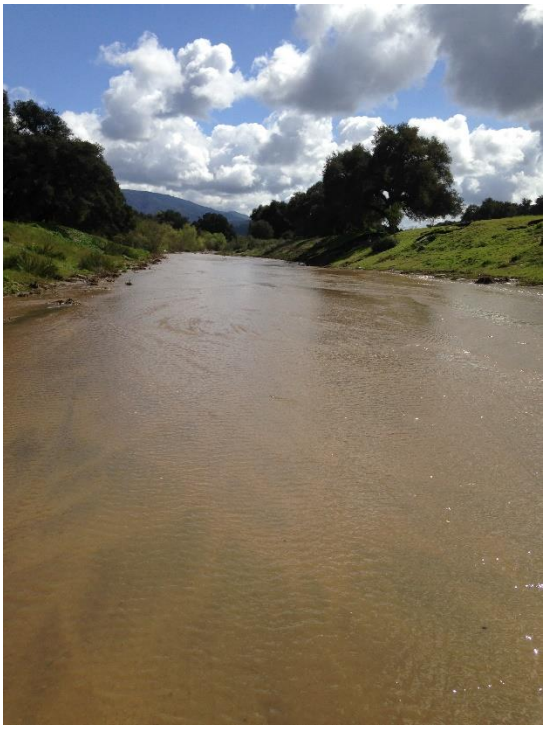
National Tribal Air Association's

Status of Tribal Air Report

May 2019

PRESENTED AT THE
NATIONAL TRIBAL FORUM
ON AIR QUALITY
HOSTED BY THE PECHANGA TRIBE

The cover photo is of Pechanga Creek (during the dry season) looking towards Pu'eska Mountain (the Tribe's sacred mountain). The following photo is included for comparison. It was taken in the same basic location, looking the same direction, after heavy rains in 2017:



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NTAA Executive Committee

	Primary Representatives	Alternate Representatives
Region 1	Bill Thompson Penobscot Nation	Marvin Cling Passamaquoddy Tribe
Region 2	Angela Benedict, Secretary Saint Regis Mohawk Tribe	Steven Smith Shinnecock Nation
Region 4	Scott Hansen, Treasurer Catawba Indian Nation	Tiffany Lozada Poarch Band of Creek Indians
Region 5	Brandy Toft, Vice Chair Leech Lake Band of Ojibwe	Joy Wiecks Fond du Lac Band of Lake Superior Chippewa
Region 6	Craig Kreman Quapaw Tribe of Oklahoma	Cherylin Atcitty Taos Pueblo
Region 7	Billie Toledo Prairie Band Potawatomi Nation	Tanner Zach Santee Sioux Nation
Region 8	Randy Ashley Confederated Salish & Kootenai Tribes	Linda Weeks Reddoor Fort Peck Assiniboine-Sioux Tribes
Region 9	Wilfred J. Nabahe, Chairman Colorado River Indian Tribes	John C. Parada Augustine Band of Cahuilla Indians
Region 10	Maggie Sanders Nisqually Indian Tribe	Allie McLaughlin Quinault Indian Nation
Alaska	Mary Mullan Alaska Native Tribal Health Consortium	Ann Wyatt Klawock Cooperative Association

Table 1 NTAA Executive Committee

National Tribal Air Association

The National Tribal Air Association (NTAA) is a Tribal membership organization currently with 140 Member Tribes whose mission is to advance air quality management policies and programs consistent with the needs, interests, and unique legal status of federally recognized Tribes. The NTAA membership grows yearly; to become a member, please see www.ntaatribalair.org.

Additionally, the NTAA serves as a communication liaison and information conduit between Tribes, EPA, and other federal agencies. The NTAA exists to assist Tribes in air quality policy work while respecting and supporting Tribal sovereignty and the Tribes' rights to a government-to-government relationship with the federal government.

All federally recognized Tribes are eligible to become member Tribes of the NTAA. Tools, such as the policy response kits, developed by the NTAA are available online for download and are readily accessible by members of the public.

NTAA Goals

- To advocate for and advance the development of Tribal air policy for the protection of environmental, cultural, and economic interests at all levels of government (Tribal, federal, state, local, and international);
- To promote the development, funding, and capacity building of Tribal air management programs;
- To promote and facilitate air quality policy and technical information that may include research, scientific and/or medical studies;
- To advance the recognition and acceptance of Tribal sovereign authority by conducting effective communication with and outreach to state, local, federal and international agencies, and to the general public; and
- To encourage and support appropriate consultation of state, local, federal, and international agencies with all Tribal governments in accordance with Tribal structures and policies.

To learn more about the National Tribal Air Association, please visit: www.ntaatribalair.org and www.tribalairquality.org.

Members of the NTAA Executive Committee met with EPA representatives in September 2018, at Saint Regis Mohawk. This photo was taken on the banks of the Saint Regis River in Akwesasne, New York.

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Credits and Acknowledgments

The **2019 Status of Tribal Air Report** is the result of the dedicated work and contribution of many people, including Tribal representatives, organizations, and EPA personnel. We thank everyone that contributed a story, data, valuable time, effort, and resources to making this project a success. We acknowledge and thank the NTAA Executive Committee Members and Chairman, the NTAA STAR Work Group Members, NTAA Member Tribes, the Institute of Tribal Environmental Professionals (ITEP), and the Tribal Air Monitoring Support Center (TAMS).

In particular, we thank Joy Wiecks, NTAA Executive Committee member, for her in depth narrative and budget analysis of the funding needs of Tribal Air Quality Programs. Joy truly went above and beyond, including with her significant contribution to the new section on Emerging Wildfire Threats. We also thank Judy Tan for her supporting contributions to these sections.

The following individuals contributed stories of their successes and challenges in operating Tribal Air Quality Programs, including shared stories of their work in addressing climate change impacts. The NTAA appreciates their invaluable time and contribution: Kris Ray, Kelcey Stricker, April Hathcoat, Julie Simpson, Mary Mullan, Billie Toledo, Angela Benedict, Rachel Feinstein, Maxine Paul, Janice Archuleta, Marjorie Connolly, Michael Troge, Heather Westra, Jennifer Seibt, Robin Bouschor, Cherylin Atcitty, John Parada, Brandy Toft, Nathan Kilger, Mark Daniels, Chris Lee, and Melinda Ronca-Battista.

Furthermore, we thank the NTAA staff for their work in developing and publishing the Status of Tribal Air Report. In particular, we appreciate Andy Bessler, Jaime Yazzie, and Dara Marks Marino.

NTAA wishes to thank its federal partner, the U.S. EPA, in supporting the work and efforts of Tribal Air Quality Programs. Specifically, we would like to thank EPA's Pat Childers, Laura McKelvey, James Payne, Regina Chappell, Sarah Sullivant, Christine Koester, Lucita Valiere, Farshid Farsi, Toni Colon, and all of EPA's Regional Tribal Air Coordinators.

Welcome from NTAA Chairman

On behalf of the National Tribal Air Association's (NTAA's) Executive Committee, I am pleased to present the 2019 Status of Tribal Air Report (STAR). As the NTAA Chairman and the representative of EPA's Region 9 Tribal Caucus on the NTAA's Executive Committee, I work to ensure that NTAA helps to empower Tribes to protect and enhance the air that we all breathe.

The NTAA was founded in 2002 with a mission to advance air quality management policies and programs, consistent with the needs, interests, and unique legal status of American Indian Tribes and Alaska Native Villages. Tribes are important partners with federal, state, and local agencies to protect and improve ambient air quality and indoor air quality, and mitigate climate change. NTAA's family of member Tribes has grown nearly 70% since 2014 to 140 federally recognized Tribes, making the NTAA the second largest national Tribal membership organization, and the largest that is media-specific.

This significant growth in membership demonstrates the important role the NTAA plays in supporting Tribes, Tribal air quality programs, and air quality policy. Recently, the NTAA was honored to receive a heartfelt thank you from a Keweenaw Bay Indian Community staff member *(see Region 5's Successes* in the *Tribal Air Quality Successes, Challenges, and Priorities by Region* section on page 48*)* for the Policy Response Kits that the NTAA develops to aid Tribes/staff in understanding and responding to EPA proposals. This is just one example among many, underpinning the importance of supporting Tribal communities in their ability to effectively assert sovereignty and ensure the fulfillment of EPA's trust responsibility.

The importance of having clean air cannot be understated, as evidenced by the story of the Northway Traditional Council's 90% decrease in children's visits to their health clinic after implementing simple improvements to their woodstoves (see *Implementation of Training Leads to 90% Reduction in Sick Children* in the *Indoor Air Quality* section on page 64). They learned about these improvements through a course on Indoor Air Quality; one of the roles of the NTAA is ensuring all Tribes are aware of these important resources.

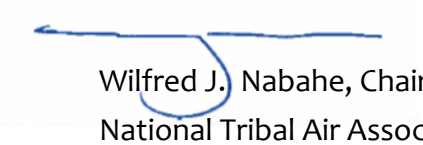
Each year, NTAA reaches out not only to member Tribes but to all Tribes, seeking their stories of both success and struggle in protecting the air quality that impacts public health on and off Tribal lands. During this process, one of the recurring concerns we heard regarded the increasing impacts of wildfires on air quality (see *Emerging Wildfire Threats* section beginning on page 25), combined with the need for improved Emergency Response. Wildfires impact nearly every aspect of both human and environmental health, and the severe lack of funding directed towards Tribes' ability to respond is an immediate need for Tribal air programs.

The research in the 2019 STAR demonstrates the essential need for Tribes to have strong programs and support for air quality; the quantitative data in the Budget Analysis demonstrates the limited resources with which Tribes have to build air programs; and the stories directly from Tribes demonstrate their skills in Moving Forward, despite these constraints and challenges. With training and resources, Tribes are effective co-regulators of

air quality. Tribes are the ones who should and must do this work. Those that live on the land and are affected by the quality of air should be the ones who regulate and protect this resource, thereby upholding the principles of the 1984 Indian Policy, which was recently reaffirmed by Administrator Wheeler on April 10, 2019.

The NTAA continues to assist Tribes' access to important air quality policy analyses and advocates for air quality funding to support Tribes' ongoing work. The 2019 STAR will help the reader understand the important role Tribes take in protecting public health. The NTAA is honored to tell this story and will continue to advocate for Tribal Air Quality Programs into the future.

Sincerely,



Wilfred J. Nabahe, Chairman
National Tribal Air Association

Executive Summary

The NTAA is pleased to present the 2019 Status of Tribal Air Report (STAR) to Tribal Nations, the U.S. Environmental Protection Agency (EPA), and to other federal agencies and interested parties. The 2019 STAR provides a national overview of Tribal Air Quality Programs for the current administration; presents the successes, challenges, and priorities from a regional perspective of managing air quality; and tells stories of management of air quality from across Indian Country. The 2019 STAR provides recommendations for EPA and other federal agencies to ensure continued success of these programs, and provides a Budget Analysis.

Air quality assessments, including emissions inventory development and the monitoring and managing of air quality, are necessary to protect public health. Both ambient and indoor air pollution pose serious threats to human health and have been linked to an array of concerning health effects such as asthma, congestive heart failure, diabetes, and decreased cognitive function. Tribal communities are more vulnerable to air pollution impacts, and experience higher than average rates of diabetes, heart disease, and childhood asthma. In addition, Tribal communities are at higher risk of exposure to mercury and other air toxics due to traditional life ways, particularly subsistence practices.

Tribes are important co-regulators of air quality, working with federal, state, and local agencies to assess, monitor, and manage regional air quality. Tribal Air Quality Programs help save lives, play an important role in guiding federal air quality policies, and participate in data-sharing programs that have led to a better understanding of regional air sheds. The NTAA supports Tribes in the development of these programs and facilitates their success through building capacity and partnerships.

Although Tribal Air Quality Programs have grown in number, and six new Tribes became federally recognized in 2018, annual federal funding has been reduced. As a result, more Tribes compete for less money, it is difficult for Tribes to obtain grant funding to establish new air programs, and existing programs are forced to make do with less. Given these circumstances, these programs operate with high levels of success. However, current funding levels cannot sustain – let alone grow – Tribal Air Quality Programs.

The 2019 STAR describes various successful projects with pressing challenges expressed by Tribal air quality management professionals. The following recommendations are presented for consideration by EPA and other federal and state agencies. In addition, the NTAA Air Quality Budget Analysis (Appendix A) provides specific funding recommendations.

2019 STAR Summary of Recommendations

1. **Restore and increase funding to Tribal Air Quality Programs:** In NTAA's FY 2019 budget request to EPA, NTAA is proposing three scenarios for increases, ranging from an annual increase of 3% for the next five years, to a total increase of $9 million, including funding for cost of living adjustments (COLA), inflation, new and expanding programs, monitoring infrastructure, and a comprehensive needs assessment for Indian Country. Specific funding recommendations can be found in **Appendix A: NTAA Air Quality Budget Analysis**.

   Tribes recognize that air quality funding is limited. However, additional funding for Tribal Air Quality Programs must be made available to:

   - Restore funding for existing established Tribal Air Quality Programs to a minimum of the highest historical funding levels;
   - Provide funding for Tribes seeking to establish an air program of their own;
   - Create new funding streams targeted at addressing critical needs such as indoor air quality, climate change mitigation and adaptation, and wildfire smoke management;
   - Provide new funding to Tribes to keep pace with the increased amount of work in permitting new sources and to review permits issued by states and EPA;
   - Replace and repair aging air monitoring infrastructure.

2. **Restore support for air quality programs important to Indian Country:** In all of EPA's directional documents, including EPA's FY 2020 Strategic Plan and the President's Budget, there has been little to no indication of support for Tribal air priorities and programs. Of note, EPA programs and budgets addressing indoor air quality (IAQ) and climate change are missing from both of those documents, and there is an indication of lowering the standards for many ambient air quality concerns. Eliminating grants and programs addressing IAQ and climate change fly in the face of the immediate and long-term support needed to improve the health of Tribal communities. The NTAA does not support this strategic and budgetary shift for Indian Country or for the rest of the Nation.

3. **Greater support for Alaska**: Alaska Native Tribes and Villages represent over 40% of federally recognized Tribes in the U.S., and due to their geographic location bear significant burdens caused by air pollution and climate change. They require increased funding and assistance for air programs and climate change adaptation planning. Specific recommendations include:

   - Identify funding for Tribes to implement "Clean Rooms" (clinics, schools, etc.) during wildfires or extreme road dust events. Having funding for this would decrease the evacuation levels and provide a safe place for all residents if needed in the event of bad air quality.
   - Tribal Air Equipment Toolkits and training (handheld PM monitors, gas detectors, Extech carbon dioxide & humidity monitors, wall moisture meters, etc.). Many Alaskan Tribes are concerned about indoor air quality and have the ability to obtain loaned equipment from the Tribal Air Monitoring Support (TAMS) Center and the

Alaska Native Tribal Health Consortium (ANTHC). However, if equipment is owned by the Tribe, these toolkits would be able to assist them in addressing issues all year round and consistently throughout the years. As Tribal environmental staff continue to achieve proper air quality and/or climate change adaptation training to properly use these tools, having them on hand would increase their ability to build capacity within their community.

- Funding for more Alaska-specific climate adaptation trainings. Currently there are trainings on this topic, but not many are designed specifically for Alaskan's circumstances.

4. **Conduct Air Quality Needs Assessment**: Tribes recognize the need for a national comprehensive air quality needs assessment. The NTAA invites the EPA to partner with Tribes to conduct such an assessment in order for the federal government to gain a better understanding of the complex and unique issues Tribes face today. These issues can be as varied as the Tribes themselves, thus it is imperative to have a complete understanding of the true effects of air quality on Tribal health.
5. **Uphold Tribal sovereignty**: Federal agencies need to demonstrate their commitment to Tribal sovereignty through **(1)** appropriate allocation of funding for Tribal Air Quality Programs, **(2)** engaging proactively in government-to-government consultation with Tribal Nations, **(3)** upholding Trust Responsibility by developing and implementing air programs that are responsive to the individual needs of Tribes, and **(4)** responding to Tribal requests and recommendations in a timely manner.
6. **Facilitate partnerships**: Partnerships between Tribes, states, and other established air quality entities should be encouraged and funded, especially in the areas of ambient air monitoring, analysis, co-regulation of the NAAQS and other regulated pollutants, and IAQ assessments and remediation. More information on NTAA's existing partnerships is summarized in the **Tribal Air Programs Infographic found in Appendix F** within this 2019 STAR.
7. **Greater support for Emerging Wildfire Threats:** As noted in this 2019 STAR, wildfires are increasing in frequency and intensity, leading to ambient and indoor air pollution, and emergency management issues such as evacuations. Tribal needs span from air monitoring, to health care from smoke exposure, to assistance with emergency management. Increased funding, staffing, and training are all essential components to maintain human health in the face of this immediate concern.

Acronyms

ACE	Affordable Clean Energy Rule
AI/AN	American Indian/Alaska Native
AIEO	American Indian Environmental Office
ALA	American Lung Association
ACA	Angoon Community Association
ANTHC	Alaska Native Tribal Health Consortium
AQ	Air Quality
AQCP	Air Quality Control Program
AQS	Air Quality System
ARA	Air Resource Advisor
ATSDR	Agency for Toxic Substances and Disease Registry
BAM	Beta Attenuation Monitor
BIA	Bureau of Indian Affairs
BMP	Best Management Practices
BOGS	Branch of Geospatial Support
CAA	Clean Air Act
CAAAC	Clean Air Act Advisory Committee
CARB	California Air Resources Board
CASTNET	Clean Air Status and Trends Network
CDC	Center for Disease Control
COLA	Cost-of-Living Adjustment
CR	Continuing Resolution
CRD	Crop Residue Disposal
DERA	Diesel Emissions Reduction Act
DOJ	Department of Justice
EGU	Electric Utility Generating Units
EI	Emissions Inventory
EPA	United States Environmental Protection Agency
FARR	Federal Air Rules for Reservations (for Region 10 only)
FEMA	Federal Emergency Management Agency
FIP	Federal Implementation Plan
FR	Federal Register
FRM	Federal Reference Method
FTE	Fulltime Employee
GAP	General Assistance Program
GHG	Greenhouse Gas
HAP	Hazardous Air Pollutant
HEPA	High Efficiency Particulate Air
HHS	Health and Human Services
HUD	Housing and Urban Development
IAQ	Indoor Air Quality
IAQWG	Indoor Air Quality Work Group
ICDBG	Indian Community Development Block Grant
IDEQ	Idaho Department of Environmental Quality
IMPROVE	Interagency Monitoring of Protected Visual Environments

IPCC	Intergovernmental Panel on Climate Change
IPM	Integrated Pest Management
ITEP	Institute for Tribal Environmental Professionals
KBIC	Keweenaw Bay Indian Community
MDEQ	Michigan Department of Environmental Quality
MDN	Mercury Deposition Network
MNSR	Minor New Source Review
MOA	Memorandum of Agreement
MSTRS	Mobile Source Technical Review Subcommittee
MTERA	Midwest Tribal Energy Resources Association
NAA	Non-attainment Area
NACAA	Nation Association of Clean Air Agencies
NAU	Northern Arizona University
NAAQS	National Ambient Air Quality Standards
NADP	National Atmospheric Deposition Program
NCA4	Fourth National Climate Assessment
NEIEN	National Environmental Information Exchange Network
NESHAP	National Emission Standards for Hazardous Air Pollutants
NGO	Non-Governmental Organization
NNEPA	Navajo Nation Environmental Protection Agency
NRCS	Natural Resources Conservation Service
NREL	National Renewable Energy Laboratory
NSR	New Source Review
NTAA	National Tribal Air Association
NTOC	Nation Tribal Operations Committee
NTF	National Tribal Forum on Air Quality
NTFAQ	National Tribal Forum on Air Quality
OAP	Office of Atmospheric Programs
OAQPS	Office of Air Planning and Standards
OAR	Office of Air and Radiation
ODEQ	Oklahoma Department of Environmental Quality
OECA	Office of Enforcement and Compliance Assurance
OGAP	Office of Global Affairs and Policy
OIE	Office of Indian Energy
OITA	Office of International and Tribal Affairs
OMIS	Office of Management and International Services
ORBA	Office of Regional and Bilateral Affairs
ORIA	Office of Radiation and Indoor Air
OTAQ	Office of Transportation and Air Quality
OTS	OAR Tribal System
PBPN	Prairie Band Potawatomi Nation
PCB	Polychlorinated biphenyls
PFAS	Per- and polyfluoroalkyl substances
PM	Particulate matter
PRK	Policy Response Kits
PSD	Prevention of Significant Deterioration
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control

SCAN	Soil Climate Analysis Network
SEP	Supplemental Environmental Projects
SEARHC	Southeast Alaska Regional Health Consortium
SNFOES	Sac and Fox Office of Environmental Services
SMP	Smoke Management Plan
STAG	State and Tribal Assistance Grant
STAR	Status of Tribal Air Report
TAMS	Tribal Air Monitoring Support Center
TAR	Tribal Authority Rule
TAS	Treatment in the Same Manner as a State
TDWG	Tribal Data Work Group
TEACH	Tribal Environmental Action for Children's Health
TEISS	Tribal Emissions Inventory Software Solution
TIP	Tribal Implementation Plan
TREX	Tribal Environmental Exchange Network
TRI	Toxic Release Inventory Program
USACE	United States Army Corps of Engineers
USGCRP	U.S. Global Change Research Program
VOC	Volatile Organic Compounds
VW	Volkswagen
WHO	World Health Organization
WRAP	Western Regional Air Partnership
WSWG	Wood Smoke Work Group
ZEV	Zero Emission Vehicle

1 NTAA Briefing for the Current Administration on Tribal Air Quality Programs

The NTAA has prepared this 2019 STAR to brief the current federal administration on the status of Tribal Air Quality Programs and to help familiarize the administration with the priorities, challenges, and successes of Tribal Air Quality Programs that play an important and crucial role in protecting public health.

The NTAA was founded in 2002 with a grant from the U.S. Environmental Protection Agency Office of Air and Radiation, and continues to work with Tribes, states, and federal agencies to facilitate Tribal Air Quality Programs and protect air quality in Indian Country. Tribes are effective co-regulators of air quality and possess unique environmental knowledge that makes them important partners for agencies working to address pollution and climate change.

Statistics of American Indian Tribes and Alaska Natives

- 573 Federally recognized Tribes and Alaskan Natives with a population of approximately 1.9 million American Indian and Alaskan Natives
- Trust lands represent approximately 56.2 million acres
- 53 Tribes have non-regulatory "Treatment as State" (TAS) status under the Clean Air Act (CAA)
- 86 Tribes operate air monitoring sites
- There are 367 identified major sources on reservations
- 16 Tribes are implementing regulatory or permit programs in Indian country (5 TIPs, 2 Title V programs, and 9 with delegation of the Federal Air Rules for Reservations, or FARR)
- Five Tribes have completed Class I designations

1.1 Tribal Consultation and Sovereignty

Since 1984, the EPA's policy of working with Tribes has been based on close coordination and respect for Tribal self-determination and sovereignty. Consistent with EPA's Policy for the Administration of Environmental Programs on Indian Reservations signed in 1984 by President Reagan and reaffirmed by every Administration since that time, this policy directs EPA to work in close coordination with the Tribes and respect Tribal self-determination and sovereignty. Specifically, the EPA's Policy for the Administration of Environmental Programs on Indian Reservations is as follows:

> *In carrying out our responsibilities on Indian reservations, the fundamental objective of the Environmental Protection Agency is to*

> *protect human health and the environment. The keynote of this effort will be to give special consideration to Tribal interests in making Agency policy, and to insure the close involvement of Tribal Governments in making decisions and managing environmental programs affecting reservation lands.*

This policy has remained the cornerstone of the EPA's approach to working with Indian Tribes and Tribal governments, and it was most recently reiterated in the EPA's 2014 update to its consultation policy. The NTAA strongly supports this policy, and seeks to ensure that the EPA continues to consult with Indian Tribes on the many decisions that affect reservation lands, including CAA regulations, permitting and enforcement, environmental justice, and program funding.

The NTAA encourages the EPA to demonstrate its commitment to supporting Tribal sovereignty and self-determination, rather than providing a patchwork of diminishing funding streams, including the decrease in CAA funding and GAP grants. Since EPA is the air quality regulatory authority on Tribal lands when Tribes are unable to implement air quality programs themselves, we request that the EPA engage proactively in government-to-government consultation to uphold their trust responsibility, develop and implement air programs that are responsive to the needs of individual Tribes, and respond to Tribal requests and recommendations in a timely manner.

1.2 Funding and Resources

The EPA currently provides approximately $11.5 million in funding to Indian Tribes under the Clean Air Act Sections 103 and 105 for air quality programs (see *Table 2* below). Indian Tribes have limited revenue sources, so many either do not have an air quality program or rely solely on EPA funds, which are crucial to Indian Tribes' ability to operate and maintain air quality programs on Tribal lands. As more and more Tribes seek to establish air quality programs, this funding level becomes even less sufficient. While funding for air quality programs has been reduced for several years, NTAA has consistently supported increased funding for Tribal Air Quality Programs to:

- Restore funding to at least the highest historical funding levels;
- Provide funding for Tribes seeking to establish an air program of their own;
- Create new funding streams targeted at addressing critical needs such as indoor air quality, and climate change mitigation and adaptation;
- Provide new funding to keep pace with increased new source permitting activity;
- Replace and repair aging air monitoring infrastructure.

Tribes that are initiating new air programs, and nearly all the Tribes/Native Villages in Alaska, rely solely on the Indian Environmental General Assistance Program (GAP) funding, which has also been relatively stagnant over the last 10 years. To cover all of their environmental

programs with GAP funding forces tough choices for Tribal governments as to which of the worst challenges will be addressed. NTAA strongly supports an increase in GAP base funding. Please see Appendix A: NTAA Air Quality Budget Analysis for additional details on funding required to adequately operate Tribal air quality programs.

As an EPA Partnership organization, NTAA also encourages and facilitates partnerships between Tribes, the EPA, and other air quality entities, including state and local governments. Funding and technical resources from the EPA – especially for monitoring, analysis, co-regulation, and IAQ testing and remediation – are critical to supporting these efforts.

Table 2 State and Tribal Assistance Grant (STAG) Allocations for Fiscal Years 2012-2017

Region	2012	2013	2014	2015	2016	2017	2018
1	$.657	$.614	$.623	$.622	$.594	$.576	$.566
2	$.440	$.424	$.425	$.418	$.403	$.394	$.389
4	$.331	$.312	$.317	$.313	$.316	$.327	$.328
5	$1.264	$1.146	$1.179	$1.226	$1.229	$1.233	$1.284
6	$1.305	$1.174	$1.176	$1.181	$1.141	$1.137	$1.109
7	$.465	$.434	$.500	$.525	$.535	$.535	$.575
8	$2.110	$2.002	$2.096	$2.070	$2.001	$1.976	$1.889
9	$3.260	$2.934	$2.975	$2.885	$2.967	$2.917	$2.869
10*	$2.657	$2.421	$2.467	$2.444	$2.464	$2.450	$2.468
Total	**$12.5**	**$11.5**	**$11.8**	**$11.7**	**$11.7**	**$11.5**	**$11.5**

All amounts are in millions of dollars.
* Includes Alaska
Table 2 State and Tribal Assistance Grant Allocations for Fiscal Years 2012-2018

1.3 Permitting and Regulation

Air Quality assessments, including emissions inventory development and monitoring, and managing air quality regulation on and near Tribal lands, is necessary to protect the public health of Tribal members. Tribal communities are more vulnerable to air pollution impacts, and experience higher than average rates of diabetes, heart disease, and childhood asthma. In addition, Tribal communities are at higher risk of exposure to mercury, uranium and other air toxics due to traditional lifeways, particularly subsistence practices.

Tribes strive to be effective co-regulators of air quality, working alongside federal, state, and local agencies to assess, monitor, and manage regional air quality. EPA plays a crucial role as the primary air quality regulatory authority on Tribal lands working directly with Tribes to protect and manage air quality where Tribes have not assumed authority, including permitting and regulatory activities on Tribal lands. Tribes should be included to a greater extent in the oversight of permitting and regulatory activities off Tribal lands where Tribal land and the

health of Tribal communities are at risk and where Tribes retain hunting, fishing, and gathering rights.

Some Tribes have delegated air programs pursuant to the Tribal Authority Rule (TAR) under the CAA, which delegates authority to Tribes to administer and enforce the CAA on Tribal lands, including implementing Federal Implementation Plans (FIP). Under the TAS eligibility determination, Tribes may regulate sources through Tribal Implementation Plans, or through delegation of Federal rules and programs for many aspects of the CAA. Tribes may also develop or take delegation of permit programs for minor and major sources on their lands under Title I and Title V of the CAA. In addition, Tribes manage and operate voluntary programs such as the Diesel Emissions Reduction Act (DERA), radon testing and mitigation, indoor air quality, and others, to form a comprehensive suite of programs to protect public health in Tribal communities.

2 Why Tribal Air Quality Programs Matter to Public Health

Air quality assessments including monitoring air quality are a critical component of evaluating the public health and cultural resources on Tribal lands. Air pollutants are not bound by borders and many Tribes are forced to live with air pollutants that they played no role in creating. Further, many Tribes are unfairly burdened with air pollution resulting from dirty industrial sources such as mining or power generation projects within or near their borders. Economic development is certainly important for the livelihood of Tribes; however, it is important that development does not threaten the health of nearby communities.

Findings from the EPA, Center for Disease Control (CDC), the World Health Organization (WHO), and a multitude of independent studies, show that both long and short-term exposure to poor air quality, including ambient and indoor air pollution, hazardous air pollutants, and mobile source pollutants, is linked to a wide variety of health concerns, such as those described in the diagram on Figure 1.

The health impacts of air pollution on many American Indian/Alaska Native (AI/AN) communities is magnified by such factors as the inability to receive quality medical care due to issues like cultural barriers and geographic isolation,[1] and spending more time in unhealthy air environments than their non-AI/AN counterparts. Most AI/AN community members, including children and Tribal elders, spend a considerable amount of time outside gathering and using plants of cultural significance. Other communities, such as those located in Alaska, are forced to spend a significant amount of time indoors during the winter months. This normal lifestyle can foster heightened respiratory conditions such as asthma. Approximately 14.2% of AI/AN adults have asthma compared to 11.6% of non-Hispanic white adults and AI/AN children are 60% more likely to have asthma as non-Hispanic white children.[2] These are health figures which necessitate Tribal Air Quality Programs to engage in comprehensive air quality monitoring and management.

Tribal Air Quality Programs play an integral role in assessing and managing air quality in Indian country. In partnership with the EPA, Tribal Air Quality Programs can identify and monitor air pollution problems and effectively focus site-specific mitigation efforts to reduce pollution and improve health, and to engage in enforcement activities against polluters when necessary.

[1] U.S. Department of Health and Human Services Office of Minority Health. Profile: American Indian/Alaska Native at https://www.minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=62 (last visited on March 24, 2017).
[2] U.S. Department of Health and Human Services Office of Minority Health. Asthma and American Indians/Alaska Natives at https://www.minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlID=30 (last visited on March 24, 2017).

Health Effects of Common Air Pollutants

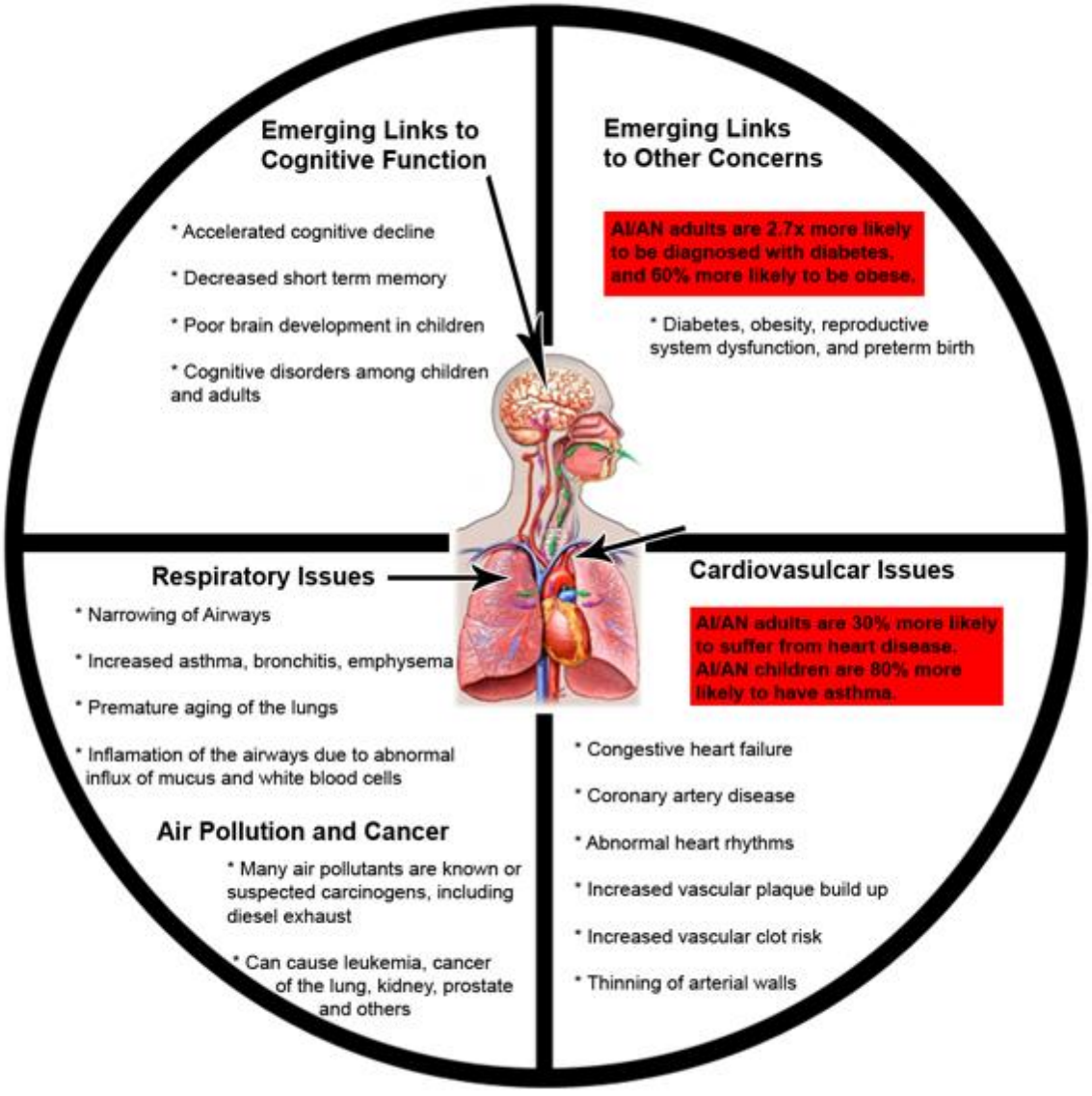


Figure 1 Health Effects of Common Air Pollutants

2.1 Ambient Air Quality

Ambient air is comprised mostly of nitrogen, oxygen, and other gases as well as a whole host of criteria[3] and hazardous air pollutants that vary in concentration as a function of proximity to air pollution sources, geographic location, and weather patterns. Tribal concerns regarding specific ambient air pollutants are as varied as the composition of the air itself and in many instances, dictated by the mix of sources of pollution that are proximal to Tribal lands. These pollutants are produced by many sources, including industry, forest fires, agriculture, and transportation.

Ambient air pollution is known by the EPA, CDC, California Air Resources Board, and WHO, to cause a variety of health impacts and lead to missed school or work days, increased emergency room visits, hospitalizations, and premature deaths. Many studies have linked air pollutants to heart and lung disease. Further, recent studies have linked air pollutants to alarming health outcomes including obesity, diabetes, poor neurological development in children, and decreased cognitive function in adults. In particular, AI/AN adults are 1.6 and 2.7 times more likely to be obese and suffer from diabetes respectively than non-Hispanic white adults.[4]

A number of Tribal Air Quality Programs are engaged in national efforts to assess air quality, including the monitoring of air quality, which is helping them to understand air pollution trends and mitigate the health impacts of these trends locally and nationally. The Clean Air Status and Trends Network, or CASTNET, is a national monitoring network established to assess trends in atmospheric deposition that cause acid rain, ecological effects, and pollutant concentrations due to changes in the emissions of air pollutants.[5] Specifically, CASTNET measures ambient air concentrations of sulfur and nitrogen species and rural ozone concentrations.[6] Tribes play an important role in the CASTNET network with six monitoring sites located on the lands of the following Tribes: Cherokee Nation in Oklahoma; Alabama-Coushatta Tribe in Texas; Santee Sioux Nation in Nebraska; Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas; Red Lake Band of Chippewa Indians in Minnesota; and Nez Perce Tribe in Idaho.[7] EPA's Air Quality System provides monitoring data from states, Tribes, and others to track air quality over time. This system is used for regulatory and research purposes, and houses most of the data collected by Tribes. Air Data (https://www.epa.gov/outdoor-air-quality-data) is a website where Tribes and the public can

[3] Criteria pollutants are defined as those air pollutants that EPA has developed National Ambient Air Quality Standards to protect public health and welfare. Ozone, PM, Lead, SO_2, NOx, CO

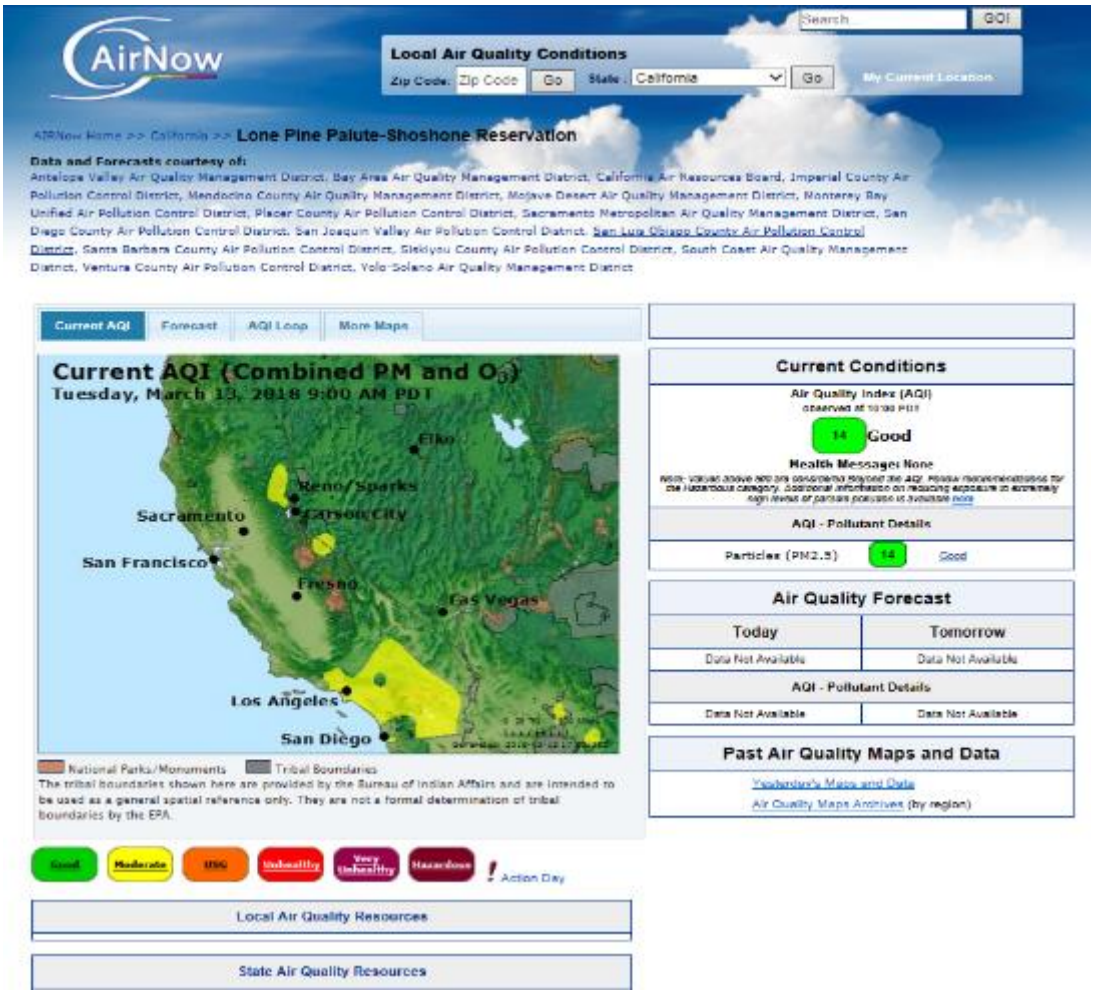
[4] National Health Statistics Report, Number 20. "Health Characteristics of the American Indian and Alaska Native Adult Population: United States, 2004-2008 (March 9, 2010) at https://www.cdc.gov/nchs/data/nhsr/nhsr020.pdf (last visited on March 24, 2017).

[5] U.S. Environmental Protection Agency. Clean Air Status and Trends Network (CASTNET) at https://www.epa.gov/castnet (last visited on March 24, 2017).

[6] *Id.*

[7] U.S. Environmental Protection Agency. Program Partners at https://www.epa.gov/castnet/program-partners (last visited on March 24, 2017).

locate monitors in their area and track trends over time. In addition, the AirNow system, developed in 1998 by EPA, the National Oceanic and Atmospheric Administration, National Park Service, Tribal, state and local agencies, provides the public with easy access to more real time national air quality information.[8] The AirNow Air Quality Index informs the public about the existing air quality and the associated health effects of concern; and through a system of numbers and colors, helps people understand what actions that they can take in order to protect their health.[9] Twenty-seven Tribal partners are actively engaged in AirNow including the Leech Lake Band of Ojibwe, Lone Pine Paiute-Shoshone Tribe, and Quapaw Tribe of Indians.[10] More Tribes want and need to be involved in CASTNET and AirNow, but can only do



so if they acquire additional federal funding support.

Figure 2 Lone Pine Paiute-Shoshone's AirNow

[8] "About AirNow, The Air Quality Index" at https://airnow.gov/index.cfm?action=topics.about_airnow (last visited on March 24, 2017).
[9] Id.
[10] "Partners" at https://www.airnow.gov/index.cfm?action=airnow.partnerslist (last visited on March 24, 2017).

In addition to the AirNow site, there is another site that Tribes contribute to called AirNow-Tech. AirNow-Tech is a password-protected website for air quality data management analysis and decision support. AirNow-Tech is primarily used by the federal, state, Tribal, and local air quality organizations that provide data and forecasts to the AirNow system, as well as researchers and other air data users. It allows users to:

- Access monitoring site data, information, and polling status
- Analyze current and past air quality events and episodes
- Submit and analyze air quality forecasts
- Configure EnviroFlash email services for public dissemination of air quality forecasts
- View meteorological and air quality data
- Generate data reports
- Create GIS-based maps with air quality and meteorological conditions
- Sign up for the AirNow Notifier listserv

The vast majority of Tribes are small, isolated, and have limited budgets. As such, federal assistance for Tribal Air Quality Programs is critical to their operation. As shown in the NTAA budget analysis *(see Appendix A)*, funding levels have decreased since 2012, causing stagnation of Tribal Air Program growth. These programs have continued to achieve more with less, particularly in how they have been able to paint a fuller picture of the nation's air quality through their monitoring efforts, and moving to control and regulate air quality in their areas. However, current funding levels threaten the sustainability of these achievements. For example, as monitoring equipment and infrastructure ages and breaks down, Tribal Air Quality Programs are unable to continue operations with the same levels of success and data Quality Assurance Quality Control (QA/QC). Additional funding is necessary to establish new and maintain current Tribal Air Quality Programs, to build capacity, and to grow these programs in the future in order to contribute to a national strategy for achieving cleaner air.

Air Emissions Inventories and Tribes

An air emissions inventory (EI) can cover a broad range of activities, leading to some confusion about what, exactly, is an EI. An EI can range from a simple summary of sources of air pollution on or near a reservation, to a comprehensive accounting of the exact amount and location of air pollution impacting the Tribe. How much detail you include and effort you expend on an EI usually depends on what you want to do with the EI data. While completing an EI can be a complex project, ITEP provides a step-by-step system for to help guide you.

An EI is often the first step in a Tribe's air quality program planning. If a Tribe recognizes that they have an air quality problem, they may choose to start an air quality program to figure out how to address it. For example, an air quality problem may be discovered by finding that large numbers of reservation residents are experiencing respiratory problems, or by noticing that haze seems to be blocking the view of a distant mountain range or butte much more frequently than in the past. If the cause of air pollution is obvious, such as a big power plant or metropolitan area nearby, a Tribe may start their air quality program by monitoring the concentrations of air pollutants on their reservation. If the cause or sources of air pollution

are not obvious, an EI is a good place for a Tribe to start exploring what the sources of air pollution are and from where they are coming.

For Tribes that have exceptionally good air quality, conducting an EI allows the Tribe to quantify how much pollution is currently being released into the air. The EI then provides a baseline for how much pollution can be released in their area without affecting air quality in a negative way. Once this baseline is set, it is easier for the Tribe to make decisions on how many new pollution sources should be allowed.

The information collected by doing an EI is an excellent air quality management tool. Once a Tribe knows how much air pollution is produced on their lands and how much is produced by nearby sources, they can make informed decisions about how new sources of air pollution will affect them. If a new business or development is being proposed on the reservation, the Tribe can ask for estimates of how much air pollution the new development would produce to determine how the new source will impact overall air quality. For new sources being proposed outside, but near to, the reservation, the Tribe will be able to comment on how pollution from the new source will affect air quality on the reservation.

At its simplest, an EI requires a careful assessment of all the different possible sources of air emissions within a geographic area, and includes, for example, gas stations, crop fields, timber operations, mines and quarries, food processing plants, roads of all types, schools, homes and buildings with heating systems, marinas and off-road vehicle use, as well as the larger facilities and operations people usually associate with air pollution. Because these facilities and sources change, an EI is usually updated every three years.

ITEP provides free training and software for Tribal EIs. The software is TEISS (Tribal Emissions Inventory Software Solution), which incorporates the EPA emission factors and calculators, and has features for producing maps, charts, and tables. The first step that ITEP's material guides the user through is the development of a "level 4" EI or "top-down" EI. This inventory includes only those emissions already reported to EPA's National Emissions Inventory database (NEI). Even Tribes planning to do more complex EIs usually start with this step, because larger facilities, and those sources that transect Tribal land, such as expressways and agriculture, as well as other sources, are often already included in the NEI database. In most cases, county-level emissions estimates in the NEI for these source types do not exclude the portions of the source on reservation land. ITEP assistance includes working with the Tribe to identify and download county-level data, reformatting that county-level data to enable import into TEISS, and providing this reformatted data to the Tribal EI development manager, who uses TEISS to summarize and interpret the estimates already in the NEI.

If there are many sources on the Tribe's lands that are not covered in the level 4 EI, the Tribe may choose to do a more detailed inventory on their own sources. This is considered a "level 2" or "level 3" EI, depending on the use of the data, or a "bottom-up" EI. The Tribal EI development manager then must obtain information about facilities and sources that TEISS needs in order to perform the calculations to estimate emissions from these sources. ITEP

provides guidance and examples for obtaining this information. This information includes the "activity," or throughput (such as vehicle miles travelled), as well as supporting factors (for example, the silt content of the local soil). In many cases, the Tribe requests assistance from ITEP to review the calculations. In addition, it is important to understand how emissions change as the sources change, and TEISS can be used for successive inventories so that changes can be documented.

It is important to understand that there are different ways that air emissions estimates can be reported: 1) In the form of a report that the Tribe uses to summarize and explain the tables, charts, and maps from TEISS. ITEP's online training includes how to export charts, maps, and tables from TEISS to use in an EI report. Some agencies may report their estimates only in such a report, which may be presented to agency management or the EPA regional office. Such reports will include sections on point sources, as well as the nonpoint (area) sources. 2) Emissions estimates data from sources on the reservation can be uploaded to the NEI database. TEISS produces data-only files that can be uploaded to the NEI and ITEP can assist with submitting the data to the NEI database. Tribes are not required to submit data to the NEI database, but are encouraged to do so in order to increase Tribal representation in the NEI database. The NEI database is used for air dispersion modeling, risk assessment screening, and tracking emission trends. The modeling results are often used to provide information for the creation of new regulations and to provide technical support for rule-making. By supplying data to the NEI, Tribes become represented in these important-decision making processes. Note that data from a level 4 EI cannot be submitted to the NEI since that data is already represented in the NEI database.

In summary, an air emissions inventory is an important component of an air program, and is often updated every three years. Such information provides the Tribal agency with information that can be used to guide pollution exposure reduction measures, monitoring projects, and public outreach and communication. Working with TEISS makes the process organized and fun!

2.2 Emerging Wildfire Threats

As the climate changes, hotter temperatures and dryer conditions lead to catastrophic wildfires on and near Tribal lands. In recent years, Tribes have struggled with growing costs to prepare for, defend against, and clean up catastrophic wildfires that impact public health, cause environmental damage and strain Tribal budgets.

In NTAA's FY2019 Tribal Air Quality Budget Analysis, wildfires are identified as a budgetary threat that must be addressed in the future. For example, from 2011-2016, western Tribes saw an overall increase of 41% in acres burnt by wildfires, while Tribal budgets for addressing air quality have decreased. From FY2012-FY2017, overall EPA funding for Tribes' air quality programs was reduced from a peak of $12.49 million in 2012 to just $11.48 million in 2019, even as inflation has risen by roughly 2% per year during that period and health care costs have risen by 4.9% annually between 2012 and 2014, and by 3% annually between 2015 and 2017. Fire

staffing within the Forest Service has grown 114%, from 5,700 in 1998 to over 12,000 in 2015.[11] Such increases have not been seen by Tribes, even though a recent article reports that more than 20% of Native Americans in the U.S. live in areas highly prone to wildfires but less than 18% of Tribes in the country have fire departments and less than 5% receive sufficient funding from agencies such as the Federal Emergency Management Agency of the Bureau of Indian Affairs.[12] This article also reports that insurers often refuse coverage to home owners in these areas, meaning that Tribes and individual Tribal members may lose everything due to wildfires and also meaning that Tribal members may be extremely reluctant to evacuate their homes during such a fire, putting their lives, as well as their property, in danger. An additional study in *PloS One*[13] found that Native Americans are more likely than people in other ethnic communities to live in areas that have both the highest potential for wildfires and the lowest capacity for effective response and recovery. This is due to factors such as income, education, and access to transportation and other social services.

At the same time, Tribes' attempts to reduce fire danger on their Reservations can be frustrating. Pre-European contact, many Tribes controlled wildfires by performing prescribed burns on their lands. However, a 1911 federal law made it illegal for non-state or federal agencies to burn public land. The Karuk Tribe in California, for example, has to negotiate individual agreements with the agencies that have jurisdictional power over their land.

Sources report that today's fires are larger, last longer, start earlier in the year and last later in the year than in the past.[14] In a Washington Post article that ran on August 14, 2018,[15] a number of facts were highlighted, as follows:

- Through August 13, 2018, around 5.7 million acres across the US had burned, surpassing the total for 2016.
- The amount of acreage burned has been growing steadily since the 1980s, despite year-to-year variations.
- Between 1990 and 2000, the number of acres burned annually grew from 4.6 million to 7.4 million, and in 2015 this number was a record-breaking 10.1 million.
- 2017 was the most expensive fire season on record,[11] and the final numbers for 2018 may be even higher.
- The typical fire has gotten bigger, from between 40-80 acres in the 1980s and 1990s to more than 100 acres in the 2010s. In 2018, the average size was about 130 acres.

[11] Blankenbuehler, Paige, and Brooke Warren, "The 2017 Fire Season Has Been More Expensive Than Any on Record. And It's Only Going to Get Worse." Mother Jones, December 9, 2017.
[12] Du Sault, Laurence, "the Karuk Tribe fights a growing wildfire threat and a lack of funding." High Country News, March 12, 2019.
[13] Davies, Ian P., Ryan D. Haugo, James C. Robertson, Phillip S. Levin, "The unequal vulnerability of communities of color to wildfire." PLOS ONE, November 2, 2018. https://doi.org/10.1371/journal.pone.0205825.
[14] NPR article from Senate sheet.
[15] Ingraham, Christopher. "Wildfires have gotten bigger in recent years, and the trend is likely to continue." Washington Post, August 14, 2018.

Wildfires burden Tribes with additional and often unplanned costs to: monitor air quality, keep Tribal leadership updated regularly, conduct public outreach, assess environmental mitigation, and conduct clean-up operations. These have led to budgetary challenges for Tribes, which are described in the paragraphs below.

Tribes have many governmental entities, as well as businesses, for which they are responsible. Tribal leadership has to assess when they need to close K-12 schools, colleges, clinics, elder housing complexes, casinos, government buildings, and other businesses due to extreme wildfire smoke or the fires themselves. Tribes may need to evacuate employees and Tribal members, sometimes from remote locations, and must find a safe place for these evacuees to stay. Since many reservations are quite large and quite remote, Tribes cannot rely solely on other governmental agencies to help them manage these concerns. In any case, other agencies are facing the same challenges with funding as Tribes are, and cannot devote the resources needed to fully protect reservations. Non-Tribal agencies may not respond to Tribal areas at all because these areas are not in their jurisdiction. Tribes know best how to manage these situations to minimize costs and health impacts but need the funds to do so.

Tribes are also responsible for the health and safety of the firefighters who are diligently working to protect life and property from these fires. In 2017, the Bureau of Indian Affairs (BIA) reported 1,100 Tribal firefighters and 1,500 Tribal administrative firefighters.[16] Just as the Forest Service works to estimate pollutant levels for firefighters, Tribes need to be able to protect the health of these individuals if they are working on-reservation.

In addition to immediate emergency situations, many wildfires are lasting longer - leading to public health emergencies for several weeks at a time in Tribal communities, where Tribal members can be more susceptible to asthma or pulmonary issues.[17] For those with asthma, other pulmonary issues, or who are homebound, both ambient air quality and indoor air quality are a threat.[18] Home air filters may help in the short term but often evacuations are the best solution, which requires additional resources and advanced planning. Tribes may also need advanced communications equipment or plans in order to keep leadership and the Tribal population informed.

Tribal Populations

Tribal members with asthma and pulmonary conditions are not the only populations at risk. Health impacts can transmit to babies born to women who are pregnant during wildfires. Research shows that babies born during or immediately after fire events have lower birth

[16] "2017 BIA Wildland Fire Facts at a Glance." *Bureau Indian Affairs*, www.bia.gov/bia/ots/dfwfm/bwfm.

[17] Pleis, John R., and Patricia M. Barnes. "A Comparison of Respiratory Conditions between Multiple Race Adults and Their Single Race Counterparts: an Analysis Based on American Indian/Alaska Native and White Adults." *Ethnicity & Health*, vol. 13, no. 5, 2008, pp. 399–415., doi:10.1080/13557850801994839.

[18] Bowman, David M.j.s., and Fay H. Johnston. "Wildfire Smoke, Fire Management, and Human Health." *EcoHealth*, vol. 2, no. 1, 2005, pp. 76–80., doi:10.1007/s10393-004-0149-8.

weights than infants born at other times, with significant effects for wildfire exposure during the second and third trimester of pregnancy.[19]

Additionally, smoke from massive wildfires has been known to cause fetal infant and child mortality in extreme cases.[20] As wildfires destroy more and more homes, the emissions from these fires potentially contain toxic chemicals from burning furniture, carpets, and appliances. These add an entirely new category of pollutants that Tribes may need to monitor.[21] The Wegesser *(see Footnote 21)* study found that not only were concentrations of particulate matter higher during wildfire episodes, but the particulates were much more toxic to the lungs (on an equal weight basis) than PM collected during normal conditions. In fact, the study found that "we can estimate the relative toxicity of the wildfire PM on an equal-dose basis as about 10-fold more damaging than normal PM." The study further states that because the amount of PM in the air during the events observed was roughly three times higher than under normal conditions, people exposed to the air from the wildfires were exposed to a relative risk of lung inflammation around thirty times higher than the risk during normal conditions.

Clean-up operations include hauling away large amounts of housing debris and burned vehicles. These can cause air quality issues insofar as Tribal workers must be protected from lingering toxic emissions and particulate matter that come from moving the debris. Toxic chemicals may come from charred vehicles, asbestos, and fiberglass from homes, even from containers of cleaning fluids, such as bleach, that were burned.[22] Even though the flames may be out when the clean-up crews arrive, the fine ash that is left behind is hard to avoid.

Specific Tribal Funding Needs

Tribes in the western US are experiencing larger, more intense, and longer-lasting wildfires over time, at substantial cost to all involved. In California last year, several catastrophic wildfires were estimated to cost $88 per person per day in additional costs. These Tribes must prepare emergency response plans that calculate some of these specific costs, in partnership with EPA. Through the BIA Wildland Fire Management, Tribes have responded to an average of 8,893 wildfires covering about 500,000 acres every year.[23] These Tribes need support from EPA as soon as possible.

Funding within Tribes for air quality monitoring and public outreach is already stretched thin, so identifying additional funds to set up mobile air monitors during a fire or to educate Tribal

[19] Breton, Carrie, et al. "Effect of Prenatal Exposure to Wildfire-Generated PM2.5 on Birth Weight." *Epidemiology*, vol. 22, 2011, doi:10.1097/01.ede.0000391864.79309.9c.

[20] Jayachandran, Seema. "Air Quality and Early-Life Mortality: Evidence from Indonesia's Wildfires." *The Journal of Human Resources*, 2008, doi:10.3386/w14011.

[21] Wegesser, Teresa C., et al. "California Wildfires of 2008: Coarse and Fine Particulate Matter Toxicity." *Environmental Health Perspectives*, vol. 117, no. 6, 2009, pp. 893–897., doi:10.1289/ehp.0800166.

[22] Alexander, Kurtis. "California Wildfires. Camp Fire: Crews begin massive cleanup of hazardous materials left in wake of blaze." San Francisco Chronicle, December 8, 2018.

[23] "2017 BIA Wildland Fire Facts at a Glance." *Bureau Indian Affairs*, www.bia.gov/bia/ots/dfwfm/bwfm.

communities to become "smoke-ready" is a real challenge (see *Smoke Ready Communities: Preparing for Smoke* in section *4.8 Wood Smoke,* below). Tribes can fall into three categories when it comes to wildfire response: those who deal with wildfires consistently, those who deal with them occasionally, and those who deal with them remotely. Tribes in each of these categories have separate needs.

Tribes who regularly experience wildfires on or near the reservation need to be able to mobilize monitors and conduct outreach immediately upon notification of a wildfire. These Tribes should prepare emergency response plans and should have their own monitors, with staff trained and ready to deploy these devices. Clean-up staff should also be trained in how to protect themselves from emissions. Tribes whose lands cover large areas would likely need several of these monitors in order to adequately protect their populations. Cost estimates to prepare an emergency response plan vary greatly due to the complexity of the process and the need to include an Incident Command System that prepares Tribes for all emergencies, not just fires.

How do Tribes prepare and calculate costs from wildfires that may or may not happen? Some Tribes experience only occasional problems with wildfire smoke. Tribes can prepare emergency response plans that calculate some of these specific costs (cost of preparing an emergency response plan is estimated above) but a dialogue between Tribes and EPA or another federal agency must take place to set things in motion. These Tribes could potentially borrow portable battery or solar operated equipment from the Tribal Air Monitoring Support (TAMS) Center as needed, however TAMS currently does not have the budget to purchase any additional equipment. These Tribes should also prepare emergency response plans. As stated above, if a Tribe needs to purchase their own portable monitor, these costs run at least $5,000-$8,000 for a basic unit. If the Tribe purchases a Federal Reference Method (FRM) monitor for long-term monitoring needs, they can expect to spend around $10,000-$15,000 just for the monitor, depending on what type is purchased. Additional costs are listed in the paragraphs below.

Other Tribes experience smoke impacts from distant wildfires. For example, Tribes in the states of Minnesota and Wisconsin experience high particulate levels each summer due to wildfires in the western US and in Canada. A recent study conducted by the Louisiana Department of Environmental Quality used a Weight of Evidence approach to demonstrate that wildfires in California caused ozone exceedances in Louisiana, roughly 1,600 miles away.[24] More demonstrations like this will be conducted in the future as states and Tribes work to pinpoint why exceedances occur.

[24] LA DEQ (2018), Louisiana Exceptional Event of September 14, 2017: Analysis of Atmospheric Processes Associated with the Ozone Exceedance and Supporting Data, Submitted to US EPA Region 6, Baton Rouge, LA, accessed March 1, 2019 online at URL: https://www.epa.gov/sites/production/files/2018-08/documents/ldeq_ee_demonstration_final_w_appendices.pdf.

While Tribes impacted by distant fires may not need to use portable monitors, placement of FRM monitors can help track the movement of wildfire emissions across the nation and can help Tribal Nations protect their people. As stated above, the cost to purchase an FRM monitor is roughly $10,000-$15,000, but associated costs also include training, quality assurance project plan preparation, audits, filter analysis (at around $7,000 per year), and data analysis. EPA has prepared materials for "Smoke-Ready Communities." Publications such as this are helpful to Tribal communities preparing for wildfires, but additional funds must be made available for Tribes to address the air quality crises that result from wildfires.

2.3 Indoor Air Quality

Much like ambient air quality, monitoring and maintaining indoor air quality (IAQ) plays a very important role in maintaining health within Tribal communities. Common indoor pollutants include allergens, radon, particulate matter, second-hand smoke, carbon monoxide, and excessive moisture which in many cases leads to mold growth. These are linked to a wide variety of health impacts that may cause symptoms immediately or years later. IAQ issues can vary widely depending on the season and region, meaning Tribes across North America face different challenges when mitigating the impacts from indoor air pollution at any given time.

While the pollutants and health impacts associated with IAQ are very similar to those of ambient air quality, the challenges to monitoring and maintaining IAQ are much different. Due to the large number of indoor environments that must be assessed, monitoring IAQ can be much more time and resource intensive than ambient air quality. Additionally, many Tribal communities have poor housing conditions that amplify indoor air quality problems.

Monitoring indoor air quality and maintaining healthy indoor environments is critically important. The EPA has found that Americans spend as much as 90% of their time indoors, where levels of air pollutants are often 2, 5, or even 100 times higher than levels outside.[25] A recent study led by researchers at Harvard University compared the cognition of workers in conventional office buildings to their counterparts in well-ventilated buildings, and highlights the value of healthy indoor air quality. The researchers found that people working in conditions with better-than-average air quality showed "significantly higher cognitive function" and scored nearly 300% higher when tested for cognitive strategy and information usage.[26]

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[25] U.S. Environmental Protection Agency. (2016). Air and Radiation: Basic Information. Retrieved from https://www3.epa.gov/air/basic.html.

[26] Harvard T.H. Chan School of Public Health. (October, 2015). Green office environments linked with higher cognitive function scores. Retrieved from http://www.hsph.harvard.edu/news/press-releases/green-office-environments-linked-with-higher-cognitive-function-scores/.

In 2017, the NTAA conducted the first National Indoor Air Quality Needs Assessment for Indian Country. The findings of this Needs Assessment were summarized in the 2017 STAR, and an update on progress from the IAQ work group was included in the 2018 STAR in section 4.4 Indoor Air Quality.

2.4 Hazardous Air Pollutants (HAPs) and Mobile Sources

Hazardous air pollutants are known or suspected to cause serious health effects such as cancer, neurological problems, and birth defects. The EPA lists 187 known toxic air pollutants including benzene, asbestos, mercury, and lead compounds. Humans can be exposed to hazardous air pollutants by breathing contaminated air, eating contaminated food (e.g., fish, meat, eggs, vegetables, etc.), drinking contaminated water, or simply coming into contact with contaminated soil, dust, or water. Some HAPs bioaccumulate, a process in which these toxins accumulate in body tissues. Humans can face long-term impacts by ingesting even small amounts of toxins over long periods of time. This can be of particular concern for Tribes who may be more exposed due to subsistence and traditional life ways. The National Air Toxics Assessment (https://www.epa.gov/national-air-toxics-assessment) is a tool Tribes can use to determine if their area has the potential risk from certain air toxics.

Mobile source emissions are released by highway vehicles and non-road equipment and are known or suspected by the EPA to cause cancer or other serious health outcomes. While mobile source emissions of air toxics have been reduced by about 50% since 1990, these emissions continue to pose hazards to human health. Diesel exhaust is of particular concern, classified by the EPA as likely carcinogenic to humans, and was classified as a known human carcinogen by the WHO in 2012. This is of significant concern to Tribal communities that often rely on old or "legacy" fleets of diesel vehicles and equipment that produce high levels of air pollutants. Additionally, many low-income communities, including Tribal communities, are in close proximity to roads, rail yards, and ports.

2.5 Climate Change

The NTAA has a history of working on climate change issues and communicating the concerns of Tribes to the EPA. In 2009, NTAA developed a report on the impacts of climate change in Indian Country after a request by then-Office of Air and Radiation Assistant Administrator, Gina McCarthy. As a result of work such as this, the EPA released the Clean Power Plan Final Rule with the goal of reducing greenhouse gas (GHG) emissions. This rule states: "Tribal communities whose health, economic well-being, and cultural traditions that depend upon the natural environment will likely be affected by the degradation of ecosystem goods, and services associated with climate change." In August 2018, EPA drafted a replacement plan, called the Affordable Clean Energy Rule, which excluded Tribal input. NTAA has developed Policy Response Kits (PRKs) to alert NTAA Member Tribes and other Tribal Air Offices of these important EPA proposed rules and provide tools for Tribes to submit comments on federal actions.

According to the U.S. Fourth National Climate Assessment (NCA4) report, climate change has already started to alter and damage the U.S. economy, environment, and human health. Chapter 12 of the NCA4 concludes: "Climate change increasingly threatens Indigenous communities' livelihoods, economies, health, and cultural identities by disrupting interconnected social, physical, and ecological systems."[27] On October 6, 2018, the Intergovernmental Panel on Climate Change (IPCC) released its Special Report on Global Warming of 1.5° Celsius. The report finds that drastic transformational actions across all economic sectors and levels, including energy, food production, behavior, and technologies, are required to limit global warming by 2030. Furthermore, the extent and magnitude of these changes depend on the current and future policy regulations and actions to limit the amount of GHG emissions released into the atmosphere today and in the future.

The consequences of climate change will endanger public health, both directly and indirectly. The EPA's Endangerment Finding cites numerous health concerns associated with increased levels of atmospheric GHGs. The EPA predicts that the negative effects of extreme hot days will outweigh the positive effects of less exposure to extreme cold, a scenario that will disproportionately impact poor communities that cannot afford or do not have access to air conditioning. Climate change has likely already increased ozone pollution in some regions of the US and has the potential to exacerbate ground-level ozone pollution and fine particle concentrations as well as the many associated health impacts.[28] Changes in temperature and precipitation patterns will increase risks associated with aeroallergens (i.e., pollen and mold) and vector-borne diseases. Furthermore, climate change is leading to more frequent extreme weather events, which have the potential to severely impact Tribes, depending on their preparedness and geographic location.[29] Finally, climate change is projected to cause more frequent and severe wildfires, degrading air quality and resulting in additional adverse health outcomes (e.g., increased respiratory illnesses from exposure to wildfire smoke, impaired visibility, and disrupted outdoor recreational activities). The negative health effects associated with climate change are especially damaging for vulnerable populations including the elderly, young children, and those individuals already in poor health.

Climate change threatens Tribal lifestyles by decreasing food security, endangering culturally significant flora and fauna and forcing them towards extinction, increasing the risk of extreme weather events, and endangering public health in general. Climate change impacts are causing the loss of indigenous cultures and indigenous knowledge systems, and forcing the

[27] USGCRP, 2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018

[28] Fann, N., T. Brennan, P. Dolwick, J.L. Gamble, V. Ilacqua, L. Kolb, C.G. Nolte, T.L. Spero, and L. Ziska, 2016: Ch. 3: Air Quality Impacts. The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment. U.S. Global Change Research Program, Washington, DC, 69–98. http://dx.doi.org/10.10.7930/J0GQ6VP6

[29] U.S. Environmental Protection Agency. (2009) USEPA's Endangerment Finding. Retrieved from https://www.epa.gov/sites/production/files/2016-08/documents/federal_register-epa-hq-oar-2009-0171-dec.15-09.pdf.

relocation of Tribal communities.[30] Additionally, air quality impacts exacerbated by climate change extend to hunting, fishing, and gathering rights of Tribes in Ceded Territories, lands that Tribes transferred to the federal government in exchange for off-reservation rights by a treaty agreement. Long-term climate change and near-term weather variation are both leading to changes in biodiversity, the abundance of important flora and fauna species, and seasonal changes that are impacting traditional hunting, foraging, and farming. Tribes and their members, in particular, are experiencing declines in health due to the loss of traditional food use caused by climate change.[31]

Longer summers and warmer winters in Alaska are causing sea ice to form late and melt early, reducing Alaska Natives' ability to move around their region to hunt or gather. In the upper Midwest, moose and wild rice habitats are shifting with the changing climate, restricting their availability as a food resource. Changing temperature and precipitation patterns are permanently altering biomes across the southwest, changing where many culturally significant plants can grow and even leading towards their extinction. Further, climate change is threatening food security based on subsistence agriculture, particularly in the west where a lack of rainfall has created long-term drought conditions. In the southeast, sea level rise and increasing flood risks in coastal and low-lying regions are impacting several communities and raising discussions on relocation.

A number of Tribes and Tribal organizations have committed significant resources to analyze the health effects of climate changes on Tribal communities. In particular, the ANTHC Center for Climate and Health has been conducting comprehensive community assessments for several Alaska Native Villages, such as the Native Village of Kivalina (Kivalina), focused on the impacts of climate change and related health effects.[32] For Kivalina, ANTHC has observed a rise in dust, smoke, and allergen levels along with health-related issues such as asthma, allergies, and other respiratory problems.[33] These levels and health-related issues have become most prominent during the summer months due to an increase in the number of hot and dry summers, lightning and wildfires, and trees and shrubs.[34]

Additionally, the NCA4 report highlighted over 800 climate adaptation activities across all regions that Tribal governments, Indigenous peoples, intertribal organizations, and their

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[30] Kathryn Norton-Smith et. al. 2016. "Climate change and Indigenous Peoples: a Synthesis of Current Impacts and Experiences". Gen. Tech. Rep. PNW-GTR-944. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. Pgs 1-138.

[31] Kathy Lynn et. al, "The impacts of climate change on tribal traditional foods," Climate Change 120:545-556, 547 (2013) ("Obesity, diabetes and cancer, rare in communities living on a traditional diet, are now increasing health problems in tribes across the U.S").

[32] "Climate Change Health Assessment." Center for Infectious Disease Research and Policy at http://www.cidrap.umn.edu/practice/climate-change-health-assessment (last visited on March 12, 2017).

[33] "Climate Change in Kivalina, Alaska, Strategies for Community Health." ANTHC Center for Climate and Health 21 (January 2011).

[34] Id. In the Northwest Arctic, more than 10.5 million acres burned between 1950 and 2007, including 24.1% of boreal forest and 9.2% of the tundra (Joly et al., 2009). In 2007, the largest tundra fires on record occurred on the North Slope, burning over 240,000 acres in a single season.

partners have undertaken.[35] Tribal leaders and managers are developing climate change adaptation strategies and emissions reduction actions that not only consider ecological impacts but sociocultural impacts. Land and resources are integral to the cultures and economies of Tribes. As climate change continues to impact ecological biomes, Tribal governments face institutional barriers that severely limit their adaptive capacities including limited access to traditional territory and resources and the limitation of existing policies, programs, and funding mechanisms in accounting for the unique conditions of Indigenous communities. Federal, state, and regional institutions must support the unique political status of Tribes as sovereign nations. Tribal sovereignty, self-determination, Indigenous knowledge systems, and intertribal organizations provide vital opportunities to adapt to the potential challenges of climate change.

3 Tribal Air Quality Successes, Challenges, and Priorities by Region

The NTAA received information from the Executive Committee about the successes, challenges, and priorities of Air Programs for each EPA Region. In addition, several Tribal air quality professionals are profiled in this section to highlight both emerging and established professionals helping to build strong air quality programs, partnering with other entities in unique collaborations, and serving on Tribal air or environmental committees or organizations as representatives of their respective Tribes, and in some cases as a voice expressing the interests of Tribes.

Region 10 – 229 Tribes – Alaska

There are 229 federally recognized Tribes/Alaska Native Villages in Alaska, and 25 of them are NTAA member Tribes. Although they face many unique obstacles, there have also been many examples of Tribal air quality work done in Alaska. The following lists highlight how Tribes continue to build capacity and successful air programs in Alaska Native Villages. Tribes have also continued to participate with the Alaska Native Tribal Health Consortium's Tribal Air Quality Program to identify air quality priorities in their communities.

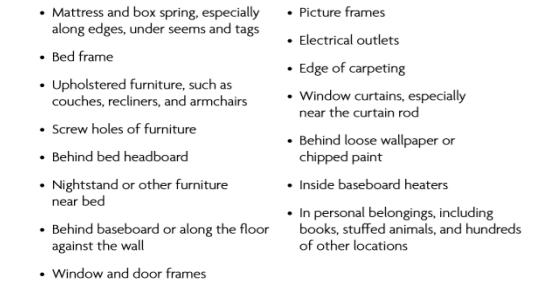
Successes

- The Craig Tribal Association (CTA) collected baseline data for radon in Tribal homes in Craig, Alaska. Project staff were able to effectively complete this project despite Alaska's challenges with radon testing *(see below)*. CTA amazingly collected 104 RSSI

[35] Bennett, T. M. B., N. G. Maynard, P. Cochran, R. Gough, K. Lynn, J. Maldonado, G. Voggesser, S. Wotkyns, and K. Cozzetto, 2014: Ch. 12: Indigenous Peoples, Lands, and Resources. *Climate Change Impacts in the United States: The Third National Climate Assessment*, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 297-317. doi:10.7930/J09G5JR1.

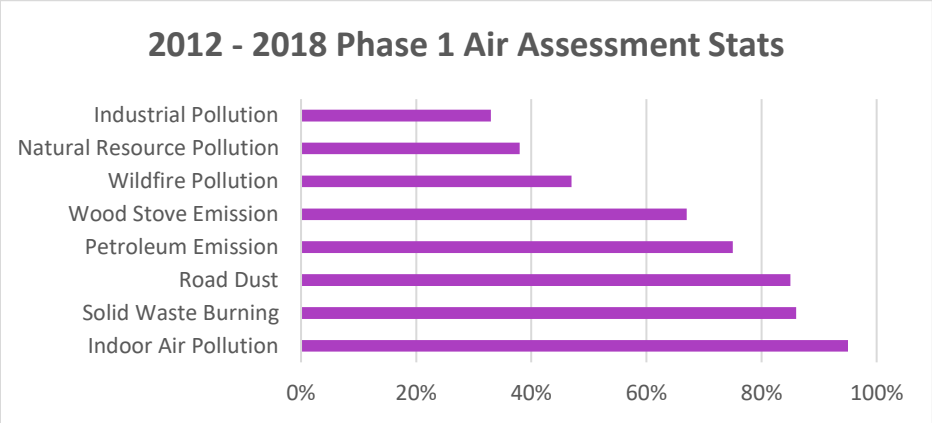
Alpha-track monitoring devices from Tribal member homes and the school system; 67 returned results. After analysis, homes with high levels were given recommendations for mitigation.

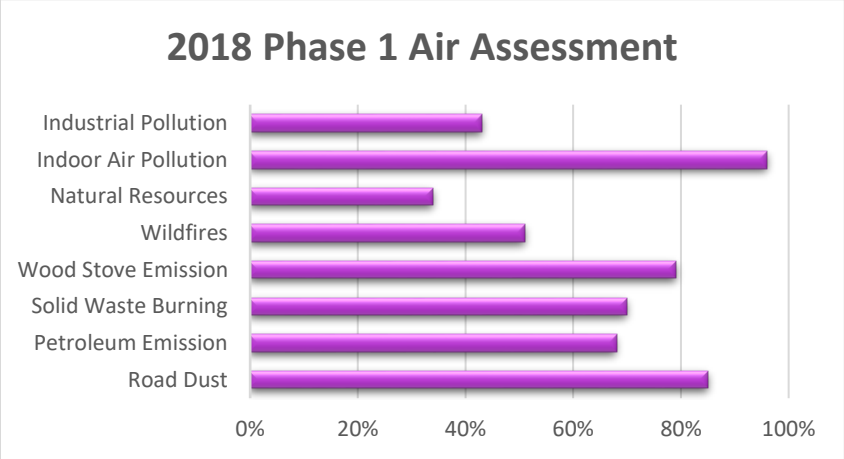
- Due to the long winter months in the Arctic of Alaska, carbon monoxide is a worry of the residents. The Native Village of Nuiqsut creatively partnered with the North Slope Borough Weatherization Program and ANTHC placed 150 carbon monoxide detectors in Tribal households and gathered data on peak ambient exposure levels in those households after a winter heating season had passed. Data collected was distributed to the Tribe and residents.
- The Native Village of Teller introduced an Air Quality Awareness campaign throughout the community. They provided 5 community meetings and 5 school outreach events that utilized the EPA Alaska Tribal Air Toolkit containing a series of short videos, fact sheets, and outreach ideas. During these community outreach meetings, staff were able to identify local air quality concerns through surveys taken during each meeting. These findings are stored for future air quality work through the Tribe.
- The Nunakauyak Traditional Council implemented a highly successful Indoor Air Quality program (see story below, under *Indoor Air Quality*).
- ANTHC continues to address respiratory illnesses in Alaska Village by working to increase capacity on all air related topics. Pesticides have recently become an issue due to bed bugs, so ANTHC created a Do-It-Yourself Bed Bug Guide (https://anthc.org/wp-content/uploads/2018/04/Do-It-Yourself-Bed-Bug-Control-Guide.pdf) to help residents address these problems in a safe and air healthy manner.



Priorities

- Since 2012, the ANTHC has been using an Alaska Tribal Air Quality Phase 1 Assessment to help identify air quality priorities in Tribal communities. A total of 47 assessments completed by 40 communities in 2018 and a total of 203 assessments in 120 communities since 2012 have been submitted. Data indicates that Indoor Air Pollution, Road Dust, and Woodstove Emissions are the top three (3) Tribally identified air quality concerns in Alaska in 2018.





Challenges

- Moisture / mold and woodstove emissions have been the biggest indoor air quality issues to date. Lack of proper ventilation sources and old stoves make it difficult for residents to battle this challenge. Utilizing windows and doors for ventilation during the harsh winter months is not realistic, especially with extreme high fuel costs. Tribes struggle to find funding to address this issue, but the struggle is real. Even with low amounts of funding to purchase supplies, the cost to ship them is equal to the purchasing costs. Tribal Environmental workers in villages across the state continue to

get the proper training and education to share with their local residents on ways they can help improve the situation to the best of their ability. Tribes continue to seek mitigation steps through a variety of sources.

- Radon testing has not been successfully done throughout rural Alaska. There have been a few successful testing communities but the outright challenge is weather. The state is very large and many of the laboratory sites that the radon kits are sent out of state. With these types of tests, there is a short window to get them to the laboratory before the test is considered void. Often times, a test will travel on 3-4 planes before leaving Alaska. Alternative routes of testing and equipment are being explored.

- Most Tribal villages in Alaska do not have paved roadways and airport runways, thus creating a road dust issue. For some communities, it is just a summer problem but for others who are facing changes in their environment they are seeing longer periods of these road dust conditions. Communities continue to partner with entities such as ANTHC, the State of Alaska and the TAMS Center to conduct road dust monitoring and state road and runway maintenance.

Region 10 – 43 Tribes – Idaho, Oregon, and Washington

There are 43 federally recognized Tribes in EPA Region 10, and 14 of them are NTAA member Tribes; 15 Tribes have Air Quality Programs. The following section highlights recent successes of Tribal Air Quality Programs in this region, as well as several common challenges they face and priorities for ensuring continued success and future growth of these air programs.

While there is much to say about the challenges facing Tribal Air Programs, we also want to highlight the recent successes of some of the programs in this region; highlighting the important work being done to protect health, safety, and the environment.

Successes

- The Colville Tribe has worked hard to form the Okanogan River Airshed Partnership, building and developing great working relationships within the area to protect air quality;
- The Umatilla Tribe has been successfully implementing the Air Quality Flag Program, teaching the community about the Air Quality Index and bringing community awareness and self-engagement to air quality monitoring;
- Tulalip Tribes Community Health and Tribal Healthy Homes Network are developing an air quality communications plan to be implemented during periods of high concentrations of PM2.5. The purpose of the communications plan is to inform residents of the risks of exposure to PM2.5, and actions they can take to minimize exposure. In order to include the designation of a clean air shelter in the air quality response plan, the team collaborated with University of Washington researchers to assess air quality and infiltration in three buildings that could potentially be used as a

clean air shelter. We conducted preliminary sampling using low-cost sensors in fall 2018, and since then Tulalip Tribes purchased four additional low-cost sensors (Purple Air) to be used for a more extensive assessment. These four sensors were co-located with the regulatory PM2.5 instrument in Marysville for 6 weeks, allowing us to calculate sensor-specific calibration equations. We are now planning to place the sensors longer term inside and outside two buildings of interest. This assessment will support Tulalip Tribes' broader smoke response plan.

- The Yakama Nation has been working on a longtime wood stove change out project. They have also been actively involved in researching and analyzing health effects related to wood smoke and other air quality concerns on asthma patients within the valley.

Challenges

- Funding Stagnation. The Tribes realize EPA has experienced reduced overall funding for several years, and there is no indication that this may change in the future. However, there is tremendous importance in the work that Tribal Air Quality programs do, and we feel they represent a better fiscal-to-health improvement investment than many other programs.
- The stagnation and cuts in Tribal funding over the last 10 years means there have been reductions in ongoing programs and no funding for new Tribal Air Quality (AQ) programs. Tribes are supplementing environmental staff with Tribal money needed for health, youth, and other environmental protection programs. Small Tribal programs, which have been allowed only a partial fulltime employee (FTE) through EPA funding, have now seen money reduced to unsustainable levels to the point where air quality staff are stretched thin, covering multiple positions, or even eliminating environmental programs. Larger Tribes are losing experienced staff because of the need to reduce wage rates, leading to increased turnover rates and decreased productivity. Monitors funded in the early days of the programs (i.e., 2000-2010) are not being funded adequately to replace equipment, which places the health and safety of community members at risk. The lack of resources and the challenges it creates leads only to one thing: program cutbacks and hard choices on which regional priorities will get supported. But when one is faced with choosing between wildfire smoke events, IAQ concerns, climate change mitigation, or ambient air quality monitoring, there really should not have to be a choice. These are all important aspects of air quality work that deserve equal support.

Needs

- Funding
  - At a minimum, restoration to the highest pre-reduction levels for current programs (funding which EPA used to get and allocate to the Tribes to establish AQ programs);
  - Increased IAQ funding stream, separate from the current grant program funding; STAG inclusion; more accessible IAQ funding opportunities. Federal entities need

to work out the means between themselves so Tribes can obtain funding through EPA, from Housing and Urban Development/ Health and Human Service (HUD/HHS) funding, for IAQ tasks without having to apply for separate department grants.
    - Separate climate change funding stream, in addition to current grant program funding. Federal entities need to work out the means for Tribes to obtain funding through EPA, to use Bureau of Indian Affairs (BIA) funding, for climate change tasks without having to apply for separate department grants.
    - Separate wildfire smoke funding stream, in addition to current grant program funding. Our region has seen an increase in the number and duration of wildfire smoke events and these events are predicted to continue in our region beyond normal occurrences; extra funds will be necessary to provide the education/outreach services and mitigation tools to minimize smoke exposure, protect the health and safety of the community, and save lives. With wildfire smoke events on the rise, the next priority would be to minimize exposure for non-wildfire smoke so we can reduce our overall yearly exposure.
- USEPA Staffing
    - Restore positions. Cutbacks have nearly eliminated experienced staff to help Tribes with specific problems like Superfund sites, toxic source impacts, etc.
    - Current EPA staff turnover/position elimination has left remaining EPA staff struggling to help Tribes.

Priorities

1. Ambient Air Quality Monitoring
2. Wildfire Smoke
3. Indoor Air Quality
4. Non-Wildfire Smoke Events
5. Climate Change
6. Community Education and Outreach

Region 9 – 148 Tribes – Arizona, California, Hawaii, Nevada, American Samoa, Commonwealth of the Northern Mariana Islands, Guam, and Marshall Islands

There are 148 federally recognized Tribes in EPA Region 9, and 32 of them are NTAA member Tribes. The following list highlights recent successes of Tribal Air Quality Programs in this region, as well as several common challenges they face and priorities for ensuring continued success and future growth of these air programs.

Successes

- The Hualapai have continued to sustain their CAA 105 Tribal Air Program despite insufficient funding, have leveraged resources to persevere, and endeavor to maintain

protecting the environment and continuing with air monitoring even with very old monitoring equipment to provide the most valid data that can be utilized for assessing ambient conditions to protect human health of the tribal community;

- The Twenty Nine Palms Band of Mission Indians have leveraged resources to establish a Tribal Air Program and secure funding from the CARB, as numerous years of attempts to utilize EPA funding has been denied. *(See story in Funding section below.)* The Tribe is currently building their air monitoring capacity in their efforts to assess ambient air quality for the protection of the environment and human health;
- The Pechanga Band of Luiseno Indians have maintained their Tribal Air Monitoring Program to evaluate and assess valid data for data sharing with Pechanga Tribal Community, Tribal Emergency Management and first responders, and Tribal Government / Tribal School for improved health of the Tribal and surrounding communities.

- The Morongo Band of Mission Indians have acquired equipment to conduct collaborative performance evaluations for ozone (O3) and instruments for an Indoor Air Quality assessment "instrument share" program for local Tribes. The Morongo Band has also been able to provide carbon monoxide (CO) detectors to Tribal community residents as part of the Tribe's IAQ program.

John C. Parada was the recipient of Region 9's 2018 Conner Byestewa Jr. Environmental Award. John has been the NTAA R9 Alternate Representative since 2015, and has been working in the environmental field for 22 years. His work with Tribes includes La Posta, La Jolla Band of Luiseno Indians, and Los Coyotes Band of Cahuilla Cupeno Indians, and he is currently working with the Augustine Band of Cahuilla Indians. John's list of professional accomplishments is too long to include here, but spans water quality, air quality, QAPPs, solid waste, storm water, climate change, emergency management, and non-point source management, as well as training other staff and active participation in his Regional Tribal Operations Committee and the Western Regional Air Partnership. John is a strong voice for Tribes in acquiring funding from EPA and maintaining a seat at the table. John is the father of six kids and 14 grandkids, and grew up in San Diego, CA, and on the Rincon Indian Reservation.

Challenges and Priorities

- Adequately fund and support existing established air programs, and support Tribes that desire to build capacity to develop and maintain technical capacity for existing air programs. Regarding support terminology, EPA identifies support as providing reference or options to other funding sources. With this in mind, EPA is currently having Tribes conduct activities such as Emission Inventories, Air Quality Assessments, Indoor Air Quality Assessments, and other activities allowed in GAP. The concern is that GAP is not an efficient source of funding to support some of these activities as EPA GAP suggests that Tribes complete an emissions inventory by creating a list of emission sources and types of emissions. GAP does not fund activities necessary to collect data over an annual time period to conduct a true emission inventory which would be accompanied by an Air Quality Assessment and Air monitoring plan or strategy to justify the need for a CAA §103 Program for which new Tribes are rarely funded;
- Provide funding to conduct baseline assessments, which include air quality monitoring to evaluate air quality conditions that have the potential to impact human health and the environment. The impacts from the exposed playa in the Salton Sea have the potential to affect local and regional areas. Baseline assessments for these types of monitoring activities are not being approved in GAP funding. Adequate funding for monitoring and evaluating Particulate Matter

(PM10) control measures for the exposed playa in the Salton Sea, and monitoring of toxic parameters should be included in this funding to identify trends over time and potential health impacts;

Morongo Band of Mission Indians' Tribal Air Program (TAP) is continually setting, reassessing, and pushing through goals and initiatives to protect the environment and community health. In 2018, the TAP met several goals through collaboration efforts despite encountering obstacles. Morongo recently purchased air monitoring equipment to help conduct QC checks, as well as establish an indoor air quality equipment-share program that will be utilized amongst local Southern California Tribal air programs. The TAP also collaborated with Morongo's Tribal Temporary Assistance for Needy Families program to disseminate over 40 CO detectors to Tribal families. Lastly, the program collaborated with the Human Resources Department to initiate a "Hazardous Outdoor Air Policy," which will alert the Tribe's employees who work outdoors when there is poor air quality so they may limit their exposure to pollutants. The TAP experienced a few minor challenges, primarily affecting air monitoring, including data loss due to the mechanical failure of a collocated PM sampler. Time spent troubleshooting and repairing this equipment was strenuous and frustrating. The TAP also continues to monitor local source polluters to ensure their compliance with local air regulations and protect community health.

- The Morongo Band cites three challenges: 1) Acquisition of PM data due to loss of their collocated PM Sampler; 2) Increased work load has created the need for additional staff and increased FTE in Air Programs; and 3) Resolving off reservation sources air quality influences and impacts;
- Targeted funding and support for Tribes affected by new ozone standards;
- Targeted funding and support for Tribal indoor air programs;
- Retaining knowledgeable staff;
- The majority of air pollution sources are off Tribal lands;
- Provide funding for Tribes to establish emergency air monitoring for the current increasing wildland fires in California that have a regional effect upon Tribal communities. The recent increased activity of wildland fires have increased the risk to human health as smoke migrates with wind patterns from immediate areas of wildland fires throughout the state of California, which also becomes a transport concern to Tribes in neighboring states. Tribes that are located in disadvantaged community areas are subject to unhealthy conditions with limited or no air filtration systems to minimize or eliminate indoor air quality effects from AC units that are required during extreme temperatures (desert communities with temperatures at 115-125 degrees are

forced to shut down AC units when smoke is intolerable);
- Develop wood stove trade out programs for all Tribes to utilize for the improvement of ambient and indoor air quality.

Region 8 – 27 Tribes – Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming

There are 27 federally recognized Tribes in EPA Region 8, and nine (9) of them are NTAA member Tribes. The following list highlights recent successes of Tribal Air Quality Programs in this region, as well as several common challenges they face and priorities for ensuring continued success and future growth of these air programs.

Successes

- The Southern Ute Tribe has been doing a great job leading the way on administering the Tribe's EPA approved Title V Operating Permit program (i.e., permitting, compliance, and enforcement);
- Northwestern Band of the Shoshone Nation (NWBSN) revised their CAA 105 TAS application and it is being reviewed by EPA Region 8;
- NWBSN revised a QAPP to include NO2 and it has been accepted by EPA Region 8; NWBSN has been monitoring for NO2 since October 1, 2018;
- The Northern Cheyenne Tribe has an application in for TAS that is out for public comment as of the printing of the 2019 STAR;
- The Ute Mountain Ute Tribe (UMUT) has several successes:
    - Overall, through training and on-the-job experience, the AQ Program staff has a basic foundation of the regulatory framework and the monitoring principles of particulates and ozone. We are on the way to carrying out a full-fledged monitoring program;
    - Virtual AQI Flag notifications designed by the AQ technician, Dave Wells, for publication on Tribal TV and social media. This also includes pollen count;

At the UMUT workshop on Wildfire Smoke.

    - Two workshops for Tribal members to construct Do-It-Yourself Air Cleaners with higher efficiency particulate filters (typical home furnace variety), a box fan, and duct tape (their choice of color). The Tribe had smoke effects from several wildfires during the summer of 2018. This idea was inspired from the ITEP webinars associated with the Wildfire Smoke class, and implemented with instructions complementary of the Washoe Tribe;
    - The Tribe broke ground on building a 1MW solar plant to offset electric bills. It is a stepping stone for future renewable energy projects: both community and

facility offsets as well as commercial scale projects, to move the Tribe's revenues from fossil fuel to renewable energy
    - Scott Clow, Ute Mountain Ute, continues as the air lead for the National Tribal Caucus.

Challenges and Priorities

- Limited funding is the most significant challenge to Tribal Air Quality Programs in Region 8;
- Rebuilding relationships with the EPA that have deteriorated in the wake of employee retirements and travel budget cuts;
- Continuing face to face regional meeting with all the Tribal Air Managers and EPA personnel;
- Oil and gas development (has lessened since last year but is still an issue);
- Non-attainment for Northern Ute;
- The Ute Mountain Ute Tribe's AQP had operational problems with the 2.5 TEOM (on-loan from TAMS/ITEP) resulting in a lack of data for a year. The staff had performed systematic trouble-shooting, and identified the problem. We are anticipating the instrument will be on-line in a few weeks.

Hello, I am Billie Toledo, Prairie Band Potawatomi Nation, Region 7. In July 2018, I became the R7 NTAA Executive Committee Primary Representative after serving as the Alternate since 2016. I am honored the Tribes in Region 7 had faith to nominate me to represent them on a regional and national level in which I've learned so much since entering these roles. My priorities are to continue engagement with R7 Tribes and to voice our stories in a manner that brings positive light and assistance to Tribal Air Programs. Even though all Tribes are different, our overall environmental goals are the same and I hope to continue representing R7 in a way that fits all our needs.

Region 7 – 9 Tribes - Iowa, Kansas, Missouri, and Nebraska

There are nine (9) federally recognized Tribes in EPA Region 7, and seven (7) of them are NTAA member Tribes. The following list highlights recent successes of Tribal Air Quality Programs in this region, as well as several common challenges they face and priorities for ensuring continued success and future growth of these air programs.

Successes

- Two Tribes completed radon fundamentals or radon measurement proficiency training;
- Mitigation system installed in a Tribal home after radon levels doubled EPA's action level. High radon levels were found while conducting an Indoor Air Quality Assessment;
- Prairie Band Potawatomi Nation replaced ambient air monitoring equipment and meteorological equipment after undergoing multiple issues;
- Winnebago Tribe of Nebraska got the Air Department up and running again and completed four trainings towards capacity building;
- Two Tribes created Memorandums of Understanding with local partners to increase indoor air quality work in communities.

Priorities

- Improved funding to support Air Program components: radon testing and radon mitigation, including the ability to purchase air monitors;
- Clear and consistent communication, operation, and processes with EPA and Tribes across all regions. Development and implementation of Air Best Management Practices;
- Develop partnerships with Federal, State, and Local agencies and contribute applicable components to ambient air monitoring;
- Provide support for usage of Air programs that are approved by states, which are currently in use – example Blue Air;
- Updating Tribal Emissions Inventory;
- Continue performing Advanced IAQ Assessments and radon testing in Tribal homes and buildings.

Challenges

- Inability to run Air programs based on differences between Tribal priorities and EPA priorities;
- Lack of mitigation efforts/opportunities for homes testing high in radon levels within Indian Country;
- Difficulties working with other agencies and departments in development of documents important to Indian Country (i.e. Smoke Management Plans, Tribal Needs Assessment);
- Maintaining work plan milestones while waiting for Quality Assurance Project Plans (QAPPs) to be approved past EPA's 30-day review process;
- Continuing ambient air monitoring when there is staff turnover, decrease in funding to purchase equipment, continuing maintenance issues, and lack of EPA support;

Tanner Zach is the new NTAA EC Alternate Representative for EPA R7, and has been the Air Quality Technician for the Santee Sioux Nation since March '18. Tanner holds a Wildlife and Fisheries BS degree with a GIS minor. After various jobs in the wildlife field, Tanner accepted the position with the Tribe and has been conducting home visits to educate residents about IAQ and conduct home radon testing to build a profile of the community's radon levels. Tanner is managing the Tribe's CASTNET site along with the Mercury Deposition Network and Ammonia Monitoring Network site, drafting a Smoke Management Plan for the reservation, updating the Emissions Inventory, providing public outreach and education to the community about the importance of healthy air quality, participating in NTAA workgroups and pertinent webinars, and strengthening relationships with both the Housing Authority and the public to enhance cooperation efforts and communication about their air quality concerns.

- Continuing Advanced IAQ and radon monitoring when there is a lack of funding for training and equipment/equipment upkeep.

Region 6 – 66 Tribes - Louisiana, Arkansas, Oklahoma, New Mexico, and Texas

There are 66 federally recognized Tribes in EPA Region 6, and 21 of them are NTAA member Tribes. The following list highlights recent successes of Tribal Air Quality Programs in this region, as well as several common challenges they face and priorities for ensuring continued success and future growth of these air programs.

Successes

- The Pueblo of Santa Ana's §103 grant (emissions inventory (EI) and particulate matter (PM) sampling) is helping them better understand air quality on the Pueblo. They are in the process of applying for TAS for 105 in order to protect Tribal sovereignty, clean air, and the health of their citizens and environment at Santa Ana (see story below under Tribal Consultation and Sovereignty).
- The Fort Sill Apache installed a PM2.5 monitor at their location in southwest Oklahoma and have begun monitoring.
- Because they cross-train their employees and take a multidisciplinary approach, the Sac and Fox Nation was able to continue conducting IAQ outreach without starting from scratch, after losing a significant amount of capacity when their Air Quality Specialist was laid off due to CAA §103 funds running out.

- The Pueblo of Zia will be purchasing air monitoring equipment to monitor PM 2.5, PM 10, and ozone.
- The Quapaw Nation is working with the TAMS Center to conduct a comparative analysis between the BAM-1022 and Teledyne T640 Particulate Matter monitors. They recently purchased a Teledyne T640 and are curious on its performance compared to the new BAM-1022's which are all enclosed monitors. With their variable weather conditions in NE Oklahoma, they are hoping to see differences and similarities in the monitors. They are hoping to present their findings in a white paper and presentation at the National Tribal Forum on Air Quality.

Challenges and Priorities

- Nearly all Tribes who responded to a recent poll listed Funding, Training, and Monitoring Equipment, as their air program needs and priorities.
- Indoor air quality issues in aging homes.
- Developing a succession plan: the loss of personnel can be a major blow to a program.
- Technical Assistance.

Cherylin Atcitty, Taos Pueblo Environmental Program Manager, is originally from Bodaway/Gap, AZ, and is currently living in Taos, NM, with her husband. She earned her BS degree in Biology with a minor in Chemistry from Oklahoma Panhandle State University and an MS in Environmental Science from West Texas A&M. During her time at WT she became interested in air quality and wrote her thesis on monitoring air quality on the Navajo reservation, and gained an understanding of the many impacts to the native populations. Serving on the EC for NTAA will provide Cherylin the opportunity to bring her knowledge of air quality to the table and give her a chance to learn more about air issues facing native communities across the country. She is excited to participate in the advancement of air policies, interest, and management with NTAA EC members.

Region 5 – 35 Tribes, Michigan, Minnesota, Wisconsin, and Indiana

There are 35 federally recognized Tribes in EPA Region 5, and 20 of them are NTAA member Tribes. The following list highlights recent successes of Tribal Air Quality Programs in this region, as well as several common challenges they face and priorities for ensuring continued success and future growth of these air programs.

Successes

- Emergency Management collaboration with Air Staff – it is not a question of *will it happen*, but rather *when* an event will happen and *how big* it will be.
    - One success story involves Tribes engaging in emergency response exercises:

        - Leech Lake Band of Ojibwe recently engaged over 50 staff, including the whole Environmental Department, in a full scale oil pipeline release exercise showing both the Tribe's need to be engaged and demonstrating the expertise that the Tribe has to offer, especially as a first responder and first line of defense for an incident on the Reservation. The Band surprised and proved to the outside agencies and the corporation that we had the skills and expertise to protect the Band's homeland. Prior to this, the Band was treated as an outside entity on its own lands and not drawn upon for response capabilities.
- Mercury
    - Four Tribes are collecting leaf litter samples each autumn to see how much mercury is contained in leaves and needles from trees in the area. A map was created that compares data across the sites and highlights trends.
- Tribes in Region 5 appreciate NTAA's work on policy issues
    - We have seen an increase in Tribal comments submitted in 2018, especially by Tribes who have never or rarely submitted previously
        - Recent correspondence from an NTAA Member Tribe: *"I wanted to let you know how much the Air Quality Program at the Keweenaw Bay Indian Community appreciates the NTAA Policy Response Kits. The Fact Sheets are a great way to decipher what the actual issues are and is a great informational document for sending to council. I have been submitting the comment templates to strengthen the platform of our tribal concerns. I have also found that the comment templates have increased my knowledge and competency in writing other comment letters for other federal, state and local concerns that KBIC has voice in. This has been invaluable, as I had no experience with writing comment letters in the past. Commenting has become a very important tool for KBIC to relay our stance on policy and suggest changes. Thank you for providing these toolkits for NTAA member use."*
    - Tribes have worked with other agencies with similar concerns to strengthen our letters
        - Recent joint effort with the State of Minnesota on the proposed Affordable Clean Energy (ACE) rule, the proposed New Source Performance Standards for Existing Electric Generating Units (Greenhouse Gases), and proposed revisions to the Mercury and Air Toxics Standards rule
        - NTAA collaboration with other agencies such as the National Association of Clean Air Agencies (NACAA)
- Electrical Generating Units (EGUs)
    - Many Tribes, along with their state counterparts, worked on and submitted comments concerning the ACE Rules. Region 5 Tribes are concerned about the backtracking of regulations, policy, and/or guidance for revised interpretations

and how these will modify permits and/or policy thus affecting Tribal treaty rights.

Concerns

- PFOs/PFAs - Tribes are concerned with flow and distribution of these pollutants
- Wildfire residual effects from western and Canadian fires
    - Observing PM Levels in Minnesota, Wisconsin, and Michigan soar into unhealthy ranges many times each year
        - Human health impacts
        - Continental transport
- Emergency Management collaboration with Air Staff – it is not a question of *will it happen*, but rather *when* an event will happen and *how big* it will be
    - Many Tribes are rural and response teams can take hours or days to respond; Tribes are the first line of response;
    - There has been an increased number of emergency response incidents on or near Tribal lands or Ceded lands. For example:
        - Two recent train derailments over the past 1.5 years
        - Chemical releases and evacuations
- Mercury
    - Tribes are concerned about Treaty rights for edible fish in line with Tribal Lifeways. Concerned with Agency for Toxic Substances and Disease Registry's (ATSDR) thresholds not taking into account Tribal concerns and needs;
    - Renewed concern regarding the release of mercury from recent and increasing forest fires.
- Mining – Taconite and Precious Metals
    - Tribes are concerned about the backtracking of regulations, policy, and/or guidance for revised interpretations and how these will modify permits and/or policy thus affecting Tribal treaty rights.
- EPA Region 5 Administration
    - TAS applications pending without action and Regional Administrator's (RA) delayed responses to Tribal leadership letters are a concern – Tribes need the RA's approval for the process to proceed to public review
        - Combined Air and Water TAS submitted in October 2017 with no movement
        - Holding up other TAS applications submitted in August 2018
    - Regional Tribal Operations Committee (RTOC) scheduling and cancelling – only one RTOC meeting has been held since the RA took office in 2018 and the RA has not attended any National Tribal Operations Committee (NTOC) meetings, either.
    - Realigning Indian Office without notification, discussion, or consultation with Region 5 Tribes

        - This approach is not in line with the other Regions. The Indian Office is being integrated into a multimedia office, which is inappropriate given the sovereign status of Tribes.
    - Tribes worked tirelessly in the 1990s to establish a separate Indian Office and feel this is a step backward.
    - The annual Region 5 Tribal Environmental Professionals Meeting was rescheduled due to the government shutdown and lack of early coordination. This caused some inconvenience and may lead to reduced Tribal attendance due to prior commitments.
- Electrical Generating Units (EGUs)
    - Tribes are concerned about the backtracking of regulations, policy, and/or guidance for revised interpretations and how these will modify permits and/or policy thus affecting Tribal treaty rights;
    - Mercury concerns in permits and emissions are a particular issue;
    - There is a need for monitoring for Tribal lands and surrounding communities;
    - Thresholds for ATSDR do not consider Tribal Lifeways;
    - Coal fired EGUs across Region 5 are affecting Tribal Lands;
    - BioMass facilities in Michigan
        - There are emissions concerns especially for PM; these specific facilities have had violations of PM even during the pilot phase.

Priorities

- PFOs/PFAs
    - Tribes want to see cross media studies/projects with air and water focus
    - These studies should be in line with EPAs recent announcement of its PFAs Action Plan
        - Provides a multi-media, multi-program, national research, and risk communication plan to address this emerging environmental challenge.
- Wildfire residual effects from western and Canadian fires
    - We are observing PM levels in Minnesota, Wisconsin, and Michigan soar into unhealthy ranges many times each year
        - Outreach to those affected down wind is needed for:
            - Air quality forecasting
            - Timely notification/outreach of events
- Emergency Management collaboration with Air Staff – it is not a question of *will it happen*, but rather *when* an event will happen and *how big* it will be.
    - Making contacts before an incident is important:
        - With Tribes and their certified staff/first responders as well as nearby responding agencies;
        - Local facility operators.
    - There needs to be Tribal understanding of Toxics Release Inventory (TRI) and chemicals that are located on Tribal lands or pass through daily on thoroughfares (rail and highway)

    - Preparedness and air monitoring at time of incident are crucial. This can be accomplished by:
        - Ensuring Tribes have the correct equipment and training for incident emission release:
            - Monitoring equipment
            - Meteorological (forecasting) information
            - Modeling software
        - Emergency response training
- Mercury
    - Tribes are concerned about the backtracking of regulations, policy, and/or guidance for revised interpretations and how these will modify permits and/or policy thus affecting Tribal treaty rights.
- Mining – Taconite and Precious Metals
    - Backlog of state permits
    - State agencies and EPA not enforcing limits on state permits or facilities allowed to operate under expired permits for years
- Electrical Generating Units (EGUs)
    - Nuclear power plant concerns at Prairie Island Indian Community *(see story in "Hazardous Air Pollutants" section below)* and Pokagon Band of Potawatomi
        - The Pokagon Band of Potawatomi has Tribal trust properties located near two nuclear power plants, Donald C. Cook Nuclear Power Plant and Palisades Power Plant. While the continued operation of both plants is a source of environmental unease for the Pokagon Band, Palisades is of particular concern. Since its first year of operation in 1971, Palisades has continually had issues with leaks of radioactive material and has been shut down for extended periods of time on multiple occasions. Palisades has recently been scheduled for decommissioning starting in 2022 and will come under the control of a different company during the decommissioning process. Given the history of the power plant and the lack of transparency during the initial planning for decommissioning, the Pokagon Band is concerned about the potential release of radioactive material and other pollutants into the environment during the operation, shutdown, and decommissioning process. This concern is especially heightened since the Pokagon Band recently established and plans to expand Tribal housing that is located 10 miles downwind of Palisades.

Region 4 – 6 Tribes - Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee

There are six federally recognized Tribes in EPA Region 4, and four of them are NTAA member Tribes. The following list highlights recent successes for the Catawba Indian Nation's Air program, and challenges and priorities related to Tribal air quality in the region.

Successes of the Catawba Indian Nation Air Program

- *Ambient Air Quality Program Successes:*
  - Completed year 3 of ozone monitoring and data collection, utilized Tribal Data Toolbox to manage data and upload data to AQS;
  - Received approval of PM 2.5 QAPP from Region 4 EPA, uploaded 2018 data to AQS;
  - Participated in Air Now for ozone and PM 2.5, one of seven sites listed in South Carolina, providing air quality information to the Catawba Nation and eastern York County;
  - Working with EPA Region 4 and applying for TAS for CAA 105;
  - Developed an Ozone and PM 2.5 Advance "Path Forward" plan for Catawba Indian Nation.
- *Indoor Air Quality Program Successes:*
  - Continuing to partner with ISWA (which refers to *yeh is-wah h'reh*, meaning "People of the River") Housing conducting IAQ walkthroughs, providing detailed findings and solutions to address IAQ issues in housing and Tribal Government buildings;
  - Developing Integrated Pest Management (IPM) plans for Tribal government buildings that focus on integrating IPM (pest proofing strategies) and IAQ and energy efficiency.

Regional Challenges and Priorities

- Air Program development and TAS
- Improving and monitoring indoor air quality
- Climate change research and adaptation planning, incorporating traditional ecological knowledge into these efforts
- Concern of increasing levels of dust pollution caused by drought
- Hydraulic fracturing pollution

Region 3 – 7 Tribes – Delaware, Maryland, Pennsylvania, Virginia, and West Virginia

There are now seven federally recognized Tribes in EPA Region 3. Until early in 2018, there had been only one federally recognized Tribe, the Pamunkey Tribe of Virginia. The Pamunkey Tribe is now joined by other Virginia-based Tribes including the Chickahominy, the Eastern Chickahominy, the Upper Mattaponi, the Rappahannock, the Monacan, and the Nansemond.

The recognition of these additional Tribes in Region 3 is an exciting development, and the NTAA looks forward to working with them. Federal recognition allows Tribes to apply for grants such as CAA §103 and §105, however, as many of the stories in this document and the Budget Analysis in Appendix A make clear, additional funding is needed for these Tribes to develop air quality programs.

Region 2 – 8 Tribes - New Jersey, New York, Puerto Rico, and US Virgin Islands

There are eight federally recognized Tribes in EPA Region 2, and three of them are NTAA member Tribes. The following list highlights recent successes of Tribal Air Quality Programs, as well as several challenges they face for ensuring continued success and future growth of Region 2's air programs.

Successes

- Secured funding through HUD for Healthy Homes. Will be inspecting 120 homes and testing the IAQ as well as the envelope of the house.

Challenges

- Researching ways to test the ambient air for PCB congeners rather than Aroclors by submitting a CAA §103 proposal for sampling and analysis of all congeners in and around Akwesasne. Submitted but not approved yet as the federal budgets may not be have enough money to provide CAA §103 funding;
- Submitted paperwork to become a beneficiary to the Volkswagen (VW) settlement funds. The process is a long process with no guarantees.

Priorities

- Indoor air quality and the health of the community;
- Minimize exposure to hazardous air pollutants like PCBs and Fluoride;
- Utilize Volkswagen Trust funds to reduce exposure from diesel vehicles by replacing two eligible trucks as well, as promote the use of all Electric and Plug-In Hybrid vehicles by installing charging stations in Akwesasne.

Steven D. Smith, II, is the new Region 2 Alternate Executive Committee member for the NTAA. He joined the department two years ago as Shinnecock's Environmental Assistant. In addition to helping with the water quality and aquaculture program, he has taken on the task of helping the department develop an Air Quality Program. Steve has dedicated the time and effort to building his knowledge and skills through attending consecutive courses offered by ITEP. We look forward to increased educational outreach opportunities for our community, because of his dedication.

Marvin Cling, Sr. is the new NTAA EC Alternate for EPA Region 1. He is the Pleasant Point Passamaquoddy Tribe's environmental planner/ director. He has experience with TSCA-related risk assessments and inspections; water quality sampling; fish toxicity studies; monitoring PM 2.5, ozone, and meteorological; woodstove change outs; GPS and GIS; IAQ; and educating home owners about energy auditing and weatherization. He maintains his HAZWOPER training for spill response exercises. His future goals include undertaking another fish tissue study and building capacity for the Tribal ecology program, as well as bringing in additional funding. He has an AA in Liberal Arts from Haskell Indian Nations University, a BS in Business Administration in Information Technology, and an MSM in IT Management from Colorado Technical University. Marvin has assisted ITEP with course teaching and has been the Tribal instructor for the AQ Computation since 2006. He also represents R1 Tribes in the E-Enterprise Leadership Council, and has served on the TAMS Steering Committee.

Region 1 – 10 Tribes - Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

There are 10 federally recognized Tribes in EPA Region 1, and four of them are NTAA member Tribes. The following list highlights recent successes of Tribal Air Quality Programs in this region, as well as several common challenges they face and priorities for ensuring continued success and future growth of these air programs.

Successes

- One monitoring site has had successive audits throughout its years of operations and recently had another Technical System Audit (2018) with limited deficiencies.
- Funds from the first round of the Volkswagen Settlement will be distributed to the two Region 1 Tribes that applied. One Tribe will be purchasing a new clean diesel bus to replace a 2006 diesel bus, which will reduce emissions of nitrogen oxides by 80%. The Volkswagen Settlement Funds will be paid out annually over the next three years.

Challenges and Priorities

- One priority for most of the Tribal air programs funded by CAA §103 is to seek TAS for CAA §105 funding.
- Indoor Air Quality for our Tribal citizens needs resources for air testing and short term monitoring for assessment. The work being done to include smaller, lower cost devices should be supported.
- One Tribe has demonstrated local PM events as well. Wintertime inversion events in northern New England valleys create local particulate matter exceedances that affect the health of those who live, work, recreate, and attend school in these communities.
- One Tribe is encouraging a joint venture/study with a university in the region and the Tribal housing

authority to conduct IAQ studies and build IAQ capacity for the housing program.

- Particulate matter and ozone-causing emission transport from out of state continue to be major concerns. One Tribe has continuously operated an IMProVE Station since 2002, with very high quality data every year. That network provides chemical pollutant data for over 500 compounds. The Tribe has been a board member of the Ozone Transport Committee since 1997.
- Acid rain and mercury deposition remain a top concern for the Tribes in the east, as they endure the most of the exhaust from the rest of the country. One Tribe has continuously collected weekly deposition samples for both the National Air Deposition Program (since 1999) and the Mercury Deposition Network (since 2006) with very high quality data.
- Federal Trust Responsibility for Tribes must remain intact.

4 Tribal Stories in Managing Air Quality and Climate Change Effects

The NTAA received stories from all across Indian Country illustrating the work they are doing, the circumstances under which they are managing air quality, and the effects they are experiencing from climate change impacts to their communities and way of life. These stories are included below by topic area to help illustrate the status of Tribal Air Quality Programs around Indian Country.

4.1 Tribal Consultation and Sovereignty

Making a Difference Through TAS and 105 Grants: Numbers Tell Stories, Too

Throughout the STAR you will find many amazing stories from Tribes as they work to address air quality issues. One of those stories this year is from the Pueblo of Santa Ana as they work their way through the Air TAS and 105 processes. To many Tribes, this process remains a mystery as to how it works and how it benefits the Tribes. Consider the numbers: 82 tribes have 103 project grants for 2019, whereas the number of Tribes with 105 program grants has hovered around only 40 for several years. Since 105 grants offer some funding protections over 103, why aren't more Tribes pursing this opportunity? Perhaps the requirements for matching funds may have kept many Tribes from making the change. However, Treatment as a State (TAS) can minimize the matching requirements for 105 grants from 40% down to as low as 5% for the first two years. Therefore, the marriage of 105 grants and TAS makes a lot of sense.

52 Tribes have received non-regulatory TAS for air grants purpose, providing them a reduced match when they pursue 105 funding and preparing them for greater future program implementation. So why don't more Tribes follow suit? Perhaps it is the jurisdictional boundary requirements of the TAS process that is a potential hurdle? The Pueblo of Santa Ana

already had TAS authority under the Clean Water Act, which streamlined the process with the Clean Air Act because the jurisdictional boundary requirement was previously demonstrated and accepted by EPA. There are currently 35 additional Tribes that also have Water TAS who could streamline a non-regulatory Air TAS process as well by using their existing boundaries. This would give them access to decreased grant matching requirements and increased certainty in their future air grants.

Tribes are resilient and even with dwindling resources they remain committed to protecting their airsheds and their citizens' health. TAS and 105 grants are opportunities to be considered for protecting these resources that more Tribes may want to consider. For more information on 105 grants, including additional match reducing options and TAS, visit the NTAA website's Fact Sheets page (https://www7.nau.edu/itep/main/ntaa/Resources/FactSheets).

Building an Air Quality Program at the Pueblo of Santa Ana: From GAP to TAS

The Pueblo of Santa Ana's Department of Natural Resources (SADNR) was created in 1996 and has grown to include a Bosque Restoration Division, Range and Wildlife Division, Water Resources Division, GIS Division, Conservation Enforcement Division, an Environmental Program, and environmental education position. However, for approximately 15 years, SADNR did not systematically address air quality on the reservation. In 2016, the Pueblo created new air quality goals, under the United States EPA Tribal General Assistance Program (GAP) grant, in order to inform the direction of an air quality program. Under GAP, SADNR trained staff and hosted a summer air quality intern through the Institute for Tribal Environmental Professionals in 2016. The intern completed a basic assessment of air quality by reviewing data from the EPA, the tribe's 15-year-old air quality assessment, and state monitors. Also under GAP, staff were trained in various ITEP Air Quality courses as needed, such as "Management of Tribal Air Programs and Grants." SADNR then conducted a community survey at the annual environmental fair regarding community perceptions of air quality and residential practices, and continues to do surveys biennially. Additionally, in the realm of indoor air quality, SADNR conducted community education and outreach and dispersed 48-hour radon test kits to homes. Before applying for a CAA 103 grant, SADNR developed a level 4 emissions inventory (EI) to understand sources of air pollution that were affecting the Pueblo from locations off of the Pueblo. The 103 grant is currently in-progress, as SADNR is conducting a level 2 EI of sources on the Pueblo. SADNR also hired a new technician to conduct particulate matter (PM 2.5) sampling with a MiniVol for training purposes, and EI data collection activities under the 103 program (see photo). Additionally, SADNR is the 2019 host of the Inter-Tribal

Nakia Casiquito with the MiniVol, she is a Tribal member and technician at the Environmental Program at SADNR who was hired through the 103 grant.

Environmental Council mobile monitor, which measures PM2.5, PM10 and Ozone continuously for the period of one year. In December of 2018, the Pueblo submitted an application for Treatment as a State (TAS) to administer CAA Section 105 Air Pollution Planning and Control Programs as well as Sections 105, 107(d)(3), Section 126, and Section 505(a)(2) of the CAA. The Pueblo already has TAS authority under Sections 106, 303, and 401 of the Clean Water Act, which streamlined the process with the Clean Air Act because the jurisdictional boundary was already established and accepted by EPA. As of the writing of this report (Feb 1, 2019), the decision for TAS is in process and the comment period should begin shortly.

4.2 Training, Education, Funding, and Resources

R Training

R is an open source software used by environmental scientists all over the world, and comes with packages specifically designed to analyze and present air and water pollution data. Not only is R totally free, it comes with a world community of users who, following the open source model, provide packages and code and advice in numerous forums, completely free. "Open source" means more than just code that is available free to anyone; it includes a philosophy (the open source way: https://opensource.com/open-source-way) for any kind of project that embraces and celebrates principles of open exchange, collaborative participation, rapid prototyping, transparency, meritocracy, and community-oriented development.

R software also has the advantage of being usable by anyone with a computer, no matter what operating system, and will look essentially the same. One of the frustrating parts of assisting Tribes all over the country with data analysis is that different operating systems and different versions of MS Office look different, making instructions and videos difficult to follow for those with different-looking screens. Tribes and the TAMS Center can share R procedures, code, and data that work in any R computer installation.

It is critical for Tribal environmental agencies to stay up to date with tools that allow them to analyze the huge masses of data that are being produced by air sensors. MS Excel and Access will crash or process very slowly the hundreds of thousands of records produced by sensors. As more and more low-cost methods for monitoring environmental data are developed, it is vital to provide tools for understanding and reporting the data. R packages can be used repeatedly, so that common data management, review, analysis, and reporting can be standardized. R, and a user interface called RStudio, provide for immediate feedback—graphs and tables are shown in a different window immediately. It also provides for immediate identification of errors.

The TAMS Center is beginning an initiative to make available training materials, both classroom and online, to make it easier for Tribes to use R for their data analysis and reporting. Recently, twelve participants from Minnesota Tribes met in the Fond Du Lac Tribal and Community College's computer training facility to learn how to use R. The 3-day series of

tutorials taught the basics of importing data, using analysis packages, cleaning and summarizing data, and using R to make charts, maps, and other graphics. The examples included Tribal data, with a focus on reporting and analyzing data for trend analyses. Participants brought their own data to work one on one with instructors.

Written comments from participants in the Minnesota course include the following:

- *Need to efficiently analyze large data sets.*
- *This class will help process data immediately and often.*
- *I was asking for this class since NTF 2018. So, thank you!*
- *Would like continuing courses to build on what was learned.*
- *This is extremely useful for my whole department! Great Course, Great instructors! Pace was good.*

The Taos Pueblo Permit Review Training

The Taos Pueblo Environmental Office had been awarded a Clean Air Act section 103 grant to complete an Air Emissions Inventory. In the process of learning about completing the EI, I (Cherylin Atcitty, the Taos Pueblo Program Manager) had taken additional courses offered by TAMS and ITEP. The courses were very useful and I knew that I had been fortunate to attend these, and that likewise these would be beneficial to other Tribes that did not have an operational air quality program. Since many of the Tribes in New Mexico do not have an air quality program and there are no local resources, they are left to navigate the difficult process of commenting on permits alone. Many of the Tribal staff already wear multiple hats and must be knowledgeable in multiple disciplines. Many of the Tribes in attendance expressed their frustration in the lack of air quality outreach that can provide assistance on a local and national level.

I had requested that ITEP provide the "Reviewing NSR and Title V Permits" training for New Mexico Tribes after I attended that course in Fargo, North Dakota. I could see the importance this training could have for all Tribes. The primary goals I wanted to see from holding a training in New Mexico were:

- To establish partnership with EPA R6, New Mexico Environmental Department (NMED), TAMS, ITEP, and NTAA in the event that a Tribe needed one-on-one assistance to help with an air quality issue;
- To become more aware of Tribal air programs, for example: the Navajo Nation and Southern Ute are the only Tribes to operate a Title V program. The Navajo Nation Title V operates in New Mexico, but is considered Region 6, and Southern Ute borders the northern New Mexico state line but is in Region 8.

- For other Tribes to be aware of the permitting process, and how to comment, so that our voices are heard.

The training was well planned and well received. It gave me an opportunity to see what is additionally needed in New Mexico. Moving forward, I would like to increase the amount of air quality resources available in New Mexico, establish a New Mexico Air Quality Working Group, and be of assistance to other Tribes.

BIA Branch of Geospatial Services (BOGS)

Erica Sorrelhorse, Administrative Specialist in the BIA Office of the Deputy Bureau Director, recently provided information that may be of interest to Tribes regarding the plans to eliminate BIA BOGS support. See below for Ms. Sorrelhorse's complete statement.

In the event of BIA BOGS support being terminated, all software will continue to work as it does now. However, there is a chance that Tribes will be subject to costs for product support from ESRI and will need to pay for upgrades to the latest version. This may also prevent Tribes from being able to move licenses to new laptops/desktops. Tribes may lose the Tribal support line and the free GIS training opportunities as well. Unconfirmed information suggests that Tribes won't lose the version of GIS that they are currently on or any of the work they have done with it.

Other concerns for Tribes would be that EPA GAP does not provide funding for building or maintaining capacity in Tribal Programs. Tribes may have to pursue options to leverage other grant funded programs or Tribal funds to support these costs to maintain or develop GIS Mapping Programs. EPA and BIA suggest that affected Tribes use Google Earth and Microsoft Paint to replace lost capacity from this change. These tools should work for quick sketches, but are not an entirely sufficient or appropriate replacement for all the planning and programs in which Tribes engage.

Response from Erica Sorrelhorse regarding BIA BOGS:
"In line with the President's Reorganization Executive Order 13781 (EO) and the Director of Management and Budget Memorandum dated April 12, 2017, the Bureau of Indian Affairs (BIA) is committed to streamline processes in pursuit of efficiency while maintaining focus on cost-savings efforts and the BIA mission.

In these efforts, we are confident, redirecting staff and funding to our field offices where the technical knowledge and experience is located relative to tribal and individual trust assets and work can best be supported. BIA is not seeking to eliminate services currently being provided to Tribes, rather, we are examining our approach for improvement to better meet the needs in the field, and to assure cost effectiveness of appropriations while supporting trust functions for direct service benefits to BIA, our tribal partners, and Tribal/individual trust asset owners.

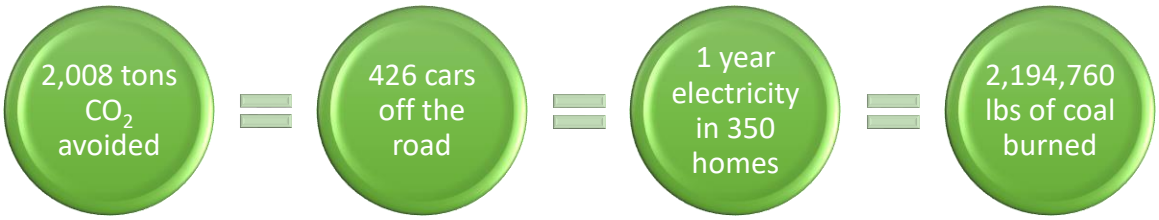
The Geospatial Services contract with Management Business Solutions (MBS) was set to expire January 15, 2019, and was one of many pending actions prior to the lapse in government appropriations and the extended furlough period. BIA staff worked with its Contracting Office (CO) in Reston, VA to obtain an extension of this contract through April 15, 2019, to allow for continuity of services, which also furthered opportunity to evaluate the return on this significant financial investment.

Along with the MBS contract is the Department of Interior, Esri (ELA) Licensing Agreement that includes BIA. It is a consequential matter, which deems it evident we need to take a serious look at the number of BIA and Tribal licenses being issued, whether they are effectively meeting the intended need, and if there are cost savings that can be obtained by alternative methods.

We will collect all available information and proceed with the review to determine next steps in the next few days. It is our intent to engage both BIA and tribal users for development of a sound realignment of the Office of Trust Services, Branch of Geospatial Services (BOGS). A users group will be coordinated to define core role and functions of BOGS necessary to support the geospatial activities as needed to further the BIA mission and in accordance with the above mentioned EO and Memorandum, by determining streamlined processing and cost effective methods/alternatives to allocate trust and non-trust funds appropriately."

4.3 Energy

Guaranteed Energy Savings Program

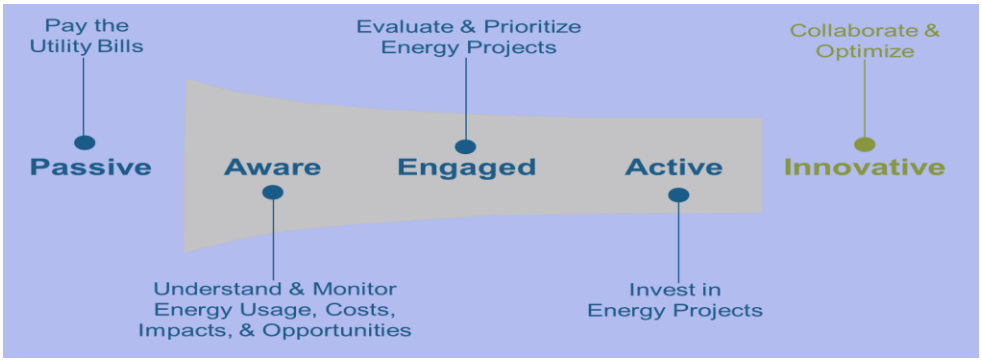


The equivalent of 426 cars off the road, one year electricity usage in 350 homes, or 2,194,760 pounds of coal burned. This is the 2,008 metric tons of carbon dioxide equivalent offset the Leech Lake Band of Ojibwe's Guaranteed Energy Savings Project (GESP) has with energy upgrades in 22 Leech Lake government buildings. The project includes easy energy control measures such as lighting and occupancy sensors and went as far as converting furnaces from electric to natural gas, replacing all hotel room HVAC units, and upgrading large air handling units in our larger buildings. GESP started in August 2018, and will be completed in April 2019. As part of the project, two solar arrays (a 40-kilowatt and a 20-kilowatt system) were installed to demonstrate the Band's commitment to sustainability. Leech Lake's GESP project evaluated over 469,000 square feet in 22 buildings to determine the best payback savings. After an Investment Grade Audit and in-depth discussions over a year with Band staff and consultants, we selected energy control measures that average 2,728,278 kWhs, 14,646 gallons of propane, and 1,211 kGal of water per year in savings. The GESP project will pay for itself in 14 years with an average savings of $276,000 per year allowing programs to invest in the community rather than energy bills.

MTERA Supports Tribal Energy

The Midwest Tribal Energy Resources Association (MTERA) is a technical assistance network, supported by the Department of Energy Office of Indian Energy (OIE). Our mission is "to empower Midwest Tribes to manage energy resources through collective action." Our intention is to create a clean, secure, sustainable energy future for Tribes and their neighbors.

The organization got its start in 2014. A few Tribes came together to discuss energy issues in the region. We realized that Tribes across the country fell somewhere on the spectrum shown below. Some were quite successful, while others had yet to be fully engaged in the energy arena. Our original intention was to be a clearinghouse of energy information. In 2016, MTERA received a grant award from the Office of Indian Energy to create a technical assistance energy network for Midwest Tribes. The grant allowed us to work on organizational development as well as expand our reach to Midwest Tribes.



The energy industry has a significant impact on Tribes. It affects their air, land, water, community, economy, and culture. Energy development can either support or be a detriment to these fundamentals. Likewise, energy decisions affecting Tribal lands are largely shaped by federal policy, state regulations, and utility investments. These decisions are often not aligned with Tribal interests. That is why Strategic Energy Planning is a featured service that MTERA provides to its Member-Tribes.

Today, MTERA has 8 Member Tribes:
Fond du Lac Band of Lake Superior Chippewa
Forest County Potawatomi Community
Ho-Chunk Nation
Lac du Flambeau Band of Lake Superior Chippewa
Leech Lake Band of Ojibwe
Mille Lacs Band of Ojibwe
Oneida Nation
Stockbridge-Munsee Band of Mohican Indians

MTERA has several active projects with current Member-Tribes:

- Coordinate strategic energy planning workshops for Tribes with assistance from Office of Indian Energy and National Renewable Energy Laboratory (NREL)
- Introduce Member-Tribes to energy monitoring tools and software
- Provide initial resource assessment work to find opportunities that can supplement their energy needs
- Provide financial assistance for baseline (current) energy consumption, energy audits, and pre-feasibility work
- Issue monthly newsletters that feature regional projects, funding opportunities, events, and other energy updates
- Engage Member-Tribes in monthly teleconferences and periodic workshops

Communication is important. During April 8-9, 2019, MTERA is hosting a Regional Energy Workshop for Midwest Tribes at Forest County Potawatomi Community in Milwaukee. Topics include energy industry basics, why do energy planning, project development, and Tribal

utilities. It's our hope that local Midwest workshops like these will provide awareness for Midwest Tribes and encourage them to become a Member-Tribe. Please contact ExecutiveDirector@MTERA.org for more information, or visit www.mtera.org.

4.4 Indoor Air Quality

Implementation of Training Leads to 90% Reduction in Sick Children

Although Alaska's Northway Traditional Council does not have an established or funded air program, they recognize the need for training and information to improve their indoor air quality. Several years ago, the Conservation Coordinator took an Indoor Air Quality training course through ITEP. With the knowledge gained from this course, they embarked on several projects to improve their air quality.

The first step they undertook was to check the wood stoves in all the homes. Several turned out to be leaking smoke into the homes due to cracks in the sides of the stoves, leaking stove pipes, and poor stove pipe connections going into the roof to release the smoke from the stove. A grant was located and the community received six new stoves and stove pipes. Several other home owners purchased their own new wood stoves. Later, the health aide at the local health clinic reported a nearly 90% reduction in sick children coming into the clinic. With this clear success, the Conservation Coordinator then encouraged home owners to clean their stove pipes monthly. This is a challenge in Alaska since the roofs are slippery during the winter, but the job gets done anyway.

In addition, after learning about the impact of burn barrels, the Conservation Department provided education to the community, and the community has now almost stopped using burn barrels outside in the yards. The Conservation Department has continued to attend classes and trainings through ITEP. At the last class they were given a tester for wood moisture content, and have been testing the wood that residents use. They have also ordered the free clean air activity coloring books offered by EPA for the schoolchildren so they can learn about clean air from a young age.

Separately, Northway also implemented a solar panel project. One of the stated goals in their clean energy grant was to reduce carbon emissions and fossil fuel dependence in their Tribally owned buildings. The initial target was to reduce that dependence down by at least 20% per year, and have a corresponding effect with carbon emissions from their oil fired heating systems in the three buildings. It was noted in the report that the exhaust (emissions) may have contributed to respiratory related health concerns for the elderly and youth in the community.

Northway is actively trying to establish an air quality program, but there are many competing needs. Often, they are left to scratch funds together for this important work, and many improvements are paid for out of community members' own pockets. The value of training, capacity building, resources, and funding is as clear as the improved air is in the community!

The Nunakauyak Traditional Council Indoor Air Quality Project

The Nunakauyak Traditional Council (NTC) is located in Toksook Bay, Alaska. With approximately 140 homes located in this rural village, they face many challenges just like other communities that surround them. The price of fuel averages $5.00-$9.00 a gallon, making residents wary about using proper ventilation and keeping "air tight" homes to not lose this precious heat. Despite the NTC's Environmental Programs efforts through articles and newsletters, they saw a need to find creative ways to catch the community's attention on these issues, and that is just what they did.

The NTC staff, Roderick Atti and Christine Lincoln, successfully conducted an Indoor Air Quality project that focused on healthy homes assessments and education. The purpose of this was to learn what the biggest indoor air quality concerns are in the community, educate accordingly, and determine what future outreach and project steps should be taken to address those concerns.

The first task was to receive training on conducting the home assessments. ANTHC staff traveled to Toksook Bay to provide the adequate training they needed to complete the project. Next was to schedule the home assessments. With approximately 140 homes in Toksook Bay, a realistic goal of 60 homes was set and scheduled for the winter. Using phone, social media, newsletters, and flyers, the staff were able to assess and educate all 60 homes before the end of the winter months so they decided to keep going and were eventually able to provide these services to an amazing total of 98 homes before the end of the winter months.

After compiling data from the assessment, staff identified areas where to continue indoor air quality work and looked for next steps. First, they contacted the school and worked with students creating indoor air quality posters. Then they contacted the regional health clinic to have them assist on education for air quality issues related to health. Pamphlets and posters were then posted at the Tribal building and local health clinic that addressed the top issues found during the assessment.

Finally, Mr. Atti and Ms. Lincoln prepared a presentation to share with residents during the Tribal Annual Gathering and also developed a report that was distributed to participants and in the NTC Newsletter. The Nunakauyak Traditional Council's Environmental Department continues to provide indoor air quality education and is taking next steps for the future.

The NTAA Indoor Air Quality Work Group

The NTAA IAQ Work Group had some issues this year. Being on or in the workgroups is not all fun and games. The lead for this workgroup has changed and participation has gone down a little. When it comes to work groups, it is hard to keep people motivated. There are so many things in the way, it would be easy to throw in the towel and end this workgroup, which we considered doing, but indoor air is important. Everybody that breathes air is important. So we made the decision to not only continue, but to try to "breathe some fresh air" into the group.

In March 2019, the workgroup held a webinar on Green Tribal Building Codes called, "Policy Tools to Improve Indoor Air Quality in Tribal Homes." One of the main topics of discussion was how a Tribe might create their own green building codes to improve the indoor air of houses. It does not have to be difficult to do what you need, so start small. One Tribal organization wrote codes for mold and moisture - that is a start and if that is all you do it is better than nothing! The webinar also covered EPA's Tribal Green Building Toolkit from 2015 that developed out of Region 9.

The IAQ workgroup meets every third Thursday of the month at 10:00 am Alaska, 11:00 am PT, 12:00 pm MT, 1:00 pm CT, and 2:00 pm EST. We hope to hear you on the next call so we can all work together to improve the vital air we breathe.

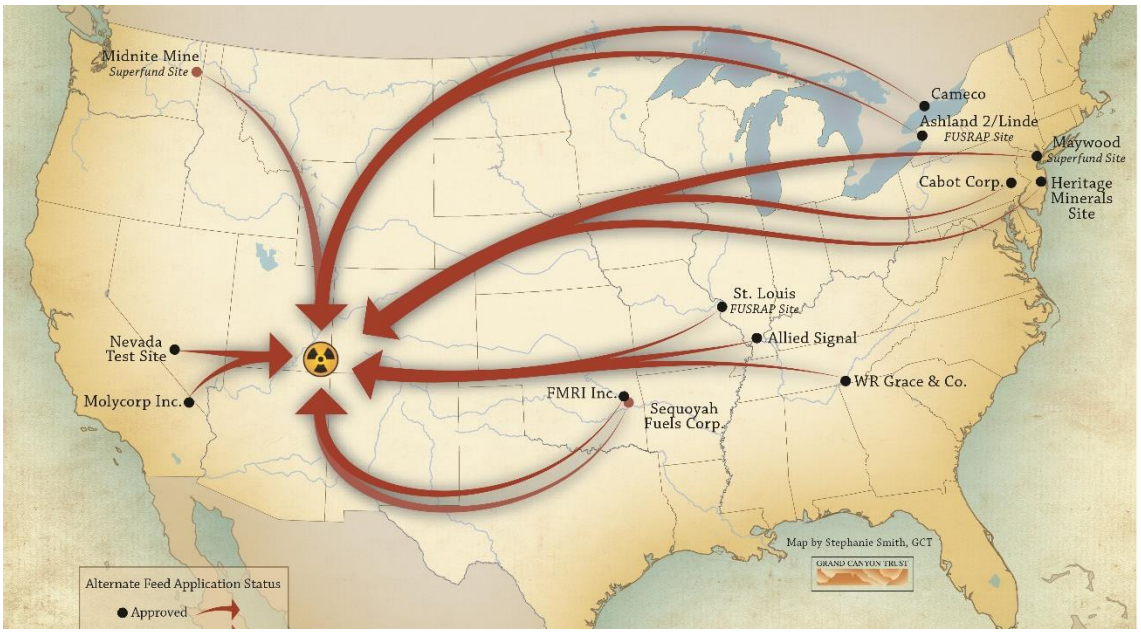
4.5 Hazardous Air Pollutants (HAPs)

The Ute Mountain Ute Tribe (UMUT), the Neighboring Uranium Mill and NESHAP Subpart W

The Weeminuche Band of the Ute Mountain Ute Tribe (Tribe) has reservation lands in three states: Colorado, New Mexico, and Utah, and the population of Tribal members is currently about 2000. In the Four Corners region of Towoac, Colorado, where most of the members live, we are trying to initiate monitoring programs for particulates and ozone. In New Mexico, there are concerns about the hazardous pollutants in the oil and gas exploration and production fields. However, probably the most unique situation is at White Mesa, Utah, home to a few hundred Tribal members. The White Mesa Community (Community) is a mere five

miles from the White Mesa Uranium Mill, the only privately owned conventional uranium mill and disposal facility operating in the U.S, currently operated by Energy Fuels. The Tribe shares a boundary with the mill property and White Mesa is the closest community to the mill.

The 1980 Environmental Impact Study stated the mill would process local uranium ores and have a lifespan of 15 years, a typical lifespan. The uranium is milled at the plant and exported, but all the waste, which includes chemicals and tailings with radioactive decay products and other natural radioactive elements such as thorium, are left on-site in impoundments. In 1996, instead of closure, the mill began to process alternative feeds deemed 'by-product material' from many Formerly Used Sites Remedial Action Program, or FUSRAP (cleanup of the early atomic energy program sites), and Uranium Mill Tailings Radiation Control Act (UMTRA) sites in the country, as well as from Superfund sites. To date, the mill has accepted nineteen alternative feeds originating from all parts of the country and from a host of chemical processes, not only from the uranium or vanadium mill processes but several sources came from, and continue to come from, further uranium enrichment that yields uranium hexafluoride as a product.



Alternative uranium feeds sent to White Mesa Uranium Mill.

Also, in 2018, the mill applied to the Utah Department of Environmental Quality (UDEQ), who has oversight of the milling operations for construction of two new tailings impoundments, Cell 5 A and B. In effect, the mill site has become a low-level waste repository for naturally radioactive materials that have been concentrated by a thousand times, though without the essential safety features to protect human health and the environment required by a commercial radioactive disposal facility.

White Mesa Air Quality Shelter (right) with instrumentation and neighboring pump house.

Due to the concerns of the Community, the Ute Mountain Ute Environmental Programs Department (EPD) received a CAA grant in 2011 and subsequent years in order to investigate the uranium mill impacts there. Using a high volume instrument to measure total suspended particulates (photo at left), samples were taken and sent to a lab for radiochemical analysis. The results were compared to effluent concentration levels (10 CFR Part 20) for each radionuclide of interest, as well as the results from the mill. The primary assessments of the sampling method to date suggest no impact to that location in the Community. In addition, the meteorological channels at the Air Quality Station collected data to support that the wind's second most frequent direction from the mill is toward the Community.

The monitoring effort happened to be timely, because in 2012, a non-controlled event with visible emissions shrouded the mill's main processing building in an orange-yellow cloud (photo at right). The White Mesa community alerted the EPD and had concerns of the health impacts of the emissions released.

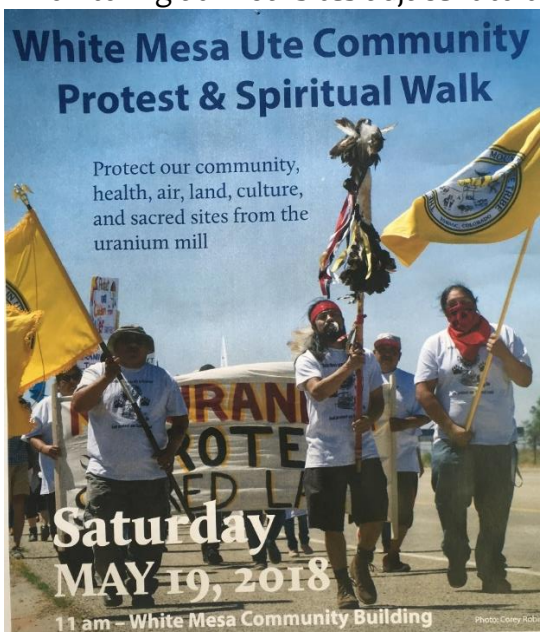
Unidentified Emission Release from White Mesa Uranium Mill. Photo was taken March 2012 by a member of the White Mesa Community.

Also in 2012, the radon-222 emissions from Cell 2, one of the conventional tailings impoundment, exceeded the 40 CFR Part 61 (NESHAP) Subpart W requirements that the flux from radon-222 (a decay product of uranium-238, which is a gas) be less than 20 pCi/m2-s from operating mill tailings. Since that time, both Cell 2 and Cell 3, the adjacent tailings impoundment, have radon flux results frequently over 20 pCi/m2-s in the summer months, though when averaged for the yearly report, the flux does not exceed the regulatory limit.

In 2014, EPA proposed revisions to the 40 CFR Part 61 Subpart W, mentioned above. This action set in motion a huge effort involving the Tribe's EPD and General Council. Staff and Tribal members met in White Mesa with the UDEQ along with representatives from the mill's operational staff, Energy Fuels, and for two days discussed in detail the mill's effect on the environment. The Tribe's EPD presented extensive comments regarding the mill and its operation with respect to the proposed rulemaking, and also sent these comments officially to EPA during the comment period.

On January 17, 2017, the EPA officially issued a final rule that updated Subpart W. One of the key points raised during the revision discussion was that non-conventional impoundments must be covered with water at all times to control the emission of radon-222. Over the past years at the mill, the liquid waste in the non-conventional impoundments are 'reprocessed'. This process requires the liquids to be pumped back through the Mill for uranium and vanadium recovery, and allows sediments and solid layers in the solutions, which have precipitated out, to be directly exposed to the atmosphere. The Tribe has concerns that during the periods of time that the liquids are removed and the residues or precipitates are exposed to the air that an increase in the release of radon-222 occurs that impacts the nearby Community members and wildlife close to the mill. The EPA recently explained to the Tribe that these sediments are not subject to the Subpart W rule and no action will be taken regarding the mill's operations.

The UMUT continues to have an on-going discussion with the EPA and the UDEQ regarding Subpart W on behalf of the Community at White Mesa. The Community continues to be wary and proactive of the mill's impact on their community and lands (see photo below). The AQP plans to perform radon-222 monitoring at Tribal sites adjacent to the mill tailings cells.



The Challenges of Living Next to a Nuclear Power Plant

Located on the banks of the Mississippi River in southeastern Minnesota, Prairie Island Indian Community (PIIC) is the closest community in the nation to a nuclear power plant and nuclear waste storage site. The Prairie Island Nuclear Generating Plant (PINGP) sits on ancestral Dakota land immediately adjacent to the reservation, just 600 yards from Tribal member homes and Tribal businesses. Despite the similarity in names, PIIC does not own the power plant nor was it properly consulted before the plant was constructed.

In 1968, Northern States Power Company (now doing business as Xcel Energy) started construction on PINGP. The plant began operating in 1973. The federal government's failure to properly uphold its trust responsibility to PIIC by allowing the plant to be built so close to the reservation has meant that Tribal members have been forced to live with health and safety concerns for nearly 50 years. Those concerns increase every year as the plant ages and the on-site stockpile of spent nuclear fuel continues to grow (there is no national repository for storage of spent fuel - also referred to as nuclear waste).

More than 35 years ago, Congress passed the National Nuclear Waste Policy Act of 1982, mandating the establishment of a national nuclear waste repository and removal of the spent fuel from existing commercial nuclear power plants, including PINGP. The government has failed to deliver on that promise. By the 1990s, PINGP had used up all of its holding capacity for spent nuclear fuel. Much to the objection of the Tribe, in 1994 the Minnesota Legislature approved dry cask storage as a "temporary" solution for the storage of spent nuclear fuel.

Today, nearly 50 years later, the PINGP is one of the oldest operating nuclear power plants in the nation. With no federal solution for the storage of nuclear waste, 1.6 million pounds of spent nuclear fuel is currently stored in 44 "temporary" dry cask containers next to the reservation. That will grow to a total of 98 casks through the end of the plant's current operation license.

Because of the burden placed on the community, PIIC has been active with legislative issues surrounding nuclear waste over the years and dedicated immense time and resources to properly address health, safety, and environmental concerns. That has included:

- Air quality and radiation monitoring – PIIC uses its own resources and support from the US EPA to conduct independent radiation monitoring near the plant. The Tribe's work supplements monitoring conducted by the utility and the MN Department of Health. Indoor and outdoor air quality programs have also been implemented to monitor and raise awareness around air quality.
- Proactively engaging on regulatory issues – PIIC employs full time government relations staff and a nuclear specialist that serves as a liaison to the Nuclear Regulatory Commission and the Department of Energy.
- Water quality improvement – PIIC partners with the EPA and other stakeholders for annual water quality tests, as its proximity to the power plant also raises water quality concerns.

- Emergency response exercises – PIIC participates in biennial emergency drills with the utility and government agencies in addition to its own in-house emergency drills.
- A continuous search for alternative land – Facing the reality that nuclear waste may never leave PIIC's sacred land, for years the Community has been working with the state of Minnesota, the federal government, and Xcel Energy to find a solution. In 2003, the state of Minnesota and Xcel Energy signed an agreement recognizing the Community's need for alternative land and supporting its ability to acquire land with the intent to be taken into trust. In 2018, PIIC purchased just over 1,000 acres of land a safe distance away from the power plant and nuclear waste storage site and has begun the process for moving that land into federal trust .

Although there is no end in sight for the removal of the spent nuclear fuel from Prairie Island, there is an opportunity for the Community to create something positive from the situation. As a condition to allowing Xcel Energy to store nuclear waste on site at PINGP, the Legislature required that Xcel Energy establish a fund for renewable energy projects. Prairie Island Indian Community has never received a dime of that money to-date, but the Community is hopeful that will change this year.

A draft bill that would provide funding for the Prairie Island Net Zero Project is before the Minnesota Legislature now. The bill funds conservation and renewable energy generation projects that will allow PIIC to become a net zero community – where the total amount of energy consumed is offset by the amount created through renewable energy generation. PIIC would be among the first communities in the nation and across Indian County to achieve this status. More importantly, the project will positively change the energy narrative that has defined PIIC for decades.

Air Toxins from Across the Sault Ste. Marie Tribe's Border

The Sault Ste. Marie Tribe of Chippewa Indians is the largest Tribe east of the Mississippi River. The main Tribal reservation is located in the beautiful Upper Peninsula of Michigan. The reservation is within the city limits of Sault Sainte Marie, Michigan, and only a few miles south of our Canadian sister city Sault Sainte Marie, Ontario.

The city that surrounds our reservation features a small population of less than 20,000 people and a minor amount of industry impacts on air quality. The Canadian side however, boasts a population of over 74,000 and has an integrated primary steel plant located on the St. Mary's River that separates our two sister cities. The St. Mary's river is an international shipping

channel that has five locks (two constructed on the US side and one on the Canadian side) that see an average of 10,000 ships passing through annually.

The steel plant has two blast furnaces, three coke batteries, two 260 short ton basic oxygen furnaces, with two ladle metallurgy stations for refining and alloying. The coke making production alone emits ammonium compounds, naphthalene, mercury, coke dust, and inorganic arsenic. The Sault Tribe has taken an interest in learning more about the mercury that is emitted from various points in the production of steel at this plant. This toxin is of interest to us because our Tribal population diet is heavily fish saturated and we already experience fish advisories due to the mercury content within certain types of fish. This has led us to start looking into working with the National Atmospheric Deposition Program (NADP), join the Mercury Deposition Network, and create an NADP site at Sault Ste. Marie, Michigan. The Forest Service used to operate an NADP site 30 miles to the west of the Sault Ste. Marie reservation, but it was shut down. Excitingly, the Forest Service has stated that they are willing to give all the equipment to the Tribe and help provide additional funds to operate it. The Tribe is looking forward to this opportunity to improve our monitoring capabilities.

4.6 Mobile Sources

Volkswagen Environmental Mitigation Trust and Tribes

The Volkswagen (VW) settlement diesel emissions environmental mitigation program is off to a great start for its second year. Established as part of the settlement with VW after they were caught cheating on air quality emissions standards, the program distributes money on an annual cycle from trust funds established by VW to pay for mitigation actions that reduce harmful pollutants from diesel engines – primarily oxides of nitrogen (NO_X). Approximately $55 million will be distributed from the Tribal Trust over the course of four or five years. Any federally recognized Tribe can apply for funding from the Tribal Trust, which they can use to replace old, polluting diesel vehicles or equipment with new, cleaner models, or even install electric vehicle charging stations.

The first funding cycle saw 26 Tribes from around the country become beneficiaries under the Trust and submit plans for mitigation actions by the deadline in early 2018. The process was held up for almost nine months while the Court and the Trustee worked out a new formula for allocation of the funds, but now things are moving again and out of the 26 Tribes that became beneficiaries, 25 are submitting their revised mitigation action plans. On May 15th, approximately $6 million will be distributed among the 25 Tribes to fund the plans and improve air quality on Tribal lands.

Meanwhile, the second funding cycle began on January 15th, 2019, and Tribes are encouraged to seek beneficiary status under the Trust so that they, too, can make use of the funds for mitigation actions. As of this writing, almost 50 additional Tribes have expressed interest in the program. Many of these Tribes have worked with ITEP (who is the Technical Assistance Provider) to prepare the required documents and approximately 10 have submitted their

documents to become beneficiaries. Along with any of the first-round Tribes who wish to participate again in the second funding cycle, the Tribes who get their documentation in to the Trustee and the Court by the March 18th deadline will be eligible to seek funding from the Tribal Trust this year. An estimated $15.5 million will be distributed in this second funding cycle, with funds to be disbursed on November 13th, 2019.

In 2019, the ITEP Technical Assistance Program will also be forming a Tribal Advisory Council to advise ITEP on its outreach and training efforts to ensure that Indian Tribes are aware of the Indian Tribe Trust, and to provide a forum for Indian Tribes to raise general questions relating to the Indian Tribe Trust Agreement. Lastly, the NTAA VW Settlement Tribal Work Group was formed in 2015 and will continue to hold monthly meetings to address this historic settlement.

4.7 Climate Change

Preparing for a Warming Climate

The Ute Mountain Ute Reservation lands are experiencing harmful impacts of a long-term drought. In response to growing concerns, the Núchíú (Ute Mountain Ute) people applied to the Bureau of Indian Affairs Tribal Resiliency Program to conduct a Climate Change Vulnerability Assessment.

Drought condition effects at a spring on Ute Mountain Ute Tribal lands.

In collaboration with Colorado State University, a project was designed honoring Traditional Ecological Knowledge and elders' observations of land and climate changes. The project was designed to: 1) understand the Ute Mountain Ute Tribe's (UMUT's) vulnerability to drought and climate changes, 2) involve natural resource managers and co-produce drought information for decision-making, and 3) engage the community in climate knowledge.

We relied on in-depth interviews with community members, elders, and natural resource managers in Towaoc, Colorado, and White Mesa, Utah. Twenty-nine elders and five natural resource managers were interviewed between June 2017 and January 2018. The interview results suggest a community concern about the changing climate. This information mirrors the climate change trends occurring in the Four Corners Region. Increases in temperature, reduced precipitation, increased drought conditions, and changes in seasonality combine to cause significant impacts to human livelihoods and the resources that the people depend upon. These results highlighted the need to move towards adaptation planning. The project results were shared with elders, Tribal leadership, natural resource managers, and community members.

The UMUT was awarded funding from the Bureau of Indian Affairs in 2018 to undertake adaptation planning as supported by the Tribe. The results of the vulnerability assessment are now being used in the development of a Climate Action Plan.

Wildfires Due to Drought

The Bad River Band of Lake Superior Chippewa's Tribal Soil Climate Analysis Network with the NRCS and BIA

The Natural Resources Conservation Service (NRCS) operates Soil Climate Analysis Network (SCAN) monitoring sites across the country to measure soil moisture and soil temperature as well as a full suite of meteorological sensors. By combining real-time soil data and weather conditions, SCAN stations support agricultural decision-making regarding field operations as well as greater forecasting confidence for agricultural adaptation or transition decisions that are critical to increased resilience during times of extreme weather events.

NRCS wanted to extend the reach of the SCAN network through a partnership with the Bureau of Indian Affairs (BIA) to place SCAN stations in areas of Indian Country that have a need for more information for adequate decision support in management and operational decisions.

The other important component of this project is the educational opportunities that the NRCS is developing through an online portal where anyone can easily access this data. Targeted groups include science classes at schools, the communities near each station, and the agricultural interests that can benefit from environmental conditions for their crops.

Located in far northern Wisconsin along the shores of Lake Superior, the Bad River Band of Lake Superior Chippewa has applied to this NRCS/BIA partnership program that will help the Tribal community in a number of ways, including being able to link the health of the environment to environmental conditions in the educational programs on the Bad River Reservation, data that

will help the climate change forestry adaptation pilot sites initiated under the Bad River Band's climate change monitoring plan, information for farmers on similar soil types throughout the area, increased warning when a heavy precipitation event coincides with saturated soils for possible flood conditions, and weather conditions and wind patterns in an area many miles from the nearest weather station that will help fill in an important data gap for many entities.

The paperwork is filled out, a location was identified, and staff was trained on how to install and operate the station. Once the current snow pack melts in the spring the last part of the project will be to install the station and have it start automatically uploading real-time data to the internet through a solar-powered cellular modem. Several Tribes across the country are at various stages in applying, installing, or have installed an NRCS SCAN station through this partnership with the BIA. There are many excited people here at Bad River and we are excited to have this station up and running very soon. Many thanks to the NRCS and BIA staff for their time and support on this project!

There are many details and partners working on this overall partnership. A Tribal SCAN brochure can be found with much more information here:
https://www.wcc.nrcs.usda.gov/tribalscan/tribalscan_brochure.pdf

4.8 Wood Smoke

Smoke Ready Communities: Preparing for Smoke

We all expect wildfire smoke to affect our lives and health but many people do not consider other types of smoke that occur during a year as potentially harmful. Each community has a unique suite of emission sources that generate fine particulate matter (PM2.5). These include wildfire smoke, prescribed fire smoke, backyard vegetation debris burning, agricultural fires, wood heating devices, and industry. Finding ways to address the variety of smoke issues and sources on a local basis is at the heart of the Smoke Ready Community idea.

Wildfires produce the majority of smoke we are exposed to on a yearly timeframe. To deal with this, people should start planning before the smoke event, including planning for what to do during the smoke event and then what steps to take after the event.

Here are a few steps individuals can take to plan for and reduce their exposure to wildfire smoke:

- Evaluate your AC system and inspect or replace the filter
- Purchase or maintain your in-room air filters
- Inspect and replace your vehicle cabin air filter
- Purchase or check your supply of N95 rated masks
- Plan how to manage your home's door use during smoke events
- Know where to get current air quality information and understand how to use it
- Plan your exercise during the time of day when smoke is less concentrated
- Learn to recognize the symptoms of smoke exposure
- Schedule outdoor activities for other times of the year
- Consider taking a vacation to an area not affected by wildfire smoke

During the fall and winter, we are exposed to home vegetation debris burning, wood heating smoke, and the others sources listed above. Fortunately, we can take measures to reduce these sources of smoke. Communities have formed partnerships to sponsor citywide cleanup days to collect vegetative material for chipping to create mulch, composting for gardens, or taking the material to the landfill. These events are very popular and can easily remove up to 100 tons of potentially burnable material in small communities. To bring down the wood heating smoke emissions, communities can hold a "buy back" event or run a woodstove change out program. Buy backs take functioning wood stoves out of

circulation by offering an incentive for people to turn them in. The stoves turned in are made inoperable and recycled. Woodstove change out programs replace uncertified wood heating devices with EPA certified models, which burn cleaner. A combination of both reduction strategies works well. The best smoke reduction strategy is to develop a robust education and outreach program to make people aware of air quality issues and take steps to reduce their yearly exposure.

To make your home, business, and community smoke ready takes a lot of effort and time but will help you to minimize your yearly smoke exposure and decrease the chances of adverse health effects.

Smoke Ready Resources

- *ITEP / EPA sponsored class "Air Quality Planning for Wildfire Smoke" recorded webinars and class materials:* *https://www.dropbox.com/sh/qudyzokbsvsneyo/AAApoW140SbHJaJS-TWxFoPva/WildlandSmoke_Resources?dl=0&subfolder_nav_tracking=1*
- *EPA Smoke Ready Toolbox for Wildfires website: https://www.epa.gov/smoke-ready-toolbox-wildfires*
- *Smoke Ready Tribal Communities, 2017 National Tribal forum on Air Quality training materials:* *https://www.dropbox.com/sh/wdb9pz373cxb15i/AADsESkgv_fOkim8TQrxbeQBa/050117_SmokeReady?dl=0&subfolder_nav_tracking=1*

Politics, Policy and Process: The Keys to Success for Wood Heater Changeout Legislation

For over three decades, the Hearth, Patio & Barbecue Association (HPBA) has worked with Tribal, state, and local agencies and the U.S. EPA on designing and implementing woodstove changeout programs.

Changeout programs are tried and true approaches to improving indoor and outdoor air quality. After a whole-town changeout in Libby, Montana, outdoor air quality improved by 37 percent and indoor air quality improved by 72 percent. While everyone agrees that changeouts are excellent solutions to cleaning up the air, improving home safety, and reducing home heating prices, a huge hurdle usually remains: funding.

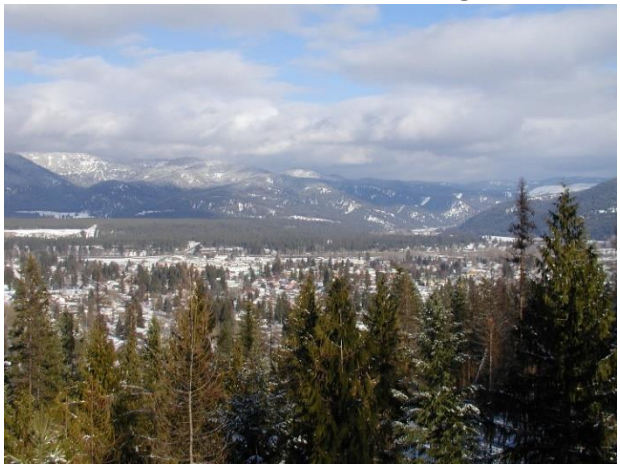
Over the years, funding for changeout programs has come from multiple sources: the federal Targeted Air Shed Grant program, federal Supplemental Environmental Projects (SEPs), state funding, and utility company rebate programs. SEPs have provided the majority of funds historically, but this funding source has dwindled in recent years. Although SEPs haven't been outright eliminated, they have come under much more scrutiny and require more arduous planning and oversight to initiate. Changeout programs really need a stable, federal source of funding similar to the support diesel engines have received from the Diesel Emissions Reduction Act (DERA). We need a Wood Heater Emissions Reduction Act (WHERA).

Libby, MT - January 24, 2006

In order for a bill to be signed into law, you need three things on your side: politics, policy, and process. Legislation was introduced by Senator Tom Carper (D-DE) at the end of December 2018 to authorize the creation of a wood heater changeout program under the EPA. The introduction served to demonstrate to constituents the dedication of Senator Carper and Senator Lisa Murkowski (R-AK), the bill's cosponsor, to supporting such a program. Unfortunately, the language was introduced too late in the legislative session (with only a handful of legislative days remaining) to gain adequate support or consideration. Having Senate Environment and Public Works Committee Ranking Member (lead Democrat) and Senator Murkowski, a powerful Republican and Senate Energy & Natural Resources Committee chair, lead this bill is "good **politics**." Their support shows the issue is bipartisan and could get enough votes to be passed into law. Although the language introduced in December 2018 was not perfect, it set down this important marker.

Now, Senate staff and stakeholders are working on edits to the language to ensure that products eligible for replacing older, non-certified wood heaters (including woodstoves, hydronic heaters, and furnaces) are readily available and reflect the latest technological advances. We need the **policy** to be strong and defensible. However, getting the language right is just the first step of many.

After introduction in the Senate, an identical version of the bill is typically introduced in the House of Representatives. Being aware of the legislative **process** is the second key to shepherding legislation through Congress. Each bill must be reviewed by the appropriate committees of jurisdiction during a hearing. In the Senate, that would be the Environment & Public Works Committee. In the House, the bill needs to be reviewed by the Energy & Commerce Committee. Then, the bills must be reviewed during a markup session of the full committee. It can only be voted on by the full House and Senate, respectively, once it "clears" its committee of jurisdiction. The bills then must pass their respective chambers, and then a conference committee-approved version of the two proceeds to the President who must sign the bill into law. Yes, there are some bills that have passed Congress but still haven't been signed into law.



Libby, MT - February 2, 2007

In addition to passage of the enabling legislation, appropriations legislation must also be passed to fund the program. The legislation being discussed today only authorizes the program to be created and recommends spending levels for the program.

Getting a nationwide, federally funded changeout program is a steep hill to climb and needs all the support we can muster to see a bill that has not yet been introduced in the current session of Congress become law. As frequently happens, it may take several sessions of Congress, spanning multiple years, before all the pieces come together to allow a bill to become a law. With the right politics, policy, and familiarity with the legislative process, a federally funded changeout grant program may one day soon become a reality.

For more information about changeout programs, template materials, success stories, and ongoing changeout programs, please visit www.woodstovechangeout.org.

The NTAA Wood Smoke Work Group

In May 2018, during the NTAA Member Meeting luncheon at the NTFAQ in Carlton, Minnesota, the NTAA, in collaboration with EPA, announced the unveiling of the Wood Smoke Work Group (WSWG). The purpose of the work group is to research, develop, and implement national residential woodstove programs to address indoor and ambient air quality impacts from residential wood/coal burning stoves, as well as other wood smoke related issues on Tribal lands.

Work Group Tasks

The WSWG had a slow beginning, but with increasing partners and Tribal voices during the monthly calls, the work group development is making significant progress.

The current Tribal concerns and needs that have been gathered include:

1. *Lack of funding and training opportunities;*
2. *Regional wood smoke data gaps and outreach materials;*
3. *Capacity building on wood stove change out program implementation;*
4. *Increase education and awareness of wood stoves, health effects, and particle pollution.*

The WSWG has steered towards multiple steps to assist with work group development to provide assistance to help guide Tribal programs. The two current steps the WSWG will venture on are: 1) Development of a three-part webinar series for Tribes to assist with wood smoke program development, and 2) attention to and completion of the work group action item matrix which houses short and long term goals.

The WSWG's current goals are:

Short-term goals:

- *Collecting existing education and outreach materials in each region;*
- *Review best practices;*

- *Identify strategies that can be used with or without a change out program to improve the lives of communities.*

Long-term goals:

- *Conduct analysis of impacts of residential burning in Indian Country nationwide to increase awareness in communities, in Tribal programs, and to decision makers;*
- *Identify potential partners to develop relationships on the federal, state, and local level;*
- *Explore potential funding streams to address residential wood stove programs.*

The WSWG has initiated partnerships with Hearth, Patio & Barbecue Association, Tribal Healthy Homes Network, and Lignetics. The WSWG calls are typically held on the first Wednesday of the month at 3:00PM ET. Visit the NTAA's WSWG webpage (https://www7.nau.edu/itep/main/ntaa/Resources/WoodSmoke/) for work group call information and access to the growing list of resources.

4.9 Emergency Management

Hard Lessons Lead To Resiliency

In the wake of the 2017 Isabella County flood, situations arose around the county and the Isabella Reservation that made the Saginaw Chippewa Indian Tribe (SCIT) take a second look at their Emergency response practices. The affected area is not a floodplain, so the extent of the flooding experienced was rare and the Tribe took note of events both on and off the Reservation for future disaster preparedness planning.

Record retention quickly became an issue for the Tribe in the midst of the flood due to flooding in the lower level of the Tribal Operations building that housed hardcopy records, compromising some of the stored documents. Indoor air quality was tested due to complaints of a mold and mildew smell. The decision was made to no longer store documents in the lower level of the Tribal Operations building and remove all paper, equipment, carpet, and drywall, as well as relocating staff.

The SCIT Environmental Team assisted in a Multi-Agency Resource Center Event after the flood that provided local residents impacted by the flood with information, assistance, and resources. The SCIT works closely with the local Emergency Manager and other local agencies to ensure that things run smoothly in emergencies such as the 2017 flood.

The SCIT Environmental Team made the most of the unfortunate severe flooding event by evaluating current practices being used by the Tribe. All notable issues were addressed and added to the Climate Resilient Waste Management Plan that the Tribe was working on at the time. The Saginaw Chippewa Indian Tribe was the first in Region 5 to submit their plan using the Environmental Protection Agency's (EPA) Waste Management Planning Tool.

The Saginaw Chippewa Indian Tribe and EPA Region 5 co-hosted a Disaster Debris Management Training Conference for Tribes in Mount Pleasant, Michigan, at the Soaring Eagle Casino and Resort in August 2018. There were many Federal, State, and local partners in attendance to discuss what actions to take during and after a disastrous event for cleanup and assistance. The local Emergency Manager and SCIT Fire Chief expressed the importance of Mutual Aid Agreements with local agencies and regular Emergency Management meetings; this proved beneficial during the 2017 flood. It was also suggested by different agencies that Tribes have Waste Management Plans in place in preparation for emergencies and to consider a Federal Emergency Management Agency (FEMA) Tribal Mitigation Plan that allows Tribal Governments to declare a state of emergency instead of having to wait on another agency to do so. The SCIT has identified the implementation of the FEMA Tribal Mitigation Plan as a priority and continues to work toward implementation.

Pechanga's Wildfire Smoke Emergency Response System

The Eagle Fire as seen from on the Pechanga Reservation in 2004.

One of the biggest threats to air quality and human health for southern California Tribes is wildfire smoke. Of the top 20 largest wildfires in California's recorded history, eight have occurred in the last 10 years, and 17 have occurred in the last 20 years.[36] A total of 85% of California's largest recorded fires have occurred in the past 20 years—within the last generation. The largest ever recorded, named the Mendocino Complex, occurred within the last year. It is expected that this trend will continue due to a constellation of factors including urbanization in the wildland and a warming climate.[37, 38]

The effect of wildfire smoke on ambient air quality can be severe. Particulate matter, carbon monoxide, and various volatile organic compounds (VOCs) fill the air and can reduce lung function and aggravate pre-existing conditions such as asthma, bronchitis, cardiovascular

[36] CalFire Incident Information: Top 20 Largest California Wildfires (http://www.fire.ca.gov/communications/downloads/fact_sheets/Top20_Acres.pdf)
[37] Langston, E. 2018. In 20 Years, Wildfires Will be Six Times Larger. Outside Magazine (https://www.outsideonline.com/2289216/20-years-wildfires-will-be-six-times-larger)
[38] SciLine. Wildfire Trends in the United States *Accessed* February 27, 2019. (https://www.sciline.org/evidence-blog/wildfires)

disease, and diabetes. Long-term exposure to wildfire smoke may also result in an increased risk of cancer.[39]

In 2018, Pechanga Air Station created a website to stream real-time air data to the Tribal community and to the Tribal Government, including Pechanga Fire Department. To reduce potential exposure to poor air quality as a result of wildfire smoke, Pechanga Air Station is working with Pechanga Fire Department to develop alert messages for poor air quality days. Using a text based system, air quality that is determined to be "Unhealthy," "Very Unhealthy," or "Hazardous"[40] will trigger an alert. That alert will include some basic public health information with proper precautions to take during the air alert. The projected implementation date for this project is winter 2019.

By using the Pechanga Air Station to stream real-time data and incorporating an emergency response component, we are helping the Tribal community to stay safe and healthy in spite of changing and unpredictable air quality.

4.10 Western Regional Air Partnership

Tribal Involvement in the Western Regional Air Partnership

The Western Regional Air Partnership (WRAP) is a voluntary partnership of states, Tribes, local air agencies, federal land managers (US Park Service, US Forest Service, Bureau of Land Management, & US Fish & Wildlife Service), and EPA whose purpose is to understand current and evolving regional air quality issues in the western US. The WRAP region consists of 15 westerns states, including Alaska and Hawaii. Within this area there are approximately 480 federally recognized Tribes. WRAP considers all federally recognized Tribes as members, but for administrative and decision-making purposes, does ask Tribes for a letter requesting to become an active voting member. By virtue of the number of Tribes and wide expanse of geography over which Tribal lands are spread, a large variability exists in the needs and goals of Tribal air programs and their capacity to be involved. WRAP currently has 24 active member Tribes with representation on the Board of Directors, Technical Steering Committee, and several Work Groups. To better meet the needs of Tribes in the WRAP region, the Tribal Data Work Group (TDWG) was formed to conduct data gathering on the size, complexity, and scope of Tribal air quality activity, and to support and participate in the "round two" regional haze state implementation planning (SIP) efforts in the west.

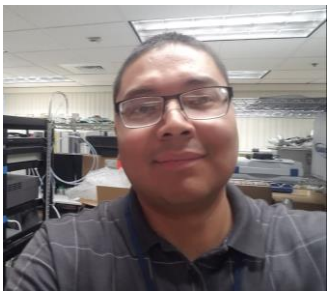
The TDWG coordinated completion of several important projects to help Tribal programs understand WRAP and regional haze. The Work Group also investigated Tribal participation in

[39] Ammann, H., Blaisdell, R., Lipsett, M., Stone, S. and Therriault, S. 2001. Wildfire Smoke: A Guide for Public Health Officials. EPA (https://www3.epa.gov/ttnamti1/files/ambient/smoke/wildgd.pdf)

[40] The Pechanga Air Station uses the color coded system developed by EPA's AirNow (https://airnow.gov/index.cfm?action=aqibasics.aqi)

emissions inventories and Air Quality System (AQS) data reporting. These are the products of this work:

1. **WRAP Website Map:** Updated map includes comprehensive Tribal air quality related activity, with interactive features.
2. **Regional Air Quality and the Regional Haze Rule: Information and Resources for Tribal Professionals:** This factsheet explains regional haze, regulations, the IMPROVE monitoring network, and WRAP, and describes benefits of Tribes becoming active members. A companion PowerPoint presentation was also developed.
3. **Tribes, WRAP and the Regional Haze Rule, Practices and Processes for Tribes to Address Regional Air Quality:** This factsheet and PowerPoint describe opportunities for Western Tribes to participate in the WRAP and EPA's regional haze planning and regulatory processes more broadly. The factsheet provides great information on how WRAP's Work Groups are structured and their goals, how Tribes can get involved with WRAP, and the benefits of involvement.
4. **WRAP Tribal Contact List:** This update of the WRAP's Tribal contact list can be used to more effectively distribute information and resources to Tribes about the WRAP, and can be a communication resource for regional haze SIP coordination and consultation processes.
5. **Tribal AQS Data Gap Study:** Using Tribal air monitoring data from several sources including AQS, AirNow, and the TAMS Steering Committee national monitor study, this effort identified 158 air monitoring sites on Tribal lands. An accompanying Excel file was created to provide searchability of Tribal monitoring stations.
6. **Tribal NEI Data Gap Study:** To better quantify and model visibility impacts, this study investigated Tribal participation in the National Emissions Inventory (NEI) process, crosschecked that information with WRAP base year emissions, and identified any significant data gaps. This effort represents the most comprehensive data set compiled on Tribal participation with the EPA NEI process.
7. **Tribal Oil & Gas Emissions Inventory:** As an in-depth addition to the Tribal NEI Data Gap Study, the TDWG focused on oil and gas related emissions to ensure the most accurate and complete assessment of oil and gas related sources in the WRAP region. These emissions play a key role in the quantification of visibility-impacting emissions both on and off Tribal lands.
8. **Consultation Framework:** TDWG is supporting activity to outline the consultation process and opportunities for Tribes, states, federal land managers and EPA to coordinate and communicate during the regional haze SIP planning process. This includes formal and informal consultation and the procedures that should be followed for inclusion of Tribes.
9. **Informational Webinars:** The TDWG and WRAP will be offering several webinars to highlight the efforts outlined above. The materials will continue to be presented and referenced over the next couple of years of regional haze SIP planning and preparation, and the studies serve as fundamental bases of information for Tribal and WRAP air quality partners.



Michael King is a member of the Navajo (Dine) Nation from Shiprock, NM. For over ten years he has performed technical air quality management, regulatory development, community outreach, and air monitoring for the Southern Ute Indian Tribe, Ute Mountain Ute Tribe, and Navajo Nation, including maintaining air monitoring equipment. He also assists in the collection and reporting of air pollutant data to EPA's Air Quality System data base, has participated in collaborative air pollution research on Tribal lands, and the development of Tribal management plans to protect Tribal air resources, human health, and environment. Michael has a BS degree in Environmental Science from Haskell Indian Nations University, and a MS degree from Purdue University. He is currently the Technology Specialist III for ITEP's Tribal Air Monitoring Support Center.

4.11 Tribal Air Monitoring Support (TAMS) Center

The Tribal Air Monitoring Support (TAMS) Center was formed in 2000 through a cooperative agreement between the U.S. EPA and the Northern Arizona University (NAU) Institute for Tribal Environmental Professionals (ITEP). The mission of the TAMS Center is to develop Tribal capacity to assess, understand, and prevent environmental impacts that adversely affect health, culture, and natural resources. The TAMS Center is the first technical training center designed specifically to meet the needs of Tribes involved in air quality management and offers an array of training and support services to Tribal air professionals.

TAMS Steering Committee

The TAMS Center Steering Committee is the Tribal advisory group that provides guidance on the services offered by the TAMS Center. The Steering Committee consists of Tribal program voting members and ex-officio members representing EPA offices and the Northern Arizona University Institute for Tribal Environmental Professionals and other Tribal support organizations. As of February 2019, the voting members of the TAMS Steering Committee are:

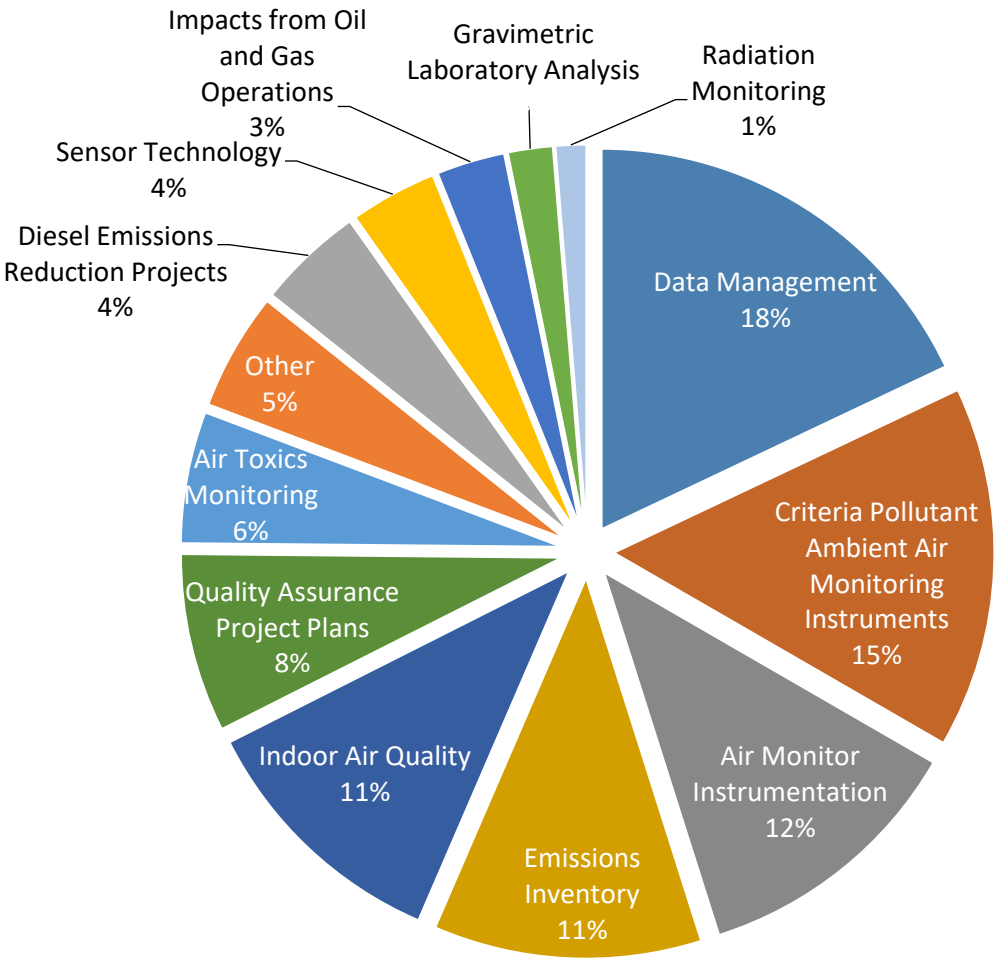
Camille QuickBear – TAMS SC Chair (17-20) – Sisseton-Wahpeton Oyate'
Vallen Cook (18-21) – Grand Portage Band of Chippewa
Lori Howell (17-20) – Shoshone-Bannock Tribe
Carma Huseby (18-21) – Leech Lake Band of Ojibwe
Mike Natchees (18-21) – Ute Tribe of the Uintah and Ouray
Darold Wallick (17-20) – Pala Band of Mission Indians
(One TAMS SC Voting Member Seat is vacant)

TAMS Technical Needs Assessment

In 2014, the TAMS Steering Committee conducted a TAMS Center Technical Needs Assessment to determine whether the current TAMS Center services were still useful to the majority of the Tribal programs nationwide. In 2016, The TAMS Steering Committee revised and updated the current TAMS Technical Needs Assessment.

Since the last TAMS Technical Needs Assessment in 2014, the TAMS Staff and SC worked to enhance the questions for 2016. The 2016 Needs Assessment was scripted to produce the most valuable results by providing a clearer direction for services provided by the TAMS Center. The 2016 Needs Assessment identified the top five Focus Areas, an increase of two Focus Areas from the last assessment. The intent of increasing from three to five was to provide respondents a larger platform to express their needs on which the TAMS Center could take action via the Support Needs, i.e.: professional assistance, classroom training, equipment loan support, or education/outreach. Furthermore, the 2016 Needs Assessment allowed respondents to select from 24 available Focus Areas compared to 10 in 2014. The results are contained in Graph A: 2017 TAMS Technical Needs Assessment Results.

Darold Wallick is the newest member of the TAMS SC. Darold has been involved with air quality monitoring since July of 2014, and is currently the Air Quality Program Manager for the Pala Environmental Department in San Diego County. His prior experience as an Information Systems Specialist has helped him greatly in adapting to the air quality monitoring world. Darold's enthusiasm and thirst for knowledge has lead him to instructing others in air quality fundamentals through the Institute for Tribal Environmental Professionals (ITEP).



Graph A: 2017 TAMS Technical Needs Assessment Results

The TAMS Steering Committee has developed an implementation plan in regard to the results. The implementation plan will be finalized and shared with the Tribes and government support agencies through various venues and forums. Tribes interested in the report can request a copy by contacting the TAMS Center at (702) 784-8264.

Tribal Environmental Exchange (TREX) Network

After the original National Environmental Information Exchange Network grant that was funding the TREX Network was not continued in 2017, Tribes using the TREX network approached the TAMS Center to help with continuing the operation of the TREX Network. Working with Tribal support staff from the Office of Air and Radiation and the Office of Air Quality Planning and Standards, emergency funding was secured to continue the TREX Network operation. After the funding ends this October 2019, the ITEP, in consultation with

the Tribal TREX users, has strategized on a plan to keep the TREX Network operating by having the Tribes pay individually for the service.

Virgil Masayesva Tribal Air Programs Excellence Award

In 2007, the Tribal Air Monitoring Support (TAMS) Center Steering Committee chose to develop an award that formally recognizes the tremendous work put forth by Tribal program staff on their air quality projects and programs. The award was named the Virgil Masayesva Tribal Air Programs Excellence Award after the co-founder and former director of the Institute for Tribal Environmental Professionals (ITEP).

Virgil Masayesva was a member of Hopi tribe and a decorated Vietnam Veteran. In his role as special assistant to NAU president Eugene Hughes, he co-founded ITEP in 1992 with a vision of strengthening Tribal sovereignty by helping Tribes build environmental management capacity and capability. Virgil was instrumental in developing and building the ITEP training programs including the TAMS Center and numerous other projects dedicated to the protection of Tribal environmental resources and cultures. Through his innovation, hard work, and commitment, Virgil positively affected the direction of environmental management in the Indian Country forever.

Every year since 2007, the TAMS Steering Committee has selected hardworking individual Tribal environmental professionals, Tribal air quality programs, or Tribal consortia from a pool of nominations to receive this prestigious award. The selectees are nominated by their peers and colleagues in any one of three categories: Technical Excellence, Policy Excellence, and/or Tribal Program Development. The award recipient is recognized and presented a commemorative plaque at the Virgil Masayesva Award Ceremony held at the annual National Tribal Forum on Air Quality.

Gillian Gawne-Mittelstaedt is the 2019 recipient of the The Virgil Masayesva Award! Ms. Mittelstaedt is Director of the Tribal Healthy Homes Network, a consortium that works to prevent exposure to indoor air hazards, through training, education, community-based research, and culturally-tailored interventions. Ms. Mittelstaedt also leads the Partnership for Air Matters, a non-profit that provides low-cost indoor air quality toolkits to inform, engage, and empower at-risk families. To date, the Partnership has distributed over 1,000 toolkits to American Indian, Alaska Native, and at-risk households nationwide. In 2017, the Air Matters program received the HUD Secretary's Award for Healthy Homes, and in 2015, received EPA's Clean Air Excellence award. Ms Mittelstaedt serves on EPA's Clean Air Act Advisory Committee, as Co-Chair of the National Coalition on Safe and Healthy Housing and formerly chaired the Washington State Asthma Initiative and the Washington Leadership Council for the American Lung Association. In addition to her air quality and environmental health work, Ms. Mittelstaedt served as Planning Commissioner for two cities and one county, working to balance sustainable land use with community development and economic growth. She is a second-year DrPH in Public Health student at the University of Chicago, Illinois, and

holds a Master of Public Administration from the Maxwell School at Syracuse University. Her research interest is in the development of a more cohesive national risk communication strategy around fine particle air pollution, driving risk-informed decisions that reduce exposure, illness, inequities, and costs to society.

Here is the list of award recipients from 2007 through 2019:

Roxanne Ellingson, Walker River Paiute Tribe	2007
Southern Ute Air Quality Program	2007
Nez Perce Tribal Air Quality Program	2008
Dewayne Beavers, Cherokee Nation	2008
Forrest County Potawatomi Air Quality Program/Jeff Crawford, FCPC Attorney General	2009
Dr. Toni Richards, Bishop Paiute Tribe	2010
Navajo Nation Radon Program	2011
Joy Wiecks, Fund Du Lac Band of Lake Superior Chippewa	2011
Brandy Toft, Leech Lake Band of Ojibwe	2012
Syndi Smallwood, Pechanga Band of Luiseno Indians	2013
Delbert Althaha, White Mountain Apache	2014
Randy Ashley, Confederated Salish and Kootenai Tribe	2015
Dan Blair, Gila River Indian Community	2015
Angela Benedict, Saint Regis Mohawk	2016
Rosalie Kalistook, Orutsararmiut Native Council	2016
Jason Walker, Northwest Band of Shoshone	2017
Northern Cheyenne Tribe Air Quality Program	2017
Morongo Air Quality Program	2018
Gillian Gawne-Mittelstaedt	2019

5 Conclusion

Throughout Indian Country, Tribal Air Quality professionals work every day to protect human health and improve ambient and indoor air quality, and the NTAA hopes that the 2019 STAR tells the story of the successes and challenges they experience on a daily basis. Tribes have faced many challenges throughout their unique histories, and through their strong traditions Tribes will continue to serve as strong stewards of the land, air, and water. Tribes understand the interconnectedness of life, and seek successful partnerships with the federal, state, and local governments, and understand that air quality will improve when Tribes are recognized as strong co-regulators. As the 2019 STAR demonstrates, recognition of a Tribe's sovereignty, adequate consultation with Tribes, and adequate funding for air programs will provide all Americans with cleaner air to breathe and a better world for future generations.

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National Tribal Air Association's

Budget Analysis

May 2019

PRESENTED AT THE
NATIONAL TRIBAL FORUM
ON AIR QUALITY
HOSTED BY THE PECHANGA TRIBE

Appendix A: NTAA Tribal Air Quality Budget Analysis

The NTAA was founded in 2002 through a grant from the USEPA's Office of Air and Radiation.

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

Goals:

1) Advocate for and advance Tribal environmental, cultural, and economic interests in the development of air policy at all levels of government (Tribal, local, state, regional, federal, and international).
2) Promote the development, funding, and capacity building of Tribal air management programs.
3) Promote and facilitate air quality policy and technical information that may include research and scientific and medical studies.
4) Advance the recognition and acceptance of Tribal sovereign authority by conducting effective communication and outreach to local, state, federal, and international agencies, as well as the general public.
5) Encourage and support appropriate consultation with all Tribal governments in accordance with Tribal structures and policies.

The NTAA is a Tribal member organization with 140 principal member Tribes. The organization serves as a resource to all 573 federally recognized Tribal Nations. The NTAA uses its resources to support the efforts of all federally recognized Tribes in protecting and improving air quality under the Clean Air Act within their respective jurisdictions. Although the NTAA always seeks to represent consensus perspectives on any given issue, it is important that EPA understands interactions with the NTAA do not substitute for government-to-government consultation, which can be achieved only through direct communication between the federal government and the Tribes.

Introduction
In 2018, Tribes celebrated the 20th anniversary of the promulgation of the Tribal Air Rule (TAR). The TAR has made it possible for Tribes to take over or actively participate in the management of Tribal air resources to the degree that the Tribe is currently able. Over the last 30 years, Tribes have made great strides in taking on the challenges of managing their air quality. Across the nation, Tribal air issues vary from permitting sources on-reservation, to monitoring for a variety of criteria air pollutants, to participating on Tribal, local, state, regional, and national workgroups. Other program tasks include addressing indoor air quality issues, and reviewing and commenting on permits issued by local, state, and federal agencies.

However, as much as Tribes have progressed in the past 30 years, Tribal funding has become stagnant, even as program costs have increased and air quality issues such as wildfire smoke

have worsened. Tribes are also increasingly participating in addressing emissions from mobile sources. Meanwhile, the nation seems to be operating in a near-constant state of unpredictability when it comes to government funding in general. Continuing resolutions have become the new normal for Congressional spending, making it extremely difficult for Tribes to plan for future funding years and allowing Tribes to keep operating without the government ever adjusting budget amounts. The activities carried out by Tribal programs have been impacted by funding shortfalls, with monitoring stations shut down and workgroup participation ending because travel and staffing funds are no longer available.

As the charts and tables in Appendix B show, the work products delivered by Tribal programs have remained largely unchanged over the years, due to the hard work and dedication of Tribal staff when it comes to making do with very little, but this work cannot continue without an increase in funding.

Furthermore, Tribes see a great need to increase the amount of activity taking place in their air programs. As mentioned above, wildfire smoke levels have increased substantially over the past several years. These events lead to a double impact on Tribal spending, as Tribes need to be able to purchase air quality monitors in order to have the data available to protect the health of their citizens, and because additional staff time is needed to operate these monitors and to inform Tribal government administrations, Tribal members, and Emergency Management Services and Incident Command personnel about pollutant levels. This issue is believed to be so vital to the future of Tribal air programs that a separate section of the 2019 STAR has been written to address it (see *Emerging Wildfire Threats*).

Several instances of backpedaling by the current administration mean that funding for indoor air quality, radon, and climate change work have been completely eliminated in the FY2019 budget request, as it was in the FY2018 funding request. Tribes have also been spending increasing amounts of time reacting to EPA proposals to water down or eliminate existing guidance and regulations. Many of these proposals do not have adequate documentation showing that they are necessary and appropriate and will not cause exceedances in air pollutants. Therefore, Tribes have been spending increasing amounts of time preparing comments on these proposals. Tribal participation in the rulemaking process is more important than ever, but must be supported by adequate funding.

Program Development

Over the past several years, indicators of Tribal air program success grew in the following ways:

- The Treatment as a State (TAS) statute authorizes Tribes to manage programs under the CAA, including regulatory development, reviewing authority for Title V permits, the opportunity for PSD Redesignation of Reservation lands, air quality monitoring, etc. Between 2012 and FY2019, the number of Tribes with non-regulatory TAS status increased from 34 to 53, and the number with regulatory TAS increased from 7 to 10.

- The number of Tribes currently operating air monitors, monitoring for criteria pollutants, hazardous air pollutants, and other pollutants under the National Atmospheric Deposition Program, has grown from 81 in 2012 to 86 in FY2019.
- The number of Tribes with completed Emissions Inventories ranged from 74 in 2012 to a peak of 86 in 2015, but has decreased to 73 in FY2019.
- The number of Tribes with §103 grants has increased from 67 in 2017 to 78 in FY2019. However, this FY2019 total is down from 82 Tribes in 2018.
- The number of Tribes with §105 grants has increased from 34 in 2015 to 40 in FY2019.
- Twenty-nine Tribes applied for, and twenty-six Tribes were determined eligible for, Volkswagen Settlement funds in the first round, which closed March 1, 2019, with approximately $6 million available. Subsequent rounds will disperse another $48.5 million. These funds can be used in limited applications to replace certain old diesel engines with updated technology. However, these applications may not be useful to all Tribes.

Budget Analysis

FY 2018

The 2019 STAR has shown that the health concerns facing Tribal nations have increased in recent years, while funding has remained stagnant, at best. From FY2012-FY2017, overall EPA funding remained fairly steady, reaching a peak of $8.45 billion in FY2012, but decreased markedly in FY2018 to $5.6 billion, meaning that the agency is also fighting to continue its efforts to protect air quality across the US and in Indian Country. Tribal air funding comes almost solely from EPA State and Tribal Assistance Grants (STAG). Peak Tribal funding occurred in 2012 at $12.49 million but only totaled $11.48 million in FY2018. Most Tribes do not have the funding base to pay for these programs themselves. Tribes do not have the authority to raise revenue through taxation, and even if they could do so, taxation would be unlikely to lead to much revenue. For those Tribes with the capacity to raise funds through other methods, such as business ventures, areas such as providing housing and health care for their membership take precedent since many Tribal members live below the poverty level. Replacing aging infrastructure on reservations is also a priority. Many Tribes also operate K-12 schools, colleges, detention facilities, and substance abuse treatment centers, to name just a few governmental entities.

Because federal CAA funding has been stagnant, Tribes with existing air programs receive the vast majority of available funds, meaning that hundreds of remaining Tribes have little hope of establishing an air program, even though they may face serious air quality issues or exist in non-classified or non-attainment air sheds. Even as funding remains stagnant, the number of federally recognized Tribes has grown from 566 in 2012 to 573 in 2018. This problem is especially apparent in Region 3, where the number of federally recognized Tribes has grown from 0 in 2015 to 7 in 2018. None of these Tribes currently receive air funding.

This stagnation in funding can be seen in the leveling off or even decrease of the types of activities that indicate a growing Tribal air program, such as completion (or updating) of

emissions inventories, the movement of Tribes from §103 to §105 funding, placement of new Tribal monitors or submittal of new quality assurance project plans, and the pursuit of authorities such as Class I Redesignation, permitting authorities, Tribal Implementation Plan development, and TAS status. Figure 1 contrasts Tribal funding with rising inflation and cost of living numbers.

FY2019

Congress passed a Continuing Resolution on February 15, 2019, which extends the FY2018 budget through September of 2019, keeping the overall EPA budget at $5.6 billion and the Tribal budget at 11.45 million.

FY2020

The President's budget proposal for FY2020 was released on March 11, 2019.[41] The budget requests $6.1 billion for EPA, which is a $2.8 billion or 31% decrease from the 2019 estimate, and proposes to "eliminate many voluntary and lower-priority activities," although no further details are provided. On a somewhat more positive note, the budget proposes to enhance monitoring of America's significant watersheds, particularly those requiring collaboration among numerous states, Tribes, and local or international governments. The NTAA suggests that the Administration propose a similar approach to enhancing air monitoring across the nation.

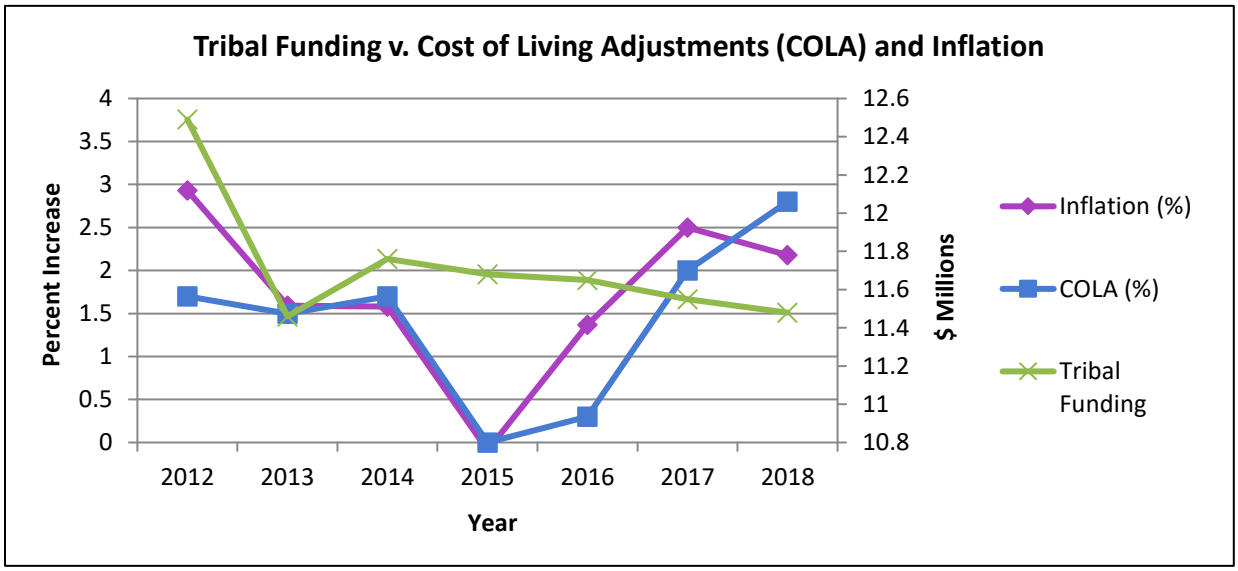


Figure 1 Tribal Funding v. COLA and Inflation

[41] Budget of the U.S. Government, Fiscal Year 2020, *"A Budget For a Better American: Promises Kept. Taxpayers First."*. https://www.whitehouse.gov/wp-content/uploads/2019/03/budget-fy2020.pdf.

Development of a Tribal Air Program

The first thing most Tribes with new air programs do is to complete an emissions inventory (EI). This helps a Tribe plot its air program's future course and decide whether or what type of monitors might be needed. Obtaining TAS status is also a natural next step for many (but not all) Tribes, and movement from §103 to §105 funding indicates movement from "project" to "program" status. However, these progressions are not free of costs. A §105 program receives priority funding, but significant non-federal matching Tribal funds are required to supplement these federal funds. Given the economic challenges that Tribes face, it can be difficult for them to come up with this money. Monitors are expensive to purchase, operate, and maintain. These activities require extensive training and experience. While training is available through the TAMS Center and the Institute for Tribal Environmental Professionals (ITEP) for free or at reduced costs, many Tribes do not have travel funds or cannot spare staff time. Travel scholarships are sometimes available, but are limited. Additionally, most Tribes that have an air program operate with only one air program staff member. It can be difficult to travel for training when there is no one else to help run the program.

Training

Statistics from ITEP show that 493 Tribes (and 9,228 individuals) received training through 2019 at either ITEP or the TAMS Center. When compared to the total of 573 federally recognized Tribes, this means that 86% of Tribes across the nation have received some type of Tribally focused, air quality specific, environmental training. It is interesting to note that about 60% of the individuals trained are no longer in the air quality field. Only 10% of individuals who take an introductory air quality course go on to take five or more courses, indicating that overall Tribal air quality staff do not receive more than entry-level training.

In considering these numbers, it is possible that high staff turnover is being reflected. Instructors at these trainings notice that some Tribes send multiple staff to trainings. It is possible that training multiple staff from a single Tribe reflects growth of an air program because many Tribes begin air training with their General Assistance Program (GAP) staff, then expand to dedicated Tribal air staff and sometimes to supervisors or multiple staff members. However, this can also reflect a high rate of turnover within a Tribe that could be related to stagnant and/or low wages.

Institutional Experience

Many Tribal air programs experience high turnover due to stagnant wages and general low wages in comparison to state/federal counterparts. While many Tribes already know this to be true from their own personal experience, training data from the TAMS Center and ITEP support this statement. Since the number of Tribes with air grants is not increasing and Tribes with established air programs almost exclusively receive the available funding, the conclusion must be that Tribes are continually sending new staff to beginner level trainings to maintain air quality monitoring proficiency. It is rare or challenging to find enough participants to fill advanced level training classes.

Increasing Tribal Monetary Needs

Program costs for health insurance benefits have continued to increase each year, decreasing the amount of program budgets available for staffing, equipment, supplies, training, and transportation costs. In the period from 1991-2014, the average annual increase in health care costs in the US was 4.9%.[42] From 2015-2017, these costs increased by 3% annually - slower, but still outpacing federal funding for Tribal programs. The US Department of Labor estimates that benefits combined are worth about 30% of an employee's total compensation package.[43] Estimating that about 80% of any Tribe's air budget goes to salary and compensation, the 1996 initial appropriation of $11 million, if increased to account for rising health care costs, would need to total a $30 million appropriation today.

The cost of outside technical support also increases annually. Tribes contract with outside entities to provide lab work, to help with audits of monitoring equipment, and to write quality assurance project plans.

If we look at the same problem in terms of general inflation, the 1996 initial appropriation of $11 million would total $17.6 million in FY2019 dollars if it kept pace with inflation (usinflationcalculator.com). Instead, at $11.48 million, funding has barely changed and is, by these calculations, underfunded by 35%.

1996 appropriation	FY2019 (with increased funds to cover inflation)	FY2019 (with increased funds to cover health care costs)
$11 million	$17.6 million	$30 million

The problem of high employee turnover is explored in a February 4, 2016, article by Christina Merhar on the website Peoplekeep.com. The article claims that replacing a business employee costs an average of 6 to 9 month's salary due to hiring costs, training, and lost work time while the new employee comes up to speed. Similarly, a study by the Center for American Progress found that the cost of training a new employee can be roughly 16% of annual salary for those earning below $30,000, and 20% of annual salary for those earning between $30,000 and $50,000. These costs are highly detrimental to Tribes and their air programs.

Monitoring

A recent survey of Tribes operating monitors demonstrates that a significant portion of the monitors deployed in Indian Country are over ten years old. Although the data is not complete, the percentage of Tribal monitors older than ten years could well be over 50%. Meanwhile, the number of Tribes with monitoring programs has remained relatively stagnant,

[42] https://www.kff.org/other/state-indicator/avg-annual-growth-percapita/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D. Sources: Centers for Medicare & Medicaid Services, Office of the Actuary, National Health Statistics Group. National Health Expenditure Data: Health Expenditures by State of Residence, June 2017.

[43] Steve Santiago, "The value of employer benefits," May 11, 2009, CAREER. Found at https://www.bankrate.com/finance/financial-literacy/the-value-of-employer-benefits.aspx.

with 81 in 2012 and 86 in 2019. Tribes operating monitors report that even if there is money in their budget for this task, there often is not enough for audits, spare parts, repairs, or training. Good data collection takes time and money.

Although the lack of reservation-specific monitoring data is detrimental to Tribes, it is also a loss for the monitoring community at large. CASTNET contacts at EPA say they would like to see more Tribal monitors in the central and northwest parts of the country, where gaps exist in the existing network, as can be seen in Figure 2. EPA needs to rely on modeling data for locations where they do not have sites. Modeling is less accurate than data from monitors, especially if the spatial gaps between monitors are large.

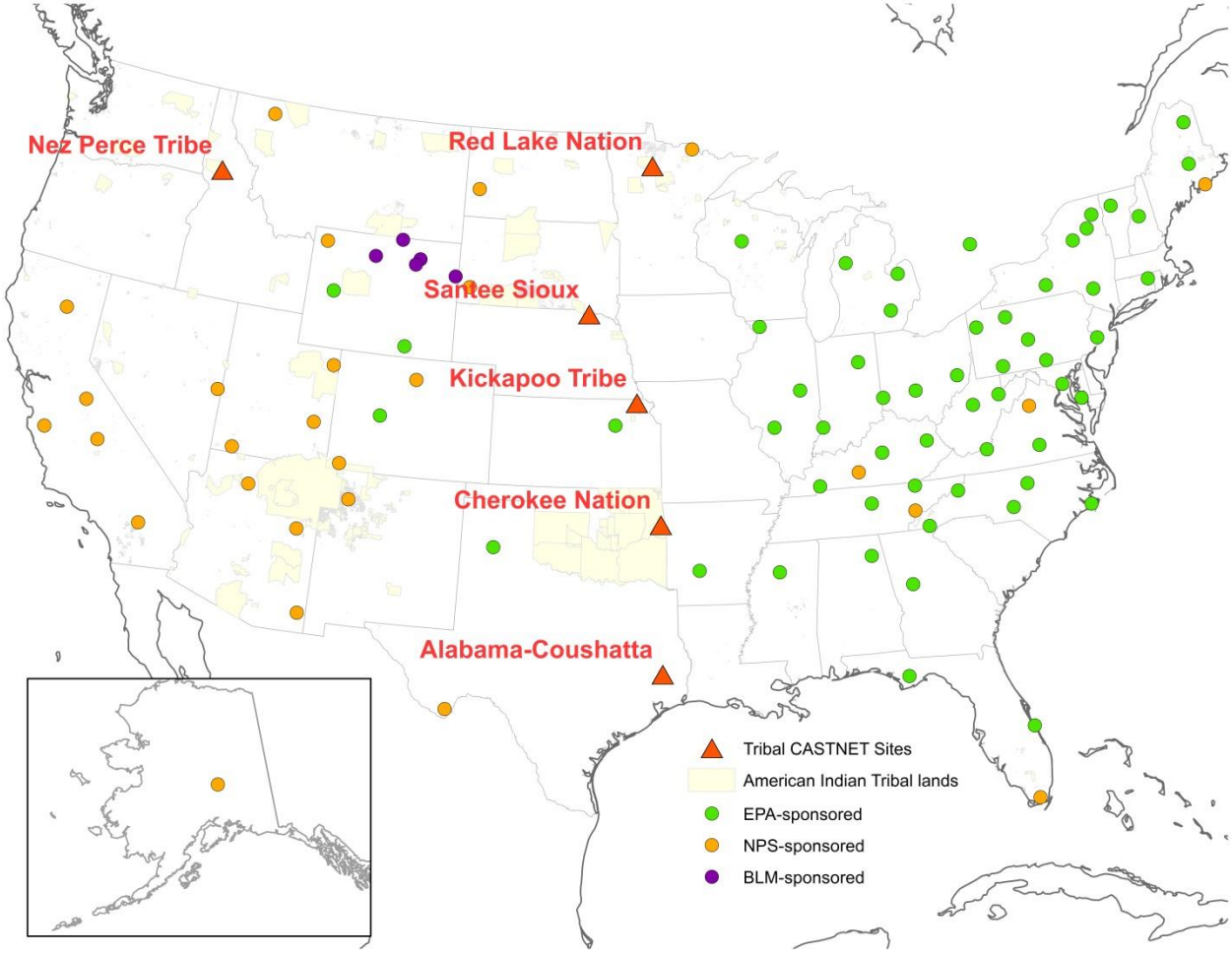


Figure 2 Tribal CASTNET Monitors

Emissions Inventories (EIs)

It is troubling to note that the number of completed Tribal EIs has decreased in recent years. The peak of 86 completed EIs was reached in 2015. This number diminished to 84 in 2016, 80 in 2017, and 78 in 2018. The explanation for this is likely that "completed EIs" refers to those that have been undertaken or updated within the last five years (although it is also possible that Tribes are choosing to not report their data to the National Emissions Inventory database; the problem remains the same). The fact that this number has fallen indicates that at least some Tribes do not have the staffing levels required to keep these inventories updated after their initial completion. This is an alarming trend, as atmospheric/air pollution conditions can change in terms of emissions over five years and these changes can greatly impact how a Tribe chooses to direct its air program.

Participation in Regional Planning Organizations (RPOs)

In the early 2000s, Tribes demonstrated active participation in regional RPOs, which were tasked with planning for implementation of the Regional Haze Rule, which was promulgated in 1999. During the early 2000s, there was adequate funding for Tribal staff to travel to Regional Haze meetings and provide meaningful input. However, Tribal participation in RPOs for the second round of Regional Haze State Implementation Plans (RH SIPs) has dropped due to the lack of funds available to participate. Much of this is due to the decreased level of funding for RPOs, but states have the funds to make up for this while Tribes do not. This is a loss to the development of the RH SIPs, to state/Tribal relations, and to the capacity development of Tribal air programs.

Non-Attainment Areas

EPA data shows that the number of Tribal non-attainment areas has increased to 185 in FY2019. This is an increase of 20% over the number of non-attainment areas in 2018. However, the EPA budget decreased during this time period, as did Tribal CAA funding. Combined with the stagnation in the number of Tribal monitors in operation, this indicates that a growing number of Tribal members are living in non-attainment areas and that these areas are not being adequately monitored.

Priorities

In recent years, the EPA's priorities have changed, as shown by changes from previous years in the annual Strategic Plan and National Program Manager's Guidance. Several important areas have been removed from these planning documents, including indoor air quality, radon, and climate change. These are especially important in Tribal communities because of: the high poverty rate, high rates of asthma and diabetes, old and failing housing stock, and old and failing infrastructure. Many Tribal homes were built poorly according to plans that did not take into account the local climate and are energy inefficient. Therefore, cases of mold are common and widespread. Increased flooding due to climate change has exacerbated the problem for many Tribes. Wildfire smoke is increasingly a concern for Tribal indoor air quality and ambient air quality, as these fires grow in incidence, size, and duration. Radon is a naturally occurring element found in many Tribal homes and offices. Remediation is relatively

cheap (about $2,200 per home) and effective but Tribal funding for evaluating these homes has decreased drastically and funding has never been available for remediation. Poor air quality due to climate change is a great concern for Tribes in many ways. These include: increased mold from flooding, increased impacts from wildfires, increased construction debris from floods and fires, increased levels of pollen from longer growing seasons, and increased levels of ozone due to higher temperatures. Climate change is also an issue that will have huge impacts on Tribes, from the loss of important species and other resources, such as crops and grazing land and the increasing impacts of wildfires, drought, flooding, and severe weather. In short, not only are Tribes losing ground in terms of funding, but they are increasingly unable to direct what funds they receive to the issues that may need the most attention.

Implementation

The decrease in funding to both the EPA and to Tribal air programs is a double-edged sword when it comes to implementing the CAA on Tribal lands. Tribes are increasingly unable to "do it all" as a result of insufficient funding to meet their needs and must rely on EPA to address air pollution and compliance assurance issues on their reservations. Since EPA regional offices are located in urban areas, extensive travel on the part of EPA staff is required to conduct inspections or permitting site visits on or near reservations. However, decreased funding within EPA has made it even more difficult for EPA staff to justify travel to Indian Country. It would be more cost efficient to train Tribal staff to perform site inspections and to work with facilities on compliance assurance with the added benefit of trained staff locally situated to respond quickly to emergencies.

Likewise, any loss of Tribal monitors can place an additional burden on state agencies, some of whom have come to rely on Tribally purchased monitors and Tribal staff to operate equipment that helps the state assess its air quality and meet monitoring placement requirements.

Needs Assessment

The preamble to the Tribal Authority Rule clearly stated the need for EPA to conduct a needs assessment for maintaining and improving air quality in Indian Country. While narrowly constructed needs assessments have been performed to address such things as capacity building, drinking water/wastewater, and indoor air quality funding, no comprehensive assessment of the air quality management needs in Indian Country exists today. Such an assessment would cost on the order of $500,000 but would provide a wealth of information to EPA.

Other Air Agency Budgets

As stated above, Tribes are not the only air agencies struggling with stagnant budgets. From the National Association of Clean Air Agencies website, the EPA budget for state and local air grants has remained steady for several years at roughly $228 million despite rising costs of

inflation and health care.[44] This is the same amount these agencies received 15 years ago, even though their duties and responsibilities have increased. NACCA showed that if this $228 million amount was adjusted for inflation it would translate into $310 million in today's dollars. NACAA requested an increase to this level of funding in a hearing before the House Appropriations Committee – Subcommittee on Interior, Environment, and Related Actions in February, 2019. NACAA also requested flexibility to use any additional grants to address the highest priority programs in state and local areas.[45]

In particular, these budget constraints affect many organizations such as the national, non-profit, consensus driven organization the Association of Air Pollution Control Agencies and Multi-Jurisdictional Organizations that collaborate with state, local, and Tribal air agencies to address air pollution across political boundaries.

Conclusions and Recommendations

The NTAA recommends that the EPA consider three amended budgeting solutions to help alleviate some of the financial pressure on Tribal air programs.

- Scenario 1 addresses basic inflationary costs and adds a needs assessment for estimating additional Tribal funding needs. As shown in Table 1 above, NTAA estimates that Tribal funding of $17.6 million would be needed in FY2019 in order to keep pace with inflation of the original 1996 appropriation of $11 million. The addition of a needs assessment (estimated at $500,000) would bring the total to **$18.1 million**.
- Scenario 2 recommends that EPA increase Tribal funding by 3% each year for five years in order to meet increases in cost of living and health care cost increases. If this recommendation is followed, funding for the next several years would look like this:

Year	**2019**	**2020**	**2021**	**2022**	**2023**
$ Million	$11.48	11.82	12.17	12.54	12.92

- Scenario 3 recommends an increase of $9 million, **totaling $20.48 million**. This would include $2.5 million for updating outdated or defunct monitors and $500,000 for a Tribal needs assessment. The remainder ($6 million) would cover cost of living increases and additional staff, as needed, to manage the most urgent air quality situations for the Tribes. These may include emergency response to wildfires, improving indoor air quality, assessing criteria or toxic pollutants, participation in RPOs or MJOs, or any other relevant needs identified.

[44] "FY 2018 Budget and Congressional Appropriations." *NACAA - National Association of Clean Air Agencies*, www.4cleanair.org/happening-in-congress/page/fy-2018-budget-and-congressional-appropriations

[45] Testimony of Miles Keogh, Executive Director, National Association of Clean Air Agencies (NACAA) Before the House Appropriations Committee Subcommittee on Interior, Environment, and Related Agencies Regarding the FY 2020 Budget for the U.S. Environmental Protection Agency, February 26, 2019. http://www.4cleanair.org/sites/default/files/Documents/NACAA_FY_2020_House_Testimony-ORAL_STATEMENT.pdf

Appendix B: Data Tables of Tribal Air Quality Programs and Grants

Tribal Air Quality Monitoring Programs and Projects

Tribes significantly contribute to air quality protection, exercising Tribal sovereignty through air quality program activities. At the request of the NTAA, EPA's Office of Air and Radiation provided a set of data summarizing Tribal air activities from 2012-2019. A broad national summary of Tribal Air Quality Programs can be found below, followed by regional summaries, with additional explanations of terms used in Appendix C.

The following data is used by the EPA to create budgets that influence CAA grant funding available to Tribes. The presentation of this data is illustrated in a simplified layout that is both easier to understand and more useful to readers. This simplified layout serves the important purpose of highlighting recent declines of funding and stagnation of Tribal Air Quality Programs.

Please see **Appendix A** for a more in-depth Tribal Air Program budget analysis, which references these tables as well. The data set was provided to the NTAA by EPA's OAR Tribal System (OTS) database.

National Summary of Tribal Air Quality Programs

National Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in millions)	$12.49	$11.46	$11.76	$11.68	$11.65	$11.55	$11.48	
Tribes Operating Air Monitors	81	83	84	83	85	83	85	86
Tribes w/ Completed EIs	74	73	84	86	84	80	78	73
Tribes w/ Non-Regulatory TAS	34	38	45	46	48	49	52	53
Tribes w/ Regulatory TAS	7	8	8	8	10	10	10	10
Major Sources on Reservations*	167	159	863	1626	1900	2991	342	367
Tribal Non-Attainment Areas	201	156	156	202	167	166	166	198
Tribes with 105 Grants	25	25	32	34	35	39	40	40
Tribes with 103 Grants	84	84	96	77	78	75	82	78

Table 3 National Summary of Tribal Air Quality Programs

***The values shown in this table reflect annual totals for all regions. The steep rise of Major Sources on Reservations in 2014-2017 is due to the introduction of new major source registration rules, which were applied to previously identified sources. This jump in major sources was caused by increased regulation, not by new pollutant sources. 2018-2019 totals are reflective only of actual permitted sources in Indian country.

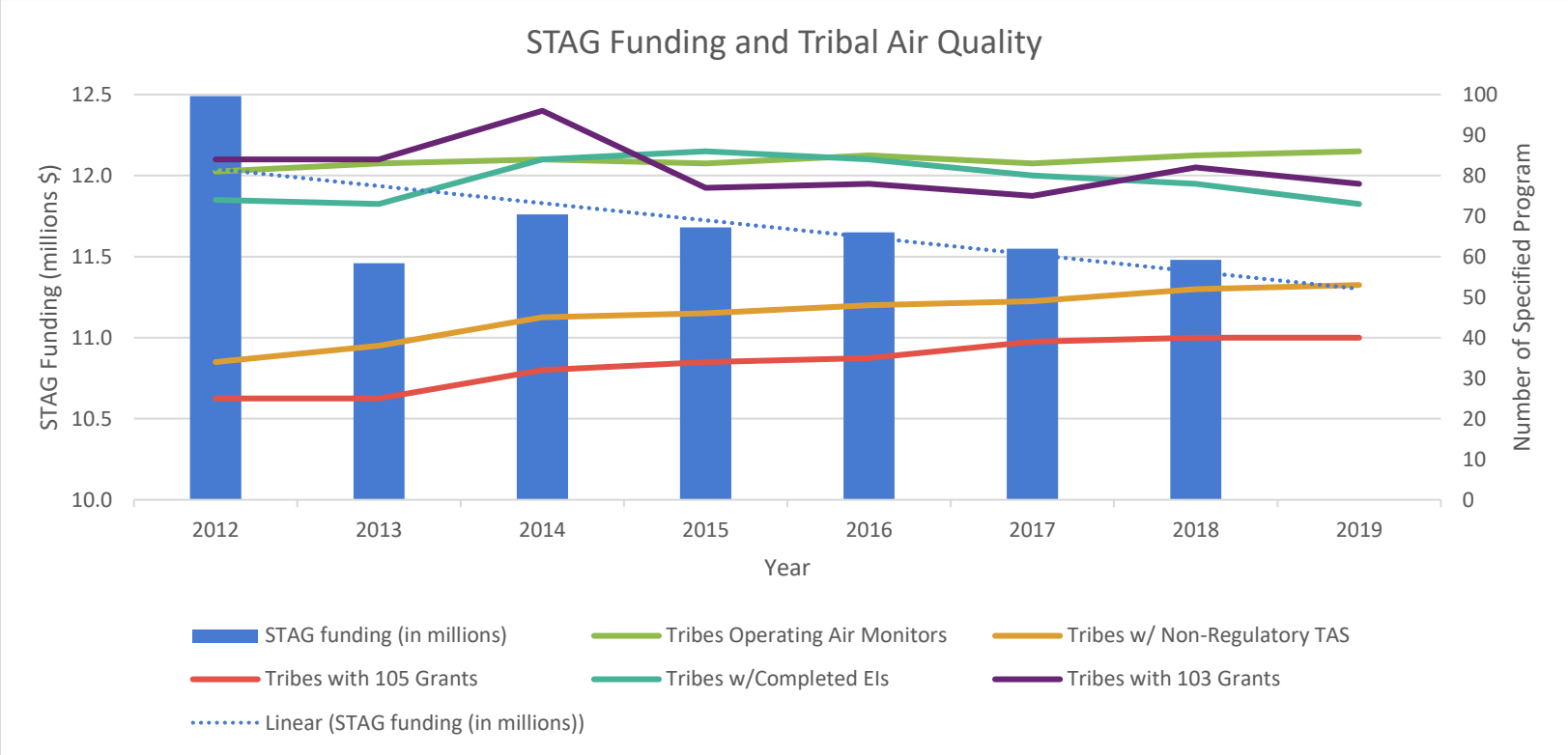


Table 4 STAG Funding and Tribal Air Quality Programs

Using the data provided, the average decrease of STAG funding is $170,000/year from the time period of 2012 to 2018 (indicated by the "Linear" trend line). This decrease does not account for Cost of Living Adjustments (COLA). See **Appendix A: NTAA Tribal Air Quality Budget Analysis** for analysis of this information.

Regional Summaries of Tribal Air Quality Programs

Table 5 Regional Summaries of Tribal Air Quality Programs

Region 1 - Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in thousands)	$657	$614	$623	$622	$594	$576	$566	
Tribes Operating Air Monitors	4	5	5	5	5	5	5	5
Tribes w/ Completed EIs	1	1	1	1	1	1	1	1
Tribes w/ Non-Regulatory TAS	1	2	2	2	2	2	2	2
Tribes w/ Regulatory TAS	2	2	2	2	2	2	2	2
Major Sources on Reservations	2	2	2	2	2	2	2	2
Tribal Non-Attainment Areas	5	5	5	5	3	3	3	3
Tribes with 105 Grants				2	2	2	2	2

Region 2 - Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in thousands)	$440	$424	$425	$418	$403	$394	$389	
Tribes Operating Air Monitors	1	1	1	1	1	1	1	1
Tribes w/ Completed EIs	0	1	1	1	1	1	1	0
Tribes w/ Non-Regulatory TAS	1	1	1	1	1	1	1	1
Tribes w/ Regulatory TAS	1	1	1	1	1	1	1	1
Major Sources on Reservations	1	1	1	1	1	1	1	1
Tribal Non-Attainment Areas	5	4	4	4	1	1	1	1
Tribes with 105 Grants				1	1	1	1	1

Region 4 - Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in thousands)	$331	$312	$317	$313	$316	$327	$328	
Tribes Operating Air Monitors	1	2	2	3	3	4	4	3
Tribes w/ Completed EIs	1	1	2	2	2	2	2	2
Tribes w/ Non-Regulatory TAS	1	1	1	1	1	1	1	1
Tribes w/ Regulatory TAS	0	0	0	0	0	0	0	0
Major Sources on Reservations	0	0	0	0	0	0	0	0
Tribal Non-Attainment Areas	1	0	0	0	0	0	0	0
Tribes with 105 Grants				1	1	1	1	1

Region 5 - Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in millions)	$1.26	$1.15	$1.18	$1.23	$1.23	$1.23	$1.28	
Tribes Operating Air Monitors	11	11	12	12	12	14	14	14
Tribes w/ Completed EIs	14	14	15	16	18	19	20	20
Tribes w/ Non-Regulatory TAS	4	4	5	5	5	6	7	7
Tribes w/ Regulatory TAS	0	0	0	0	0	0	0	0
Major Sources on Reservations	13	15	15	15	15	16	17	17
Tribal Non-Attainment Areas	5	5	5	5	4	4	4	4
Tribes with 105 Grants				5	5	5	7	7

Region 6 - Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in millions)	$1.31	$1.17	$1.18	$1.18	$1.14	$1.14	$1.11	
Tribes Operating Air Monitors	5	5	4	4	5	5	7	7
Tribes w/ Completed EIs	8	8	14	15	11	12	9	5
Tribes w/ Non-Regulatory TAS	2	2	3	3	4	4	5	6
Tribes w/ Regulatory TAS	0	0	0	0	0	0	0	0
Major Sources on Reservations	6	6	6	6	11	10	9	9
Tribal Non-Attainment Areas	0	0	0	0	0	0	0	0
Tribes with 105 Grants				0	0	1	1	1

Region 7 - Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in thousands)	$465	$434	$500	$525	$535	$535	$575	
Tribes Operating Air Monitors	4	4	5	4	4	4	5	6
Tribes w/ Completed EIs	6	6	6	6	6	6	6	6
Tribes w/ Non-Regulatory TAS	0	1	2	2	2	2	2	2
Tribes w/ Regulatory TAS	0	0	0	0	0	0	0	0
Major Sources on Reservations	4	4	4	4	4	4	4	4
Tribal Non-Attainment Areas	0	0	0	0	0	0	0	0
Tribes with 105 Grants				1	0	1	2	2

Region 8 - Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in millions)	$2.11	$2.00	$2.10	$2.07	$2.00	$1.98	$1.89	
Tribes Operating Air Monitors	10	10	10	10	10	10	9	9
Tribes w/ Completed EIs	18	13	14	14	14	8	8	8
Tribes w/ Non-Regulatory TAS	7	7	9	9	9	9	9	9
Tribes w/ Regulatory TAS	1	1	1	1	1	1	1	1
Major Sources on Reservations*	86	89/706**	702	1451	1719	2806	261	289
Tribal Non-Attainment Areas	3	3	3	3	3	3	3	4
Tribes with 105 Grants				7	6	8	8	8

*The steep rise of Major Sources on Reservations in 2014-2017 is due to the introduction of new major source registration rules, which were applied to previously identified sources. This includes newly identified oil and gas sources required to be registered for PSD permits. 2018 totals are reflective only of actual permitted sources in Indian country.

** In 2013, Region 8 reported this data using both old and new rules.

Region 9 - Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in millions)	$3.26	$2.93	$2.97	$2.89	$2.97	$2.92	$2.87	
Tribes Operating Air Monitors	29	29	29	29	30	29	27	28
Tribes w/ Completed EIs	17	19	21	21	24	24	24	24
Tribes w/ Non-Regulatory TAS	7	7	9	10	11	11	12	12
Tribes w/ Regulatory TAS	2	2	2	2	4	4	4	4
Major Sources on Reservations	21	21	21	21	22	22	22	18
Tribal Non-Attainment Areas	170	137	137	183	154	154	154	185
Tribes with 105 Grants				4	7	7	5	6

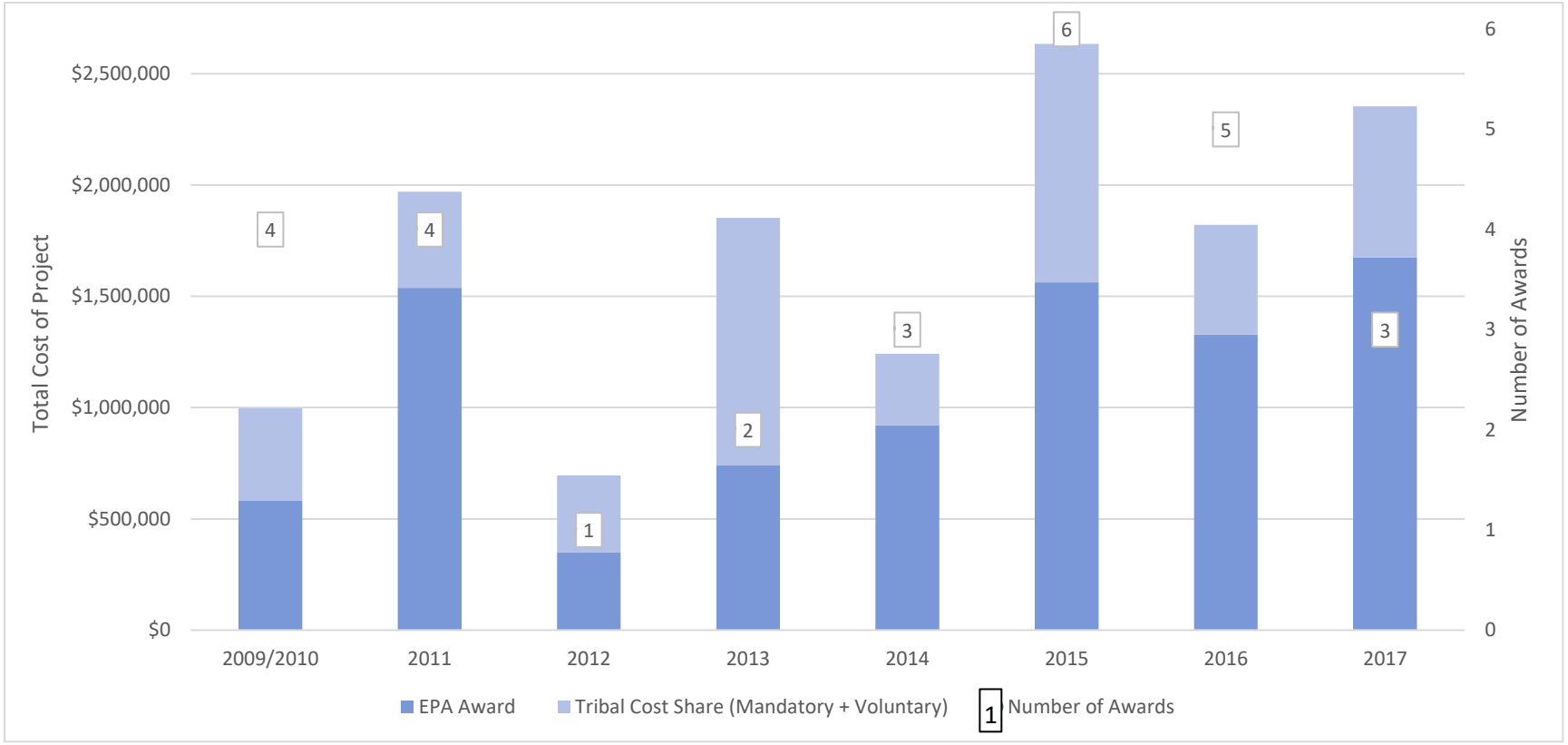
Region 10 - Summary of Tribal Air Quality Programs								
	2012	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
STAG Funding (in millions)	$2.66	$2.42	$2.47	$2.44	$2.46	$2.45	$2.47	
Tribes Operating Air Monitors	16	16	16	15	15	13	13	13
Tribes w/ Completed EIs	9	10	10	10	7	7	7	7
Tribes w/ Non-Regulatory TAS	11	13	13	13	13	13	13	13
Tribes w/ Regulatory TAS	1	2	2	2	2	2	2	2
Major Sources on Reservations*	34	110	112	126	126	130	26	27
Tribal Non-Attainment Areas	12	2	2	2	1	1	1	1
Tribes with 105 Grants				13	13	13	13	12

*****The steep rise of Major Sources on Reservations in 2014-2017 is due to the introduction of new major source registration rules, which were applied to previously identified sources. 2018 totals are reflective only of actual permitted sources in Indian country.

Tribal Diesel Emissions Reduction Act (DERA)

EPA's Tribal DERA program awards grants to federally recognized Tribes, intertribal consortium, or Alaskan Native Villages for projects that reduce emissions from diesel engines. The Tribal DERA program requires a high cost share commitment, which is a barrier for most Tribes. The graph below provides the total amount awarded from EPA, the total amount of cost share borne by the Tribes, and the total number of awards for each year since the program began in 2009.

Table 6 Tribal DERA Grant Awards



Appendix C: Permit Categories on Reservations

The Clean Air Act establishes emissions-related permitting programs, the pre-construction permit programs under Title I of the Act, and the operating permit program under Title V of the Act. EPA delegates their implementation to local air agencies. Tribes may implement their permit programs once approved by EPA either under the Tribal New Source Review rule or under the part 71 rule for Title V sources (Federal Implementation Plan) or by taking delegation of one or both of the Federal Implementation Plans (FIPs). Where a Tribe does not implement these programs, EPA issues the permits to the sources as appropriate.

Terms

NSR – New Source Review – NSR is a Clean Air Act program (aka, the "preconstruction air permitting program") that requires industrial facilities to install modern pollution control equipment when they are built or when making a change that increases emissions significantly. The program requires owners or operators to obtain permits before they begin construction.

Tribal New Source Review rule – The Tribal NSR rule is a Federal Implementation Plan (FIP – a plan that is developed by the EPA to federally implement CAA requirements) that establishes the nonattainment NSR and minor NSR permitting programs in Indian country where no EPA-approved Tribal program exists. There are 2 parts – the minor NSR rule and the nonattainment major NSR rule. The permitting authority (either EPA or a Tribe that takes delegation from EPA) reviews the permit application and either grants or denies the permit after a public comment period.

PSD – Prevention of Significant Deterioration – Applicable to new and modified major sources in attainment areas. Regulated pollutants: NAAQS, GHGs, and others (sulfuric acid mist, hydrogen sulfide) – does not include air toxics (mercury, cadmium, benzene, etc.). Has specific requirements - Install Best Available Control Technology (BACT); perform air quality analysis to assess impacts on air quality; perform class I area analysis to assess impacts on national parks/wilderness areas; perform additional impacts analysis; and allow for public involvement. This program can also be delegated to the tribes or implemented through an EPA approved Tribal Program.

FARR – Federal Air Rules for Reservations (applicable in Region 10 only) – A set of air quality regulations that apply to Indian Reservations in Idaho, Oregon, and Washington.

Title V – Permits issued to major sources by the Tribe (CAA part 70) and permits issued by EPA (CAA part 71). These operating permits include all the applicable CAA requirements that apply to a major source and are designed to improve compliance by clarifying what sources must do to control air pollution.

Major Source – Facilities that emit or have the potential to emit pollutants in amounts equal to or greater than the corresponding major source threshold levels. These levels vary by pollutant and/or source category. Major sources must comply with specific emission limits which are generally more stringent in nonattainment areas and if the pollutant is a criterial pollutant or an air toxic.

Minor Source – Facilities that have the potential to emit pollutants in amounts less than the corresponding major source thresholds.

Synthetic Minor Source – Facilities that have the potential to emit pollutants at or above the major source threshold level, but voluntarily accept enforceable limits to keep emissions below the major source thresholds and avoid the major NSR requirements.

Nonattainment Area – Areas of the country that meet or violate air quality standards (NAAQS).

Attainment Area – Areas of the country that have air quality as good as or better than the air quality standards for a given pollutant.

HAP – Hazardous Air Pollutant - Pollutants (toxic air pollutants or air toxics) that are known to cause cancer and other serious health impacts. There are approximately 187 toxic air pollutants.

TAS – Treatment as a State

The Tribal Authority Rule authorizes EPA to treat eligible federally recognized Indian tribes in the same manner as a state for implementing and managing certain environmental programs.

TAS Eligibility – A Tribe must meet certain criteria to be eligible for TAS. The Tribe must be federally recognized; have a governing body; have appropriate authority to regulate air quality (includes exterior boundaries of the reservation); and be capable of carrying out the functions of the program.

Administrative TAS – Examples include 105 grants, 107 designations, 126/505 notifications, 319 monitoring, permit review, redesignations, etc.

Regulatory TAS – Examples include Tribal Implementation Plan (TIP), delegation of a FIP, regional haze, or permit program, etc.

Note: TAS is not required for all programs, e.g., program development, monitoring.

Appendix D: List of 140 NTAA Member Tribes by EPA Regions

Region 1 (4 Tribes)

- Houlton Band of Maliseet Indians
- The Mohegan Tribe
- Passamaquody Tribe at Pleasant Point
- Penobscot Indian Nation

Region 2 (3 Tribes)

- Saint Regis Band of Mohawk Indians
- Seneca Nation of Indians
- Shinnecock Indian Tribe

Region 4 (4 Tribes)

- Catawba Indian Nation
- Eastern Band of Cherokee
- Miccosukee Indian Tribe of Florida
- Poarch Band of Creek Indian

Region 5 (20 Tribes)

- Bad River Band of Lake Superior Tribe of Chippewa Indians
- Bois Forte Band of Chippewa
- Fond du Lac Band of Lake Superior Chippewa
- Forest County Potawatomi Community
- Grand Portage Band of Lake Superior Chippewa
- Grand Traverse Band of Ottawa & Chippewa Indians
- Keweenaw Bay Indian Community
- Lac du Flambeau Band of Lake Superior Chippewa Indians
- Leech Lake Band of Ojibwe
- Little Traverse Bay Bands of Odawa Indians
- Lower Sioux Indian Community
- Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians of Michigan
- Menominee Indian Tribe of Wisconsin
- Oneida Tribe of Indians of Wisconsin
- Red Lake Band of Chippewa Indians
- Saginaw Chippewa Indian Tribe of Michigan
- Sault Tribe of Chippewa Indians
- Shakopee Mdewakanton Sioux Community
- St. Croix Chippewa Indian of Wisconsin
- White Earth Nation

Region 6 (21 Tribes)

- Caddo Nation of Oklahoma
- Cherokee Nation of Oklahoma
- Choctaw Nation of Oklahoma
- Citizen Potawatomi Nation
- Delaware Nation of Oklahoma
- Fort Sill Apache Tribe of Oklahoma
- Iowa Tribe of Oklahoma
- Modoc Tribe of Oklahoma
- Ohkay Owingeh
- Pueblo of Acoma

- Pueblo of Jemez
- Pueblo of Laguna
- Pueblo of Pojoaque
- Pueblo of Santa Ana
- Pueblo of Santo Domingo
- Pueblo of Zuni
- Quapaw Tribe Of Oklahoma
- Sac and Fox Nation
- Seminole Nation of Oklahoma
- Taos Pueblo
- United Keetoowah Band of Cherokee Indians in Oklahoma

Region 7 (7 Tribes)

- Kickapoo Tribe in Kansas
- Ponca Tribe of Nebraska
- Prairie Band Potawatomi Nation
- Sac & Fox Tribe of the Mississippi in Iowa/Meskwaki
- Sac & Fox Nation of Missouri in Kansas and Nebraska
- Santee Sioux Nation
- Winnebago Tribe of Nebraska

Region 8 (9 Tribes)

- Confederated Salish & Kootenai Tribes
- Fort Belknap Indian Community
- Fort Peck Tribes of Assiniboine & Sioux Tribe
- Northern Cheyenne Tribe
- Northwestern Band of Shoshone Nation
- Sisseton Wahpeton Oyate
- Southern Ute Indian Tribe
- Standing Rock Sioux Tribe
- Ute Indian Tribe
- Ute Mountain Ute Tribe

Region 9 (32 Tribes)

- Ak-Chin Indian Community
- Big Pine Paiute Tribe of the Owens Valley
- Bishop Paiute Tribe
- Blue Lake Rancheria
- Cahuilla Band of Indians
- Campo Band of Mission Indians
- Colorado River Indian Tribes
- Cortina Indian Rancheria of Wintun Indians
- Coyote Valley Band of Pomo Indians
- Elk Valley Rancheria
- Gila River Indian Community
- Habematolel Pomo of Upper Lake
- Hoopa Valley Tribe
- Hualapai Tribe
- La Posta Band of Mission Indians
- Lone Pine Paiute Shoshone Reservation
- Los Coyotes Band of Cahuilla Cupeno Indians
- Manzanita Band of the Kumeyaay Nation
- Moapa Band of Paiutes
- Morongo Band of Mission Indians
- Pala Band of Mission Indians
- Pechanga Band of Luiseno Indians
- Pyramid Lake Paiute Tribe
- Robinson Rancheria of Pomo Indians
- Soboba Band of Luiseno Indians
- Susanville Indian Rancheria
- Tejon Indian Tribe
- Utu Utu Gwaitu Paiute Tribe
- Walker River Paiute Tribe
- Washoe Tribe of Nevada and California
- White Mountain Apache Tribe
- Yavapai-Apache Nation

Region 10 (14 Tribes)

- Coeur d'Alene Tribe
- Confederated Tribes of Warm Springs
- Confederated Tribes of the Colville Reservation
- Confederated Tribes of the Coos, Lower Umpqua & Siuslaw Indians
- Kootenai Tribe of Idaho
- Makah Indian Tribe
- Nez Perce Tribe
- Nisqually Tribe
- Quinault Indian Nation
- Samish Indian Nation
- Shoshone-Bannock Tribes
- Spokane Tribe
- Tulalip Tribes
- Yakama Nation

Alaska (25 Tribes and Villages)

- Aleknagik Traditional Council
- Alutiiq Tribe of Old Harbor
- Bristol Bay Native Association
- Chickaloon Village Traditional Council
- Craig Tribal Association
- Inupiat Community of the Arctic Slope
- Klawock Cooperative Association
- Native Village of Aniak
- Native Village of Buckland
- Native Village of Kiana
- Native Village of Kivalina (IRA)
- Native Village of Kluti-Kaah
- Native Village of Kwinhagak
- Native Village of Noatak
- Native Village of Nuiqsut
- Native Village of Selawik
- Native Village of Shungnak
- Native Village of Tyonek
- Noorvik Native Community
- Nulato Tribal Council
- Orutsararmuit Native Council
- Qawalangin Tribe of Unalaska
- Seldovia Village Tribe
- Ugashik Traditional Village
- Wrangell Cooperative Association

Tribal Consortia as Associate NTAA member

- Inter-Tribal Council of Arizona

Appendix E: EPA OAR and OITA Organizational Charts

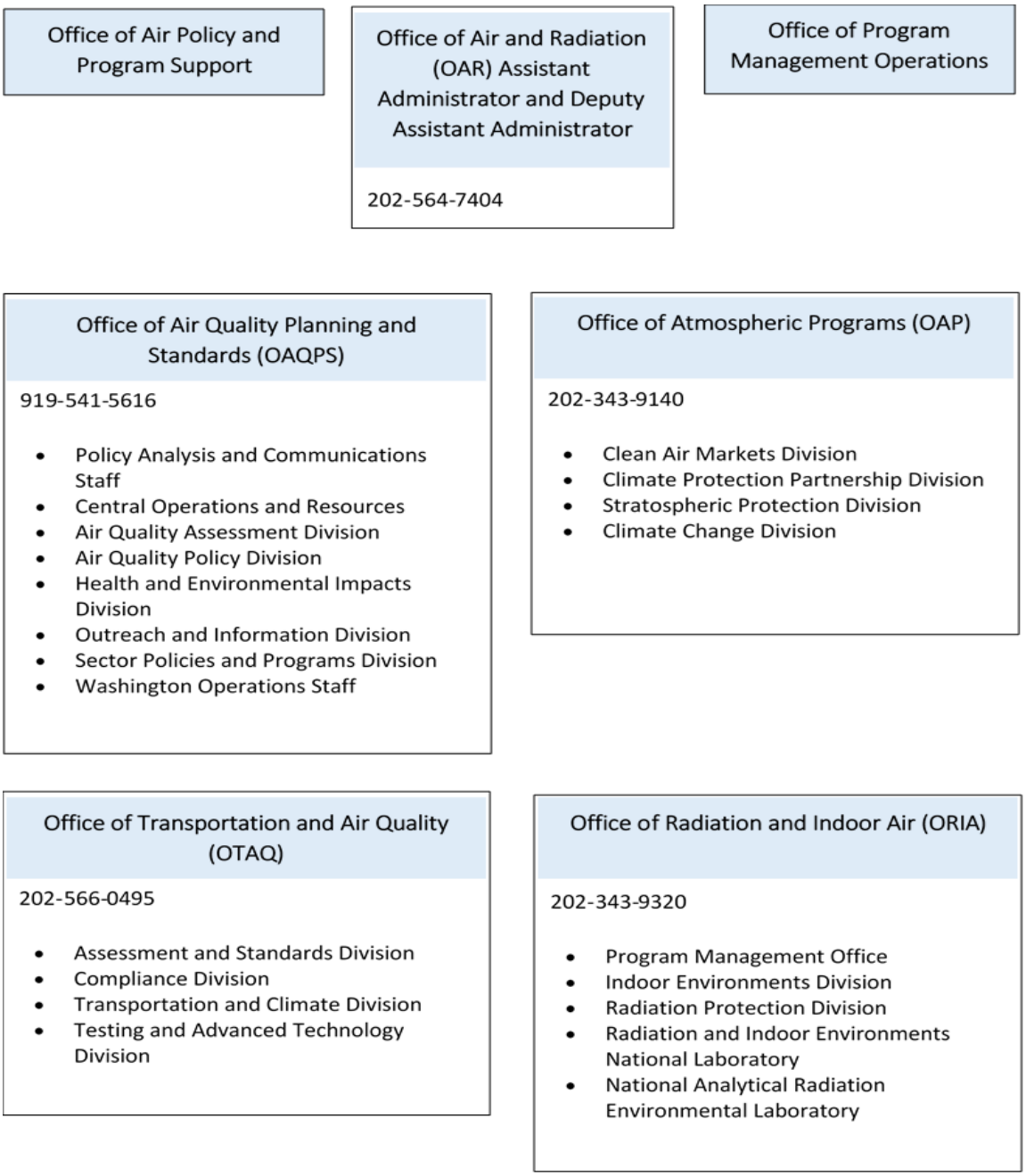


Figure 3 EPA OAR Organizational Chart

Additional information about the EPA Office of Air and Radiation can be found at: https://www.epa.gov/aboutepa/about-office-air-and-radiation-oar.

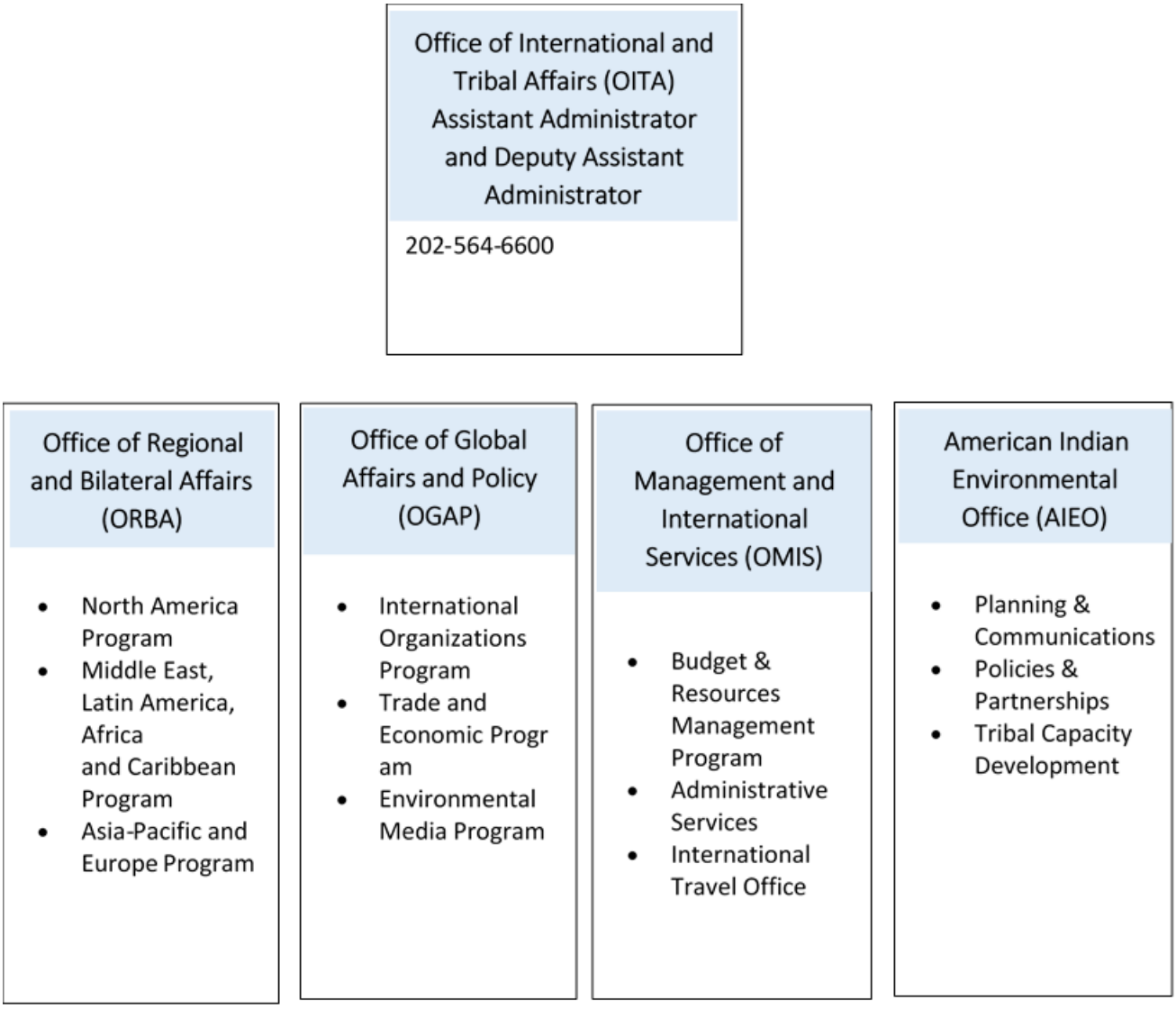


Figure 4 EPA OITA Organizational Chart

Additional information about the EPA Office of International and Tribal Affairs can be found at: https://www.epa.gov/aboutepa/about-office-international-and-tribal-affairs-oita.

Appendix F: Tribal Air Programs Infographic

The infographic found on the following pages was originally published in 2017 by the National Tribal Air Association in partnership with EPA's Office of Air and Radiation, Northern Arizona University's Institute for Tribal Environmental Professionals, and the Tribal Air Monitoring Support Center, and updated in 2019 to reflect developments.

TRIBAL AIR PROGRAMS

CELEBRATING OVER 25 YEARS OF STRONG PARTNERSHIPS

TRIBES
573 Federally - Recognized Tribes

INSTITUTE For TRIBAL ENVIRONMENTAL PROFESSIONALS (ITEP)
since 1992

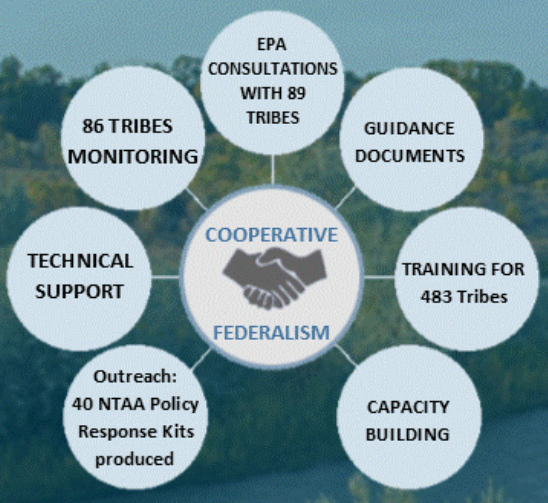
TRIBAL AIR PROGRAM
since 1994

TRIBAL AIR MONITORING SUPPORT CENTER (TAMS)
since 1999

NATIONAL TRIBAL AIR ASSOCIATION (NTAA)
since 2002

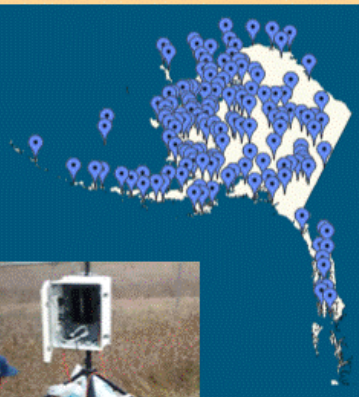
RULE OF LAW 301(d) TRIBAL AIR RULE (TAR)

- **367** Permits for major and minor sources of air pollutants
- **149** Tribes manage air quality on their lands
- **118** Tribes have air grants
- **53** Tribes have Treatment as a State status
- **9** Tribes have delegation to implement Federal Rule
- **6** Tribes have Tribal Implementation Plans
- **5** Tribes with Class I Redesignation under the PSD program
- **2** Tribes Implement Title V Programs

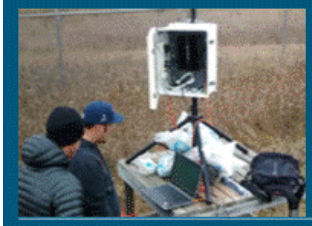


OFFICE of AIR and RADIATION (OAR) now has a coordinator for Tribal issues in all four OAR program offices.

PUBLIC PARTICIPATION and Government-to-Government Consultation



573 FEDERALLY RECOGNIZED TRIBES



ITEP:

- Number of Tribes represented at Air Quality courses: 483
- Number of Air Quality Tribal professionals trained: approximately 9338
- Over 1,900 Tribal professionals trained by the TAMS Center
- Organizes 3 National Tribal Conferences each year
- Provides support to 6 national Tribal Partnership Groups

NTAA:

- One of the Nation's largest Tribal membership organizations with 140 member Tribes and growing.
- Issue-specific Workgroups
- Monthly NTAA / EPA Air Policy Calls
- NTAA Weekly Update
- Ad hoc high priority, topic specific NTAA/EPA calls

PARTNERS:

- Tribal organizations and businesses
- States and Local Governments
- Other Federal Agencies such as USDA, HUD and DOE/NREL
- State organizations including NACAA and WRAP
- Public health groups such as ALA and other Health Groups

EPA: Environmental Protection Agency
USDA: United States Department of Agriculture
HUD: U.S. Department of Housing and Urban Development
DOE: U.S. Department of Energy

NREL: National Renewable Energy Laboratory
NACAA: National Association of Clean Air Agencies
WRAP: Western Regional Air Partnership
ALA: American Lung Association

WANT MORE INFORMATION?

EPA's Tribal Air and Climate Resources:
www.epa.gov/tribal-air ***NTAA: www.ntaatribalair.org***
ITEP: nau.edu/itep ***TAMS: www.nau.edu/tams***

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NTAA

Appendix G: Impacts of Federal Shutdown

It is widely known that the 35-day, 2018-2019 Federal Shutdown was the longest in US history. What is less widely known are the shutdown's direct impacts on Tribes. Given that Tribes are in the unique position of being sovereign governments yet dependent on the federal government in many ways, it is not surprising that Tribes experienced unique repercussions. Although countless news agencies covered the general impacts to Tribes, including an article by the American Civil Liberties Union (ACLU) titled *The Shutdown Is Disproportionally Hurting Native Americans*,[46] the Center for Indian Country Development's blog titled *The U.S. government shutdown: Its impact on Indian Country is deep*,[47] the New York Times' article *Shutdown Leaves Food, Medicine and Pay in Doubt in Indian Country*,[48] and the Non Profit Quarterly's article *Indian Country Devastated by Ongoing Government Shutdown*,[49] it is important to recognize the specific impacts to Tribal air and environment programs. What follows are lists of both general and specific impacts felt across the nation.

General impacts to Indian Country air and environmental programs:

- Delayed decisions from the federal government
- Rulemaking delays
- Cancelled or delayed meetings
- Cancelled or delayed webinars
- Delays in funding
- Grant application delays
- Consultation delays
- Cancelled or delayed classes
- Cancelled or delayed conferences
- Measures taken to curb spending, partially or fully shutdown offices, and implement no-travel policies

Specific impacts to Tribes:

- The Campo Tribe had delays in approvals for an emergency air monitor purchase so that quality assured data can be collected and submitted, and a delay in the purchase of emergency back-up power generators to operate office and air monitoring equipment. Power shutdowns have hampered their ability to monitor and submit AQS data.
- Metlakatla experienced extended delays in their ability to draw down funds, which led to furloughs, work hour reductions, closing departments, and sending people home. The effects of that include families/households falling behind in paying their bills to the Tribe-owned utilities, which have seen a drop in revenue.
- The Mississippi Band of Choctaw Indians saw an increase in costs associated with delayed scheduling of travel due to the uncertainty of events. EPA meetings and

[46] https://www.aclu.org/blog/racial-justice/american-indian-rights/shutdown-disproportionally-hurting-native-americans
[47] https://www.minneapolisfed.org/indiancountry/research-and-articles/cicd-blog/the-us-government-shutdown-its-impact-on-indian-country-is-deep
[48] https://www.nytimes.com/2019/01/01/us/native-american-government-shutdown.html
[49] https://nonprofitquarterly.org/2019/01/04/indian-country-devastated-by-ongoing-government-shutdown/

trainings were uncertain, so they did not book hotel rooms or flights until the furlough ended, and the price of those flights and rooms increased drastically during that time.

- The Institute for Environmental Professionals' (ITEP's) National Environmental Information Exchange Network (NEIEN) project had to postpone the Tribal conference they had scheduled
- Two Tribes in Region 5 had delays in the Water and Air Treatment as a State (TAS) application approvals
- The Region 5 Tribal Environmental Program Managers Meeting was delayed, and may be cancelled entirely. Rescheduling is difficult between the Regional Administrator's and Tribe's schedules, EPA Region room availability, and hotel room requirements.
- The Chickaloon Native Village experienced a cancellation of EPA's National Compliance Initiatives Teleconference Sessions and Consultation, and EPA's Teleconference on the Proposed Amendments to the NSPS for GHGs from New, Modified, or Reconstructed EGUs; grant application delays; and an absence of federal participation at the Alaska Marine Science Symposium conference where they are the lead on most research investigations (no federal research reported and no participation by federal workers). The Chickaloon Native Village also experienced a delay in negotiations with the Interior Business Center, which in turn further delayed moving forward with hiring key staff in order to ensure services are being delivered in the most effective manner. This had a direct impact on Tribal citizens.
- The Gila River Indian Community was waiting on an official letter from EPA that would allow them to conduct seasonal ozone monitoring in 2019. They had to continue to monitor for ozone for the length of the shutdown. They received the letter via email two days after the shutdown ended.
- The Tejon Indian Tribe of Kern County, CA, experienced the following:
    - Delays in consultation – Their environmental department had a federal grant application for the General Assistance Program (GAP) due Jan. 15th, 2019. Ideally, consultation between the Tribe and their US EPA project officer would happen prior to the application deadline—so that negotiation can occur before the application submittal into grants.gov. Therefore, consultation had to wait until after the grant application deadline/submittal (they moved forward with submitting their application before the deadline, so only consultation was delayed in this circumstance).
    - Delayed decisions from US EPA – Since the GAP grant application consultation was delayed (regarding the grant above), there will likely also be a delay in the decision to award the grant as well—although it might be a little soon to tell. This is a predication only. They are also still waiting on their "end of year letter/report" from fiscal year 2017 – 2018 from US EPA – which they are assuming the government shutdown is to blame for its delay.
    - Delays in grant reporting – Due to the shutdown, "quarter one" federal grant reporting was delayed. The environmental director for the Tejon Tribe was unable to access the specific section within the online platform for reporting on the grant, because it still needed to be "unlocked" by the Tribe's US EPA

project officer before she could generate a new report. Reporting that should have been uploaded before 1/30/19 had to wait until US EPA project officers came back to work and caught up post shutdown.
    - Cancelled or delayed classes/webinars – There were a handful of webinars that the Tejon Tribe's environmental director was registered for during the shutdown, that were either cancelled or delayed due to the planned presenters being from US EPA (so they were not able to present during the shutdown).
    - There was low attendance and participation of US EPA representatives in the Region 9 Regional Tribal Operations Committee (RTOC) Winter 2019 meeting that was held one week after the shutdown ended. Typically, the Tribal caucus gets at least a day and a half with more than just the 4 US EPA representatives that came to just one afternoon of this meeting. This of course was through no fault of US EPA, but the Region 9 Tribes did not get the normal engagement, time, and numbers of attendees from US EPA that they normally do for these quarterly meetings.
    - Fortunately, other than these impacts to the environmental department, the Tejon Indian Tribe did not experience any significant impacts on the rest of the organization, primarily due to the fact that the funding for their programs had already been awarded before the shutdown began.
- The Native Village of Kongiganak experienced delayed decisions from the federal government, delays in funding, consultation delays, cancelled/delayed conferences, cancelled meeting with EPA, and technical assistance from EPA was unavailable for the entire time of the shutdown.
- The Confederated Tribes of Warm Springs BIA roads department violated the Trust responsibilities for many Tribes as they were on furlough when a major snow storm not only shut down their schools but also impacted their rural residents, FEMA staff, and parts of IHS staffing, including their Federal Fish Hatchery. The Confederated Tribes of Warm Springs opened a Food Distributions center for the Federal Employees that were affected by the shutdown, since many went without several paid days. They served 164 folks, which for the most part were first-time users of the food bank. Many of the patrons were embarrassed by the handouts, but on a positive note the Tribes came together as Tribal Nations, demonstrating their resilience.
- The impacts experienced by the Prairie Island Indian Community included a grant application delay for the 319 competitive grant, BIA closure delaying communication with project officers and grant reporting/work plan submissions, cancelled meetings regarding the TEPM conference, cancelled meetings regarding compost projects at PIIC, cancelled webinars regarding compost projects, and cancelled meetings and delays in submission of the ETEP reports to EPA for our grants.
- The Pamunkey Tribe experienced 5 postponed or rescheduled events and 4 cancelled events.
- The Winnebago Tribe of Nebraska's Air Quality Specialist was temporarily laid off due to the shutdown. The Tribe was not able to draw down funds for the air program so

she was put on leave until they can do so. This led to missed and rescheduled trainings, missing the RTOC, and becoming six weeks behind in work plan deliverables.
- The Fort Yukon Tribe experienced a cancelled conference and webinars; the inability to have questions concerning their grant answered, due to no personnel being available; and delays in funding and equipment purchases.

Lastly, the EPA was made aware of the following list of impacts:
- Shutdown affected ability to submit emissions inventory;
- Tribes cannot afford missed opportunities to get grants submitted due to shutdown's impacts on deadlines, etc.;
- Possibility of getting laid off if shutdown went long enough to impact salaries;
- Communication on grants (what a grantee could or could not do, and if a grantee could drawdown) was confusing;
- Tribal Grantee did not know if they were operating under the correct program which allowed the grantee to drawdown;
- Received a blanket email regarding their grant work: if unable to continue (lack of EPA funds or direction), would need to shut down themselves;
- Concern that there could be issues submitting through grants.gov if the site went dormant during the shutdown (similar to emissions inventory problem);
- Government-to-government calls did not happen, glad that Federal agencies are now allowing extra time for those to still happen;
- Unable to confirm upcoming meetings and events with EPA participation;
- Smoke management partner from BIA could not attend a planning meeting with the Tribe, which affects their preparation for the upcoming season;
- Technical assistance needs were unmet – asbestos issue with construction/remodeling project (EPA online info was not comprehensive, Tribe was not able to contact EPA technical personnel and as a result, inaccurate information was supplied, then corrected upon return of EPA personnel);
- Grass growers meeting usually has EPA representation to talk about 2019 permit process and season, but did not;
- Prior to the shutdown, had discussions about incremental amendment and use of funds, but then was delayed and had to reschedule meetings with PO due to the shutdown.

Appendix H: NTAA Comment Letters on EPA and Federal Agencies' Actions 2018-2019

EPA's Proposal: Revised Supplemental Cost Finding for the Mercury and Air Toxics Standards (MATS) and Results of the Residual Risk and Technology Review EPA-HQ-OAR-2018-0794 NTAA submitted comments on April 17, 2019. https://www7.nau.edu/itep/main/ntaa/PRKPDF/MATS Comments are under review.
EPA's Proposed New Source Performance Standards (NSPS) for Greenhouse Gas (GHG) Emissions from New, Modified, and Reconstructed Sources: Electric Utility Generating Units (EGUs) EPA-HQ-OAR-2013-0495. NTAA submitted a formal comment letter on March 18, 2019. https://www7.nau.edu/itep/main/ntaa/PolicyResponseKits/GHG Comments are under review.
EPA's Draft Guidance: Revised Policy on Exclusions from "Ambient Air" NTAA submitted formal comment letter on 1/10/19. https://www7.nau.edu/itep/main/ntaa/PolicyResponseKits/AmbientAir Comments are under review.
EPA's Proposed Amendments to the 2016 New Source Performance Standards for the Oil and Natural Gas Industry EPA-HQ-OAR-2017-0483 NTAA submitted a formal comment letter on 12/17/18. https://www7.nau.edu/itep/main/ntaa/PRKPDF/NSPS_CL Comments are under review.
EPA's Emission Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program EPA-HQ-OAR-2017-0355 NTAA submitted a formal comment letter on 10/31/18. https://www7.nau.edu/itep/main/ntaa/PRKPDF/ACE_CL Comments are under review
EPA's Proposed Rule Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021 – 2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule) EPA-HQ-OAR-2018-0283

NTAA submitted a formal comment letter on 10/26/2018. https://www7.nau.edu/itep/main/ntaa/PRKPDF/SAFE_CL Comments are under review.
Interpreting "Adjacent" for New Source Review and Title V Source Determinations in All Industries Other Than Oil and Gas NTAA submitted a formal comment letter on 10/5/2018. http://www7.nau.edu/itep/main/ntaa/PolicyResponseKits/InterpretingAdjacent/ Comments are under review.
Indian Environmental General Assistance Program (GAP) 2013 Guidance NTAA submitted a formal comment letter on 08/24/2018. https://www7.nau.edu/itep/main/ntaa/PRKPDF/GAPGuidanceCommentLetter Comments are under review.
Risk Management Program Reconsideration Proposed Rule EPA-HQ-OEM-2015-0725 NTAA submitted a formal comment letter on 08/15/2018. https://www7.nau.edu/itep/main/ntaa/PRKPDF/RMPCommentLetter Comments are under review.
Strengthening Transparency in Regulatory Science EPA-HQ-OAR-2018-0259 NTAA submitted a formal comment letter https://www7.nau.edu/itep/main/ntaa/PRKPDF/STCommentLetter on 08/13/2018. Comments are under review.