person in IGAP

Appendix D.

Additional information Tribes wanted NTAA to know about their air quality staffing and human resource needs. (n = 25)

Our tribe needs to be educated and informed about the Air Quality Program, funding, grants, define, explain all components in the Air Quality Program. Thank you .

Ability to compensate to retain highly qualified staff overtime a hurdle for other environmental positions

Currently we only have 1 staff person for the entire Environmental Department and 0 Natural Resources or "Other" staff. So, there are many hats being worn.

4 staff total in our program. 1 Director, 1 env coordinator, 1 env specialist, 1 water quality tech

Human health needs to be included and studies funded with IHS working with EPA

We have no current air quality program or funding or grant writing abilities

I'm not sure what exactly led to the termination of the air quality program here. From what I can find in files, GTB had an Ozone monitoring grant that was terminated in 2010. There also seems to be some mercury deposition monitoring between 2004-2007 thru BIA. Staff turnover seems to be the most likely culprit, along with insufficient funding to support a qualified individual.

Our Community really wants to build our people, but AQ is an especially hard field to develop (and keep) talent. There is little room for promotion due to high technical elements.

IDC limit the amount of funding

in order to fulfill the duties of a regulatory program, you need many staff and most tribal programs do not have the resources for that.

We had 4 FTE at one time.

We cannot pay a competitive salary for individuals more skilled and/or knowledgeable of permitting and regulation.

Finding qualified scientific minded individuals that want to work in the environmental field at a noncompetitive wage is difficult.

EPA grant administrators have made comments about how "expensive" the hourly rates for staff are. But it is difficult to remain competitive as a tribe and retain qualified staff if we cannot offer reasonable hourly rates.

Region 9 Tribes "In Attainment" need to be equitably by the grant reviewer's, and that does not seem to be the case.

Difficult to hire and retain staff in this area. Consultants are available and already possess the expertise

SIRG grant is currently paying PTE salary and assists with other air work

We are on a hiring freeze for Natural Resources and do not have enough office space for everyone.

if it's not in the workplan, we don't work on it. we had in the past but never resolved. can't have it for many years.

lack of funds and lack of people that want to work in remote Alaska

Typically, one staff member does the job of a team.

NPT has been able to hire and retain staff, which has made all the difference in program development and effectiveness. Having the training resources of ITEP, EPA, and WESTAR have been critical to NPT AQ Program development and effectiveness.

Staffing is never devoted to one area of focus. This can cause missed training opportunities.

that the EPA indoor air funding doesn't seem as important? Why?

Staff retention major problem

Appendix E. Most urgent or important air quality activities for Tribes.

Air Quality Priority 1
(n = 108)

- no burn barrels in town
- Fire/smoke health issues
- Understanding current AQ
- Summer season dust from gravel roads
- Get funding if adequate funds are available.
- Indoor Air Purifiers
- pm 2.5 monitoring and sensing
- Wildfire impacts
- Education for Tribal Members
- Wood stove
- Training
- monitoring
- I personally think we should have more air monitoring stations which we are currently working on to have.
- Facility air quality filtration
- Air Quality Monitoring
- air monitoring of oil and gas facilities
- Continuous PM monitoring
- Air quality monitoring device
- Indoor Air
- Healthy Homes
- Indoor Air Quality
- Meeting all regulatory procedures with limited staff/contractors
- QA
- episodic sampling for fugitive road/agricultural dust from off/on reservation sources
- Funded position
- reviewing nearby industry and polluters permitting actions
- Indoor Air Quality
- Monitoring/Testing
- IAQ Assessments
- Burning Ordinance
- NAAQS compliance
- air pollution monitoring
- Monitoring
- maintaining regulatory status
- Operating monitors
- Maintain regulatory air monitoring network
- wildfire
- Indoor Air Quality Inspections
- Getting approval from EPA to even apply for grants that address air quality issues (DERA, VW, SIRG, radon grants)
- IAQ assessments for community and Headstart.
- HVAC infrastructure improvement
- Smoke monitoring
- operate air quality sensors

- PM 10
- Comment letters and permit reviews
- daily outdoor air conditions
- Hazardous Indoor Pollutant Storage and Education
- COVID 19
- Road Dust Control
- Indoor Air Quality
- Observe dust fly by.
- Conduct Air Quality Monitoring
- Strategic reduction of GHG emissions
- Conduct IAQ assessments
- Indoor Air Quality Monitoring
- Indoor Air
- Ongoing Funding
- air quality analysis
- Wildfire Smoke Notification and Monitoring
- indoor air quality
- Outdoor burning permits
- our door; carefully monitored now
- indoor air quality
- mold and AQ issues in homes
- Wood burning stoves
- Dust Control
- complete an air emissions inventory
- mold inspections
- lung health of tribe members
- Monitoring air quality that impacts tribal resources.
- Indoor Air Quality due to old woodstoves
- Develop monitoring program
- Sampling
- Purchase equipment
- Monitoring for wildfire smoke/ Be able to tell the community it is safe to go outside during wildfire events that are occurring in Canada, MT, CO, CA. Right now, there is no data for our area.
- mitigate PM 10
- Reliable Ambient Air Monitoring
- Total Suspended Particulate and analyses for NESHAPs - uranium decay products
- Operation of two air stations
- Administration of FARR FIP
- monitoring limited
- Air Quality Monitoring Site
- PM 2.5 monitoring station at tribal complex
- Convert to Renewable Energy (become carbon neutral)
- AQ Monitoring
- Lead dust exposure
- Setting up our regulatory monitoring program (currently only monitoring for PM with loaner equipment)
- Monitor PM10

	<ul style="list-style-type: none"> • air monitoring • emissions inventory • Completing the Emission Inventory • indoor air inspections • Protect Class 1 Airshed Redesignation for STOI • Monitoring • Ambient air monitoring and participation in EPA national programs. • PM Monitoring • Road Dust • Indoor air quality program • Emissions Inventory Report • Bathroom ventilation • Raise awareness and education • Mold Assessments • Monitoring equipment • IAQ assessments • Indoor Air Quality Monitoring • Monitoring • Establishing Air Monitoring site • Mold and Mildew
<p>Air Quality Priority 2 (n = 101)</p>	<ul style="list-style-type: none"> • burning trash at the dump in the burning barrels • Prevent AQ degradation • wood stoves • Develop a plan to ID and address air quality issues in the areas around and in tribal lands. • Wildland Fire Smoke Education • Policy building and Enforcement • Wood burning stoves • Radon testing • landfill burning • Capacity Building • education • Enforcement Inspections • Title V Permitting • Mercury deposition monitoring • Indoor air quality, mold, radon • Air Emissions • dust suppression to reduce pm • Outreach & Education • Working with datalogger company to have equipment meet the needs of small organization • QC • indoor air quality impacts from Activity #1 • Outdoor Air Monitoring • monitoring PM2.5, especially related to wildfires • Daily air quality test • Data Interpretation • Air Quality Outreach and Education • PSD Increment Analysis

- community outreach
- program administration
- Permit/ policy/ rule commenting
- expanding the air network (currently only have one monitoring station)
- Reviewing permits
- Maintain compliance/enforcement program
- wood burning (Winter)
- Funding to help families
- Ambient Air Quality monitoring and importing certified data into AQS and other platforms
- PM 2.5/10 monitoring
- Wood burning Stove Improvement
- Jet fuel emissions
- indoor air quality education
- PM 2.5
- Outreach and home assessments
- Fresh Air flow indoors
- Other Airborne Viruses
- Healthy Homes
- Outreach
- See mold build up in homes.
- Education and Outreach
- Strategic resilience to increasing poor air quality days
- Conduct inspections for Tribes
- Smoke from Wildfires
- Outdoor Air
- Collecting Air Data
- AQI website creation
- Adding indoor and outdoor air quality sensors to the reservation
- road dust
- Home assessments
- indoor; concerns about proper ventilation
- ambient air quality
- no ventilation
- Dump/landfill burning
- Respiratory health improvements for both elder and children
- understand air quality regulations
- wood-burning stove exhaust
- effect of gravel roads on health of community
- Monitoring indoor air quality to ensure citizen safety.
- Road dust monitoring
- Assess indoor air conditions
- Monitoring
- Maintain AQ software subscriptions
- Conducting baseline data assessments
- address indoor air quality
- Community hazardous air events to the community
- particulate during wildfire season
- QA/QC of air station data

	<ul style="list-style-type: none"> • AQ monitoring • PM 2.5 sensor use for site evaluations • IAQ Services including assessments for tribal citizens • Outreach and Education • Particulate matter • providing IAQ home assessments • Monitor PM2.5 • quality assurance • outreach/information distribution • Preparing an Air Monitoring Site with QAPP • radon testing • Radon • Outreach • Ensure proper QA/QC procedures are followed and submit data to AQS and AirNow. • Lead Monitoring • Mold/Moisture • Identifying types of air emissions • mold remediation • pass out healthy homes/IAQ kits • Outreach & Education • data management • air quality outreach and education • Outdoor Air Quality Monitoring • Permit Reviews • Establish Wet Deposition Site • Indoor Air Assessment
<p>Air Quality Priority 3 (n = 93)</p>	<ul style="list-style-type: none"> • Outreach and Education • landfill burning • Mitigate radon gases. • Outreach and Education • Control Strategies • Health impacts • Road Dust • Monitoring • outreach • Community Outreach/Partnerships • Establishing a MSPR program • Completing an updated emissions inventory • Address air pollution and education to community • Air Monitoring • radon remediation • Building Partnerships • Technical skills and procedures to audit the firm lab, and contractors. • Maintenance • tracking potential pesticide drift • Indoor Air monitoring • indoor air education • Outreach

- Building Capacity
- Review Air Permits
- AQRV development
- smoke monitoring
- permit review and Emissions inventory
- Pollution control strategies and projects
- developing a plan to reduce emissions/improve air quality (not just monitor it)
- Reviewing regulatory actions
- Maintain professional staff
- IAQ air purification units
- Outreach Activities
- education and outreach
- Replace Diesel with Electric school buses
- Indoor air quality
- conduct emissions inventories
- IAQ
- building air monitoring capability
- Burning practices
- Education Tribal Staff
- Wood Smoke & Wildfire Smoke
- Training
- See people smoke in homes.
- Build partnerships
- Conduct AQ modeling
- Burn Bans
- Outreach and Education
- Indoor Air Quality Assessment
- Air quality compliance
- covid air disease
- Community education
- schools; need proper indoor air quality; students complain too hot.
- assessments and awareness to control strategies
- outdoor treated wood burning
- Indoor air quality
- partner with HUD in building new homes for and monitoring air quality
- make comment on air permits
- Get a handle on air consultations, data collection, and O/E.
- education and outreach
- Inspect and replace wood stoves
- Indoor sampling
- Hire/train another technician
- Indoor air quality
- purchase and conduct monitoring
- Indoor air quality assessments
- ozone monitoring
- Indoor air assessments
- IAQ, education, outreach, community health
- Emissions inventory at Akela, NM

-
- Being involved in air quality legislation and permitting
 - Enforcement
 - ozone
 - mobile monitoring
 - Monitor Ozone
 - data management
 - continuing community education through outreach and events
 - outreach on indoor air issues
 - Outreach and Education
 - Radon
 - Assist other tribes with air monitoring through use of the mobile monitor, providing audits and training, and assisting with AQS issues.
 - Ozone Monitoring
 - Ventilation
 - Developing an SOP
 - attic ventilation
 - do home assessments
 - Radon
 - permit reviews
 - radon
 - Education and Outreach
 - MJO Participation
 - Radon mitigation
 - Healthy Homes Assessment

Appendix F.

Additional information Tribes wanted NTAA to know about their current and desired air quality activities. (n = 21)

We have participated twice in the VW Settlement funding project and replaced two tribal vehicles. This funding was straightforward and easy to use/apply for, I'd like to see more program funding as easily usable as these funds have been.

need weather station

monitor for radionuclides at or near abandoned uranium sites

Funding should have set asides for climate change and mitigation

We have two new Met One PM 10 BAMS that go online soon.

We would like to do an EI, but even after training, it is difficult to find time to finish it, or to do it again in 3-5 years

With additional staff we could expand our program and partnerships to enhance and protect air quality for the Tribal Nation and the state.

CAA requirements demand high quality performance and professional staff members; especially QA requirements needs 3 personnel to deliver quality data and QA independence.

Military arial emissions due to low flying aircrafts.

We did an EI two years ago it was concluded that PM 10 and 2.5 were the best starting point to begin monitoring for.

All current activities are funded through IGAP

City government would enforce and tribe gets funding

Airport; summer dust control; dust affects homes; plants, fish habitat; berries

We need funding to resume AQ activities

Would like to start a program to address air quality.

If funded we could have one person who could focus on this problem instead of on a as time allows and staffing is free

Support and training are essential.

We need more FTE funding for IAQ and community health work.

we currently do IAQ assessments in tribal gov buildings. would like to put together Healthy Home toolkits and be able to assess tribal member homes. would like to have funding for drone based AQ sensors.

The importance of indoor air in tribal communities because it can prevent help issues

We currently don't have monitoring equipment. We've never done indoor air assessments but want to. Asthma is big concern here. We've had too much turnover to be able to grow this program beyond where we are today.

Appendix G.

Additional information Tribes wanted NTAA to know about their attainment status of the county they are located. (n = 23)

Yes, there has been mining by private companies in the Mohave area, near Kingman, Arizona on our sacred sites and reservation. Now present day, the Hualapai tribe has protested against and is opposing against the Australian company Hawkstone Mining Ltd. from mining lithium-ion for batteries that threatens our sacred sites, and land at the Cholla Canyon Ranch on or near our Hualapai reservation. If mining is approved the waste from the mining will pollute our water aquifers. As we are already in a drought in Arizona, we lose our water sources.

I wrote "DNK" for Ozone as the county to the south has exceeded standards and should be designated nonattainment soon.

ozone and PM levels are expected to increase with Climate Change and could put FCPC into non-attainment in the future - when there are no major sources of contributing pollutants on or near FCPC lands.

The Tribe has a different non-attainment status than the neighboring air districts/counties

Unresolved issues with airshed or a control region.

We are in the middle of 2 Class 1 areas

We are a village when no land that we own, we shared control with other entities when it comes to write in grants for programs with the city and other tribal entities designated lands

Yukon-Koyukuk Census Area is incredibly large - attainment or nonattainment probably means little for our specific village

probably never done the tests

worry about possible particulate matter; items burned accidentally

We should have attainment status, as we are a small Inupiaq village in NW Alaska.in

what does attainment status mean?

not sure of question, tribes are not recognized by state of Alaska

The particulates are likely coming across the lake from Chicago and impacting resources.

if we had dedicated staff we might know more about these designations

Episodic exposures are relevant.

Tribal separate basin for Ozone 2015 standard

It should be handled properly.

The State of MI rates the air quality at attainment/unclassifiable

the closest monitoring station is 50miles away and only monitors O3

Morongo has a separate ozone designation from South Coast

What does attainment mean in regard to air quality standards?

We are in an area of Attainment, but little monitoring is done.

Appendix H.

Additional information Tribes wanted NTAA to know about additional sources of ambient air pollution that impacts their Tribe. (n = 19)

The biggest source is wildfire smoke.
Wildfire smoke and burn barrels
Yes, OG&E Coal plant less than a 1/4 mile away
Soon will have ferrochrome Processing Plant right next to the steel Plant
PFAS has become an issue in this region, but we are uncertain to what extent at this time.
Pulp and paper
Ozone
Agricultural Practices
Residential wood burning and wildland fire smoke.
Marijuana grow
It has been cleaned but our old school burned down and there was known lead and asbestos in the building. It burned down in March 2021 and did not get professionally cleaned until last month, Sept 2021. Tribal members have been concerned about the site and what pollution it may have caused during and after the fire.
Indoor smoking, road dust, wildfires.
dirt roads, wood stoves
Ultrafine particulate matter from sea spray.
Particulates
Transportation
Possibly hex chromium
Big Stone Electric Plant and Ethanol Plant in Hankinson, ND
Yes, smoke from wildfires and prescribed burns, dust from extreme winds

Appendix I.

Additional information Tribes wanted NTAA to know about their indoor air quality concerns. (n = 45)

My concerns are for the Hualapai Tribe to be informed and educated about Air Quality Program and grants.
Bathrooms are the issues for most home as well as around window areas

A lot of homes have mold and moisture problems due to homes shifting from permafrost melting. Also, public buildings.

no, but I am not sure if we do any indoor air testing or not. If we do I have yet to be shown. If there were funding for it that would be great.

concerns with abandoned structures with hazardous issues.

Mold is present in about 30% of tribal offices. This has caused health concerns for workers and forced personnel to relocate offices until remediation can take place.

A number of years ago we conducted a healthy homes assessment, education, and outreach project with EPA funds targeted especially to asthma triggers. We do not have staff or funding to make that an ongoing program

The woodstoves being used are outdated and some people need to completely stop using. That is a big Indoor Air Concern. Tribal housing mold is out of control. Our new Headstart has no windows that open I really want to do a proper Indoor Air Inspection on that building and our daycare. A company came in and charged the tribe a lot of money to tell them to change the carpet due to mold but didn't clean anything before laying the new carpet or fix the leak causing the mold ??

Obtaining funding to make, or assist with, the repairs and/or mitigation to homes, particularly when moisture or radon are involved, is mostly not possible.

Increased funding would allow us to go from a part time radon tech to a full-time indoor air quality specialist that could serve the Tribal community for its indoor air quality needs and expand program capacity

Mold prevention and mitigation has been a big focus of the indoor air quality program, especially in government buildings. It's a difficult and expensive problem to solve if it requires roof repair, etc.

It would be nice to assess the Headstart building. It is a very old building and has had some IAQ issues in the past.

IAQ concerns are often brought from Housing staff to Environment staff, so coordinating with Housing is very helpful

We work with housing department on many issues

Our tribe has opened and closed HUD funding for a mold mitigation program in the past that was successful for a handful of homeowners, and it is something that our tribal membership would like to see come back.

A survey conducted last year through our IGAP Grant indicates that most households are concerned with ventilation, mold & moisture in their homes. We have partnered with the Cold Climate Housing Research Center to apply for the HUD Healthy Homes Production grant.

Housing and Natural Resources do not interact on environmental issues. This is a common problem for the Tribe in department collaboration.

weatherization done to the houses was 2 years ago and they moved on to another village. non available, just McGyver own. Need an ongoing program for this. thanks

Most or Indian Housing Programs have only one entrance to home; I worry about fire; I know in the past the housing program, put a chain ladder by bedroom windows, not a good plan, especially for Elders and children.

proper training, PPE, knowledge of indoor and ambient air quality issues for the local maintenance guys who are pretty much doing "everything" from landfill work to road work to remodeling or updating buildings, etc., is needed for our community.

Our community is in need of funding for repair and improvement of homes and conditions. about 30%-40% of population has sever mold issues.

Yes, we do have issues that may be a factor in health issues of many of our 450 residents. It would benefit our community to begin & develop an Air Quality program.

We need further information to better answer these questions and move forward with creating an air quality program.

We would like to have an air technician that could conduct indoor and outdoor assessments, write up plans, collect data, provide feedback on consultations, and review other air quality needs.

Cook Inlet Housing Authority has helped with homes in the past but I think they are on a rotation for what community they work in each year so it isn't like someone will come right now and help

We need funding

Department would like 1 FTE IAQ Specialist to document IAQ issues and apply for funding to address issues. Tribe has its own housing program, and they need to find funding to address issues.

We are in the beginning stages of establishing an air quality program and in order to do that we are working on getting base line studies done to see if monitoring is needed.

Mold is found in majority of the housing and can be found in the schools as well.

the housing authority I believe applies for these funds and does their own remediation of mold, asbestos etc. it's the other homes that are not covered by the housing authority that we have to deal with for mold, asbestos and lead the tribal schools have mold and at times old chemistry equipment that needs to be addressed.

IAQ concerns for school facilities and government facilities. Tribe has no control over individual residences and provides no direct assistance to remediate IAQ concerns.

Tribe has just initiated a new school. The building is sufficient now but am concerned about the air health as the building ages or has malfunctions.

Our Fort Peck Housing Authority does not work closely with any outside entity.

Mold, leaks and proper ventilation/HVAC are the primary concerns.

we are in Mississippi. average humidity for the state is 74%. mold grows fast. the elementary schools have had severe mold problems in the last 2 years requiring professional remediation. due to inadequate HVAC systems. The High school, dorm, and middle school have both asbestos and LBP.

We would like to provide these services to our citizens if funded.

That the funding that EPA offers to Tribes is far less than ambient air for Tribes.

We have a separate program for indoor air that uses other funding (not 103 or 105 funds).

We are currently partnering with Cold Climate Housing Research Center for a HUD Healthy Homes Production Grant they were awarded to improve indoor air quality in Galena

I'm sure there are many other concerns, but we are still working on establishing a program at this time.

retaining staff is an issue across all village entities. finding someone able to handle workload and responsibilities could be a little troublesome.

healthy homes training would be extremely useful as well providing information on how to make each grant successful. a small portion of tribal housing has mold concerns, many of them have experienced flooding or run off issues that cause periodic mold concerns. tribal school is fairly new, and construction is good. unsure on the childcare facilities

Not sure on numbers but I know that some of these homes are old, and owners cannot fix due to financial constraints. Also, you may find at least two families that live in one home. School is over 20 years, probably needs upgrades throughout.

Vast majority of buildings are well cared. Having an Energy Auditor and Building Inspector in the Housing Maintenance who together with Air Quality also assess Tribal Housing and Tribal Public Buildings, issues have been identified and adequately addressed.

Our Tribal Housing has mold problems, but with C19 we are not allowed into homes there. Most outreach and education on this are posted on Facebook and/or fliers around village.

Appendix J.

Additional information Tribes wanted NTAA to know about their air quality priorities, concerns, or funding needs. (n = 31)

QA requirements for NAAQS air monitoring is stringent that our AQ Monitoring QAPP is not being approved. It needs QA independence and data validation support or need additional personnel to fulfill requirements.

We are in the beginning stages of establishing an air quality program and in order to do that we are working on getting base line studies done to see if monitoring is needed. Our GAP grant only has radon air quality testing schedule, but we'd be interested in expanding to testing for other air quality factors in the future.

Staffing and travel funds are important for us to do activities necessary in New Mexico and Arizona.

Lack of technical assistance and knowledge for permit reviews and building ambient monitoring capabilities.
Total lack of dedicated air quality technician to assist with carrying out workload

Tribes with established air quality monitoring should get ongoing funding especially if the data fills where a data gap could exist. The data should also be shared, so modelers and forecasters have access. Monitoring is not always related to attainment or regulatory purposes. Monitoring could be important to AIRNOW and providing much needed 2-day forecast for those that have respiratory issues.

Funding needs could be met but EPA is currently denying our tribe from applying for ANY grants to address air quality concerns found through assessments/data collection.

We do give away free radon tests and have never had a test come back at or above the level of concern.

Lack of funding that will allow for a full-time position and equipment to do the job.

Replacement of molded materials would highly be appreciated

Work is being done our roads right now and when completer we hope to see quality material on roads with dust control added; we need it badly at the airport (State Operated).

It would be nice to have a full time Air Technician that can work with the community on a regular basis.

The funding we get doesn't allow us to hire a full-time staff. that also doesn't help us to fill the position. for the past year we have not been able to hire anyone, and then I have to explain to EPA project officers why we are not filling the position.

The only time the tribe works on this is if it's in the IGAP workplan. No funding for it to stand alone. The city government doesn't have the program either even though they are in charge of road maintenance.

I feel that if we had adequate funding we could get more things done for my tribe.

We haven't gotten very far in our AQ program that some of these priorities and concerns are things we haven't even discussed yet.

GAP funding can only go so far and there is not enough funding in Air Quality specific grants from EPA to fund a full-time person.

EPA needs to be reminded of their responsibilities

Little is discussed about this program within the tribal community here. Would need more open contact for both tribal council and tribal community.

Hoopla Tribal EPA has exhausted all of its "capacity building" opportunities which qualify us for CAA 103. We need funding to implement our air quality research not additional training!

Funding is needed to continue to develop regulatory monitoring in tribal communities. This includes direct funding to tribes for staff, equipment, and continued operation. Also important, EPA regional offices need

additional funding to support tribal air programs in achieving regulatory monitoring including offering NPAP/NPEP audits and additional staff time for technical system audits.

Air Quality is vital to our community. Especially since the Covid-19 Pandemic had an impact on our community with loss of lives. Indoor Air Quality is vital where multiple families live in one home.

Hope to get money to improve our air quality

Hope to get money to improve our air quality

Better service support capabilities.

Air quality is related to our lives and safety, and we must take it seriously.

Funding is very important.

We hope to get better support.

Because of staff shortages, our program has been relying on AQ consultants for expertise, calibrated ozone source and other time consuming or expensive components of the program.

forgot to mention that we did at one time do radon assessment and mitigation with EPA \$ that we no longer have sufficient access to. Most tribal housing has some level of radon, 15% have elevated (< 5 picocuries/liter) levels

We used to have a Radon program many years ago. I am pretty new in my position and just learning of the needs and the risk factors. The Tribe is receptive to improving the air quality but is not in a position to fund it themselves.

funding has been a concern for years but hands on training is as well. consistent training is key and can be difficult to keep employees trained depending on time of year that they start

Appendix K.

Additional information Tribes wanted NTAA to know. (n = 10)

Keep Clean Air Act programs separate from Indoor Air/ Climate Change/ Woodstove/ programs. Do not conflict funding needs between these programs. Keep CAA separate when requesting for grants and funding. NAAQS monitoring is regulatory function under the CAA. And these grants should be or is long-term or ongoing programs.

My answers are not representative of the Pueblo they are based off my opinion and observations from working in my position over the years.

Thanks for putting this robust survey together. I hope TAMS and NTAA benefit from the assessment. Tribes do benefit when organizations like TAMS and NTAA voice tribal concerns and needs.

Help filling out grants would help out tribal members to have a better quality of life

Concerned about offshore mining impacts; purse seining in our Bay for the first time; low fish returns; bridge on creek to protect local fish habitat and drinking water source creek.

I have asked the tribe to supplement the grant but have not been able to convince them to do so. USEPA needs to increase funding for tribes in order for them to address their air quality needs.

We had a paved road funding but that is gone and left us with the same old road. We tried that stuff on the road but that wasn't too successful with the lack of trained staff and unfamiliar with the product and the people weren't excited about it.

The GAP program only provides a minimal amount of funding and has allowed us to develop a level IV emissions inventory and acquire sensors, but not much more than that.

We simply do not have room to grow our department currently. Even with funding for an air position, we would not have space for an additional person.

We need more support services.

Appendix L: Full Survey Instrument

NTAA Baseline Needs Assessment

ABOUT YOUR TRIBE OR NATIVE ORGANIZATION

1) First and Last Name*

2) Email Address*

3) Name of Tribe*

4) Your Job Title*

5) Your Department or Program*

6) City*

7) State*

8) *If clarifications are needed, may we contact you for follow-up information about your survey responses?**

Yes

No

9) *Would you like a copy of your responses sent to you? Please note that your responses will be sent to you within 3 business days of your response.*

Yes

No

BACKGROUND QUESTIONS

10) *Does your Tribe currently have an Air Quality department or program? **

Yes

No

No but we would like to develop an air quality program

11) *The field of air quality is technical, scientific, and ever-changing. How would you rate your familiarity with air quality programs, concepts, and fundamentals?*

Unfamiliar (Brand new or just starting out) Somewhat Familiar Familiar (I know my way around) Very Familiar (I could teach it!)

12) *Does your Tribe currently have one or more staff positions who focus solely on-air quality?*

Yes

No

No but we would if funding was available

13) If yes, how many Full-Time Air Quality staff does your Tribe currently employ?

14) Please check all that apply for the following air quality questions:*

	YES - we are currently funded	NOT NOW - but we had funding for this in the past	NO - and we have never had funding for this	Not Applicable
Does your Tribe have a formal air quality program?	()	()	()	()
Does your Tribe conduct any air quality activities?	()	()	()	()
Does your Tribe have any Part Time staff that work on air quality?	()	()	()	()

FINANCIAL RESOURCES TO ADDRESS AIR QUALITY

15) Has your Tribe received EPA Clean Air Act (CAA) Section 103 grant funding? *Select the best response.*

CAA Section 103 grants are used to study or investigate the causes and prevention of air pollution. Funding is used for community education and outreach, monitoring studies, training, home assessments and research on health impacts of air quality issues. *

- We have this grant now and it fully funds our air quality work
- We have this grant, but it does NOT fully fund our air quality work
- We applied but we did NOT receive this grant
- We have never applied for this grant
- We are not eligible for this grant
- Don't know
- Other - Write In

16) If you do not know whether your Tribe receives EPA Clean Air Act (CAA) Section 103 grant funding, why?

- I don't know because I'm new to the program
- I don't know because I don't oversee grant funding
- I don't recall
- Other - Write In: _____

17) Has your Tribe received EPA Clean Air Act (CAA) Section 105 grant funding? *Select the best response.*

CAA Section 105 grants are used to implement Air Quality Programs to control and prevent air pollution (ambient and indoor) or Air Quality Programs that implement the national primary and secondary ambient air quality standards described by the CAA. *

- We have this grant now and it fully funds our air quality work
- We have this grant, but it does NOT fully fund our air quality work
- We have had CAA 105 funding, but do not now
- We applied but we did NOT receive this grant
- We have never applied for this grant
- We are not eligible for this grant
- Don't know
- Other - Write In: _____

18) If you do not know whether your Tribe receives EPA Clean Air Act (CAA) Section 105 grant funding, why?

- I don't know because I'm new to the program
- I don't know because I don't oversee grant funding
- I don't recall
- Other - Write In: _____

19) Has your Tribe received Indian General Assistance Program (IGAP) grant funding? Select the best response.

IGAP grants are used to assist Tribes and inter-Tribal consortia in developing the capacity to manage their own environmental protection programs and to develop and implement solid and hazardous waste programs in accordance with individual tribal needs and applicable federal laws and regulations.*

- We have this grant now and it fully funds our air quality work
- We have this grant, but it does NOT fully fund our air quality work
- We applied but we did NOT receive this grant
- We have never applied for this grant
- We are not eligible for this grant
- Don't know
- Other - Write In: _____

20) If you do not know whether your Tribe receives EPA Indian General Assistant Program (IGAP) grant funding, why?

- I don't know because I'm new to the program
- I don't know because I don't oversee grant funding
- I don't recall
- Other - Write In: _____

21) If your Tribe has applied for but not received Clean Air Act funding, please describe the impact that has had on your community.

22) Have you received any other federal funding that helped your Tribe address air quality? Select the best response for each statement. (If you do not know about a certain grant, please leave that line blank.)

	We have this grant, and it fully funds our air quality work	We have this grant, but it does NOT fully fund our air quality work	We applied but did NOT receive this grant	We have never applied or are not eligible
a. EPA Performance Partnership Grant (PPG)	()	()	()	()
b. Bureau of Indian Affairs Funding	()	()	()	()
c. CARES Act or American Rescue Plan Funding	()	()	()	()
d. Administration for Native Americans (ANA) Funding	()	()	()	()
e. Department of Energy Funding	()	()	()	()

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f. Housing and Urban Development Funding	()	()	()	()
g. DERA (Diesel Emissions Reduction Act) Funding	()	()	()	()
h. Volkswagen Settlement Act Funding	()	()	()	()
i. Funding from a Settlement Agreement	()	()	()	()

23) Are there any other sources of funding (e.g., state grants, private foundation grants, mini-grants) that your Tribe has received to conduct air quality activities? If so, please describe.

24) Are any of the following resources used to help fund your Tribe's Air Quality Program or Activities? Check all that apply.

- Direct or "hard" Tribal dollars (cash match)
- In-kind Tribal contribution (non-cash match)
- Support from other Tribes or Tribal consortia/councils
- None of the above
- Other - Write In: _____
- Other - Write In: _____

25) Are any of the following factors a barrier to your Tribe's ability to apply for grant funding? Select the best response for each statement.

	Not a barrier	A minor barrier	A major barrier
a. Tribe does not have a formal grant-writer	()	()	()
b. Tribe has a grant-writer, but they are overloaded	()	()	()
c. Grant applications are time-consuming and administratively burdensome	()	()	()
d. Tribe does not yet have the staff or experience with air quality to compete against the many other applicants	()	()	()
e. Tribe is ineligible at this time for certain federal funds	()	()	()

26) If your Tribe does not currently receive any continuous grant funding for an Air Quality program, do you have an estimate of how much your Tribe would require annually to operate a baseline Air Quality Program?

- Do not know
- \$25,000 - \$49,999
- \$50,000 - \$74,999
- \$75,000 - \$99,999

- () \$100,000 - \$124,999
- () \$125,000 - \$149,999
- () \$150,000 - \$174,999
- () \$175,000 - \$199,999
- () \$200,000 - \$224,999
- () \$225,000 - \$249,999
- () \$250,000 - \$274,999
- () \$275,000 - \$299,999
- () \$300,000 or Greater

27) If your Tribe currently receives any continuous grant funding for Air Quality activities, do you have an estimate of your annual grant amount?

- () Do not know
- () \$25,000 - \$49,999
- () \$50,000 - \$74,999
- () \$75,000 - \$99,999
- () \$100,000 - \$124,999
- () \$125,000 - \$149,999
- () \$150,000 - \$174,999
- () \$175,000 - \$199,999
- () \$200,000 - \$224,999
- () \$225,000 - \$249,999
- () \$250,000 - \$274,999
- () \$275,000 - \$299,999
- () \$300,000 or Greater

28) If your Tribe currently receives any continuous grant funding for Air Quality activities, do you have an estimate of your **DESIRED** annual grant amount? (Your current funding plus your desired funding)

- () \$25,000 - \$49,999
- () \$50,000 - \$74,999
- () \$75,000 - \$99,999
- () \$100,000 - \$124,999
- () \$125,000 - \$149,999
- () \$150,000 - \$174,999
- () \$175,000 - \$199,999
- () \$200,000 - \$224,999
- () \$225,000 - \$249,999
- () \$250,000 - \$274,999
- () \$275,000 - \$299,999
- () \$300,000 or Greater

29) Is there anything else you'd like us to know about your Tribe's air quality funding needs?

HUMAN RESOURCES TO ADDRESS AIR QUALITY

30) If your Tribe has any of the following programs, about how many people are in each of these departments?

	Don't Know	1-5	6-10	11-15	16-20	21 or more

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a. Environment/ Environmental Protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Natural Resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Air Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31) Do the staff who currently work on air quality activities or programs conduct other environmental activities or programs as well (i.e., wear several hats)?

- Yes
- No

32) What percent of this staff person's time is spent exclusively on air quality work?

- 0% - 25%
- 26% - 50%
- 51% - 75%
- 76% - 100%

33) If increased grant funding was available, how many staff members would you like to add to your Air Quality department or program?

34) If your Tribe had grant funds to hire additional air quality staff, what activities or roles would they potentially have? (e.g., air quality technician, permitting and enforcement).

35) Please rate your response to the following statements. Select the best response for each statement.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Finding and retaining candidates interested in air quality can be difficult	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Salaries are not competitive for staff retention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Employee turnover can negatively impact the continuity of air quality activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Hiring permanent staff is difficult because of high fringe rates (i.e., healthcare) rates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Current funding is too low to fully fund the employees that we need for our Air Quality Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Air quality staff have a lack of training opportunities available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

g. Air quality staff have a steep learning curve because of the scientific and technical elements of many air quality activities (e.g., acronyms, statutes, pollutants)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Grant restrictions prevent my Tribe from developing an Air Quality Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Administrative hurdles prevent my Tribe from developing an Air Quality Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

36) Is there anything else you'd like us to know about staffing and human resource issues of your Air Quality Program?

CAPACITY TO ADDRESS AIR QUALITY

37) Please tell us about your air quality activities, selecting the best response for each statement:

	We do this now	We do this now but need more funding	We don't do this but we would if funded	Not applicable
a. Conduct Air Quality Modeling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Operate Low-Cost Air Quality Sensors (e.g., Purple Air)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Conduct Periodic Emissions Inventories	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Develop Control Strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Enforcement: Conduct Inspections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Enforcement: Issue Notice of Violations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. New Source Review Permitting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Issue Operating Permits Under Title V	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Compliance Status Evaluation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. Conduct Indoor Air Quality or "Healthy Home" Assessments (pre-COVID)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

k. Conduct Air Quality Outreach and Education	()	()	()	()
l. Issue Outdoor Burning permits	()	()	()	()
m. Build Internal and External Partnerships to Address Air Quality Issues	()	()	()	()
n. Mitigate Radon Gases	()	()	()	()

38) What are three of the most urgent or important air quality activities for your Tribe today?

- Air Quality Activity #1: _____
- Air Quality Activity #2: _____
- Air Quality Activity #3: _____

39) Is there anything else you'd like us to know about your current or desired air quality activities?

AMBIENT AIR QUALITY

40) Do any of the following pollutants, identified by EPA as "criteria" air pollutants under the Clean Air Act, negatively impact your Tribe's air quality? Check all that apply.

- Ozone
- Fine Particulate Matter (PM2.5)
- Coarse Particulate Matter (PM 10)
- Sulfur Dioxide
- Nitrogen Dioxide
- Carbon Monoxide
- Lead

41) Which of the following sources of ambient air pollution have an impact on your Tribe? Check all that apply.

- Mobile Sources - On-road & Near Highways
- Mobile Sources - Off-road
- Point Sources (e.g., factories, power plants, refineries, chemical plants)
- Road Dust
- Drift from Pesticide Spraying
- Solid Waste Burning
- Coal-Fired Power Plants
- Mining Operation
- Incinerator or Waste-to-Energy Facility
- Diesel - Port Activities
- Diesel - Marine Vessels & Cruise Ships
- Diesel - Rail
- Diesel - On and Off-Road
- Smoke from Wildfires
- Smoke from Controlled Burns - Agriculture
- Smoke from Controlled Burns - Forestry
- Backyard Burning or Barrel Burning
- Methane Emissions from Oil & Gas
- Hazardous Air Pollutants from Oil & Gas Refining
- Wood Burning Devices (e.g., wood stoves)

[] Other - Write In: _____

[] Other - Write In: _____

42) Do you know if your Tribe is within a county that is designated as any of the following? Select the best response for each statement.

If the air quality in a geographic area meets or is cleaner than the national standard, it is called an attainment area (designated "attainment/unclassifiable"); areas that don't meet the national standard are called nonattainment areas.

	Attainment	Nonattainment	Unclassifiable	Do not know
a. Carbon monoxide (CO)	()	()	()	()
b. Lead (Pb)	()	()	()	()
c. Nitrogen dioxide (NO2)	()	()	()	()
d. Ozone (O3)	()	()	()	()
e. Particle pollution (PM2.5 and PM10)	()	()	()	()
f. Sulfur dioxide (SO2)	()	()	()	()

43) Is there anything you'd like us to know about the attainment status of the county where your reservation or Tribal lands are located?

44) Are any of the following sources of greenhouse gases having an impact on your Tribe? Check all that apply.

[] Methane emissions from landfills

[] Methane emissions from agriculture and/or livestock production

[] Transportation (burning of fossil fuels for mobile sources)

[] Industry

[] Electricity Production (burning coal or natural gas)

[] Deforestation and Urbanization

[] Other - Write In: _____

[] Other - Write In: _____

45) Are there toxic air pollutants, identified by EPA as "Hazardous Air Pollutants" or "HAPs" under the Clean Air Act, that negatively impact your Tribe's health, natural or cultural resources?

Hazardous air pollutants (HAPs), also known as toxic air pollutants or air toxics, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. EPA is working with state, local, and tribal governments to reduce air emissions of 187 toxic air pollutants to the environment.

() Yes

() No

() Do Not Know

46) If Air Toxics or HAPs are an issue, briefly describe the sources (to the best of your knowledge).

47) Are there any other sources of ambient air pollution that impact your Tribe?

INDOOR AIR QUALITY

48) In your Tribal HOUSING (private housing or Tribally-owned housing), which of the following indoor air pollutants are a concern? Check all that apply.

- Mold and Moisture
- Radon
- Woodsmoke
- Formaldehyde
- Carbon Dioxide
- Allergy and Asthma Triggers
- Carbon Monoxide
- Hazardous or Toxic Materials
- Asbestos
- Lead Paint
- Dust Mites or Bedbugs
- Other - Write In: _____
- Other - Write In: _____

49) In your Tribal PUBLIC OR COMMUNITY BUILDINGS (Tribal offices, community buildings, schools), are any of the following indoor air pollutants a concern? Check all that apply.

- Mold and Moisture
- Radon
- Woodsmoke
- Formaldehyde
- Carbon Dioxide
- Allergy and Asthma Triggers
- Carbon Monoxide
- Hazardous or Toxic Materials
- Asbestos
- Lead Paint
- Other - Write In: _____
- Other - Write In: _____

50) For any of these indoor air pollutants, whether in homes, schools or offices, please indicate how you have come to be aware of these issues. Check all that apply.

- Visual Inspection or Observation (e.g., visible mold)
- Monitoring Instruments Were Used to Measure (e.g., radon testing, particle counter)
- Problem or Health Concern Reported by Resident or Occupant
- Investigation or Assessment Was Conducted
- Other - Write In: _____

51) For each of the following housing conditions, how urgent is the need for additional funding? Select the best response for each statement.

	Don't need funding	Funding would be useful	Funding need is urgent
a. Replace old or uncertified woodstoves	()	()	()

b. Upgrade or install adequate ventilation in kitchen and bathrooms	()	()	()
c. Install energy efficient and clean heating sources (e.g., heat pumps, solar)	()	()	()
d. Remediate/clean-up mold	()	()	()
e. Replace building materials (flooring, cabinetry, carpet) that emit formaldehyde and other volatile organic compounds	()	()	()
f. Provide air quality filtration through portable air cleaners or through HVAC systems	()	()	()
g. Address home or building maintenance issues (e.g., roof, siding, sheathing, that can lead to indoor air issues	()	()	()
h. Incorporate green energy solutions into Tribal housing and public buildings	()	()	()
i. Perform radon mitigation measures	()	()	()

52) *Approximately how many woodstoves are in use among your Tribal members?*

- Do not know
- None
- 1 - 25
- 26 - 50
- 51 - 75
- 76 - 100
- 101 - 125
- 126 - 150
- 151 - 175
- 176 - 200
- 201 - 225
- 226 - 250
- 251 or Greater

53) *If you provided an estimate of woodstoves in use by your Tribe, how did you obtain this data?*

- Gathered raw data about woodstove use
- Estimated based on my observations
- Other - Write In: _____

54) *If funding were available, would your Tribe establish a full-time Indoor Air Quality Specialist position?*

- Yes
- No
- Other - Write In: _____

55) Is there anything more that you would like to share about your indoor air quality concerns? (For example, Have you had success with HUD Healthy Homes Production grants to repair or improve conditions? What proportion of all Tribal housing has severe mold? Do you have specific concerns about a Tribal school or childcare facility?)

AIR QUALITY PRIORITIES

56) Overall, how would your Tribe rate its concern about the following air quality, climate, and human health challenges?

	Low Priority	Medium Priority	High Priority
a. Meeting the Clean Air Act standards for EPA's criteria air pollutants	()	()	()
b. Addressing greenhouse gases that impact climate change	()	()	()
c. Reducing risks from toxic air pollutants	()	()	()
d. Protecting the stratospheric ozone layer against degradation	()	()	()
e. Addressing pollutants in the indoor environment	()	()	()
f. Asserting and exercising Tribal Sovereignty in Air Quality Management	()	()	()
g. Protecting community from wildfire smoke	()	()	()

57) Please rank the following statements:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
a. Insufficient air quality funding impacts the health and welfare of our people	()	()	()	()	()
b. Insufficient air quality funding impacts our Tribe's capacity to prevent health impacts, such as asthma, allergies, lung and heart disease	()	()	()	()	()
c. Insufficient air quality funding impacts our Tribe's ability to test for and mitigate radon gases and lead	()	()	()	()	()

contamination, which contribute to lung cancer and learning disabilities					
d. Insufficient air quality funding impacts our Tribe's ability to address the ecological impact of air pollution on our Treaty-Protected Natural and Cultural Resources	()	()	()	()	()
e. Insufficient air quality funding impacts our Tribe's ability to assert and exercise our sovereignty and our government-to-governmental relationships	()	()	()	()	()

58) Is there anything that you would like to add about your Tribe's air quality priorities, concerns, or funding needs?

59) In case there is anything else you'd like us to know, please share below.