

AN EVALUATION OF OAR's TRIBAL AIR PROGRAM

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EXECUTIVE SUMMARY

In the 1990 Clean Air Act (CAA) Amendments, Congress provided Indian Tribes with the authority to implement CAA programs on their reservations. The Amendments state that Indian Tribes and the Environmental Protection Agency (EPA) have authority over all air pollution within reservation boundaries. Since the 1990 Amendments, EPA's air program has provided increased resources to assist Tribes, and a number of Tribes have in turn developed the capacity to carry out CAA programs. In the early 1990's, EPA's Office of Air and Radiation combined efforts that had been ongoing since the late 1970's into a more formal Tribal Program to help Tribes manage air quality on lands within their jurisdiction. The Tribal Program was tasked with providing technical and financial assistance to Tribes to help them address CAA requirements on their lands.

With over 100 Tribes currently receiving grants to develop air programs, OAR determined that it was an appropriate time to conduct an evaluation of the Tribal Program. The purpose of the evaluation was to identify how well the Program is using its resources to build Tribal capacity, address air quality issues on Tribal lands, and provide the tools to reach these goals. OAR assembled an evaluation team ('the team') with contract support from Industrial Economics, Incorporated (IEc), and Ross and Associates.

To conduct the evaluation, the team first developed an Activities Flow Chart that identifies the main stakeholders associated with Tribal air programs and their primary responsibilities and activities. The flow chart also identifies key program objectives, which form the basis of our evaluation. To determine whether the Tribal Program was fulfilling its objectives, the team reviewed information on Tribal Program activities and achievements, developed an interview guide, and conducted interviews with key program stakeholders. Specifically, for the evaluation we interviewed 24 Tribal air managers, 19 EPA Regional staff, seven EPA Headquarters staff, and six non-governmental organizations involved with Tribal air issues.

FINDINGS AND RECOMMENDATIONS

The evaluation report includes results from our interviews and information collection, captured as key findings and recommendations for three main subject areas: providing the tools, building Tribal capacity, and evidence of Tribal capacity.

Providing the Tools

As part of its Federal trust responsibility and under the specifications of the Clean Air Act and the Tribal Authority Rule, EPA provides Tribes with tools necessary to build their capacity to develop their own air programs. Specifically, EPA distributes grant funding to Tribes that can be used to perform activities associated with the development of air programs, including installing air monitors, conducting emissions inventories, and developing regulations for on-site sources. In addition, EPA is responsible for providing training and guidance to Tribal environmental professionals to enable them to develop and manage air programs.

Findings

- The process and criteria for awarding air grants to Tribes varies considerably from Region to Region. Some Regions have developed formal grant criteria to determine awards, but most have not generated specific criteria for allocation.
- Tribes benefit significantly from technical training held by the Institute of Tribal Environmental Professionals (ITEP) and the Tribal Air Monitoring Support Center (TAMS), and request coverage of additional topics (e.g., grant and resource management).

Recommendations

- EPA could continue its efforts to develop national criteria for grant allocation from Regions to Tribes, which would help ensure that grants are being allocated in an equitable and efficient way. To account for the unique air issues faced by Tribes in each Region, EPA could develop these criteria as a framework that could be adapted for each Region.
- EPA could provide technical courses in a variety of Regions to provide access to a broader range of Tribes. Specifically, ITEP, TAMS, or the Air Pollution Training Institute could help bring training more directly to Tribes.

Building Tribal Capacity

The resources, tools, and assistance that EPA provides help Tribal communities to develop the capacity to initiate and manage their own air programs, with the ultimate goal of improving air quality on reservations. In addition to EPA assistance, Tribal representatives gain air quality experience through their participation in Tribal, state, or national air quality organizations, and their interactions with other knowledgeable Tribal environmental professionals. Furthermore, strong communication between Tribes and other governmental counterparts at the state, regional, or national level is crucial to the development of Tribal air programs, as environmental managers and technical staff are able to share ideas and tools regarding the development and implementation of air programs.

Findings

- Tribal air professionals rely upon other air programs as models and experienced staff at other Tribes for information on technical and policy air issues. However, because issues vary from Tribe to Tribe, models and tools developed by one Tribe may not always be applicable to other Tribes.
- Engaging Tribal and EPA leadership in air quality issues is critical to capacity-building. Tribal air program staff indicate that air quality is not always perceived as a high-priority issue by governmental and business leaders in the Tribal community; because of their reliance on fishing as a primary form of subsistence, water quality issues are generally the primary environmental concern.

Recommendations

- EPA or a Tribal organization could develop, update regularly, and disseminate a current list of Tribal Air Managers to allow for better communication. This list could be used for intertribal networking and for EPA to communicate new information, activities, or policies.
- OAR and Regional coordinators could work with Tribal air managers to convene environmental management workshops for Tribal leaders to increase the level of interest in air quality issues on Tribal lands.

Evidence of Tribal Capacity

In order to measure the effectiveness of EPA's efforts towards building Tribal capacity, the evaluation team compiled information from representatives of several Tribal air programs on their efforts and activities. Since the team did not have the resources to survey all Tribes on their current air program activities, our indicators of Tribal capacity represent illustrative examples rather than a comprehensive analysis.

Findings

- There is a significant amount of variety among and within EPA Regions regarding the level of activity at Tribes. For example, some Tribes are developing Tribal Implementation Plans (TIPs), while others are conducting fish consumption surveys to assess mercury deposition effects.
- Tribes have made significant progress towards building program capacity and assessing air quality on reservations. Specifically, there are 117 Tribes with CAA Section 103 or 105 grants, and over 150 air monitors on Tribal lands.
- It is difficult to evaluate the efficiency or effectiveness of the Tribal air grant programs as there are few milestones and limited information with which the Regions can track how Tribes use grant dollars.
- Tribes see the need for increased communication with Regional staff to help identify and address problems and to share information on a range of issues. However, limited resources restrict the ability of Regional staff to significantly increase interaction with the Tribes.

Recommendations

- EPA could work with Regions and Tribes to develop clear objectives and performance measures with which to evaluate program effectiveness. In order to effectively evaluate the capacity of Tribes, EPA could develop some key goals - tailored to Tribal needs - that they hope to achieve through the distribution of grants and tools.

- EPA could directly involve Tribes in decision-making, rulemaking efforts, and guidance documents that affect their air programs.
- EPA could more effectively disseminate Tribal success stories to share lessons learned with and provide a potential roadmap to other Tribes.

LESSONS LEARNED AND CONCLUSIONS

In addition to the findings and recommendations provided in the report, as part of our evaluation the team developed a set of lessons learned for OAR to consider as it looks to improve implementation of the air program. As part of the lessons learned the team suggests that EPA consider more directly involving Tribes in decision-making, collecting more detailed information on how Regions are allocating grant resources to Tribes for air programs, tracking more closely how Tribes are using resources, and augmenting Agency efforts to support Tribes through direct training, outreach, and communication. Finally, a conclusions section summarizes the key achievements (e.g., initiating a number of air programs on Tribal lands) and shortcomings (e.g., EPA's infrequent visits to Tribal lands due to resource limitations) of the program and provides suggestions for future activities.

INTRODUCTION

The Clean Air Act (CAA) of 1970 did not address the role of Tribes in implementing the air program, nor did it explicitly define EPA's role on Tribal lands. Generally, although Tribes recognized pollution problems, they had insufficient resources to implement their own air pollution programs and were concentrating on other priority problems, including serious public health, education, social, and economic challenges. At the same time, EPA was challenged with limited funds to establish the basic framework of the CAA regulatory program and assist states in establishing their programs to meet CAA requirements. Tribal programs received little attention from EPA in the early critical years of the program. Following the development of the Prevention of Significant Deterioration regulation in the mid 1970's, several tribes started small air programs to monitor large neighboring sources on an ongoing basis. In many other cases, States stepped in and worked with sources on Tribal lands (mostly without authority) to implement the CAA, or worked informally with Tribes on air pollution issues. However, for most Tribes, air quality programs were nonexistent in the late 20th century.

Through the 1980s, awareness of the need to address Tribal environmental conditions grew markedly for a variety of reasons. First, Tribes were generally asserting sovereignty and specific jurisdiction over all governmental functions in Indian Country. This included environmental programs, most notably at that time water quality programs (which directly affected the health of fisheries on which some Tribes relied for their livelihood and, in some cases, as subsistence sources of protein). Second, there was growing concern about specific air pollution problems affecting certain Tribes (for example, in the Four Corners area). Finally, the federal legal rule was becoming more and more clear: EPA had a trust responsibility to carry out environmental programs on Tribal lands as reflected in EPA's first Indian Policy, signed in 1984 by Administrator William D. Ruckelshaus.

At the time, many Tribes were developing the capacity to establish and implement their own environmental programs and even more Tribes had aspirations to do so. This was an important goal for many Tribes in order to reinforce their sovereignty, to exercise local control, and to provide opportunities for employment and advancement on reservations. Tribes had become sophisticated about working together to use the courts to establish their rights and to lobby Congress for increased clarity about the statutory role of Tribes as well as their eligibility for grants similar to the grants States had long received to assist in establishing environmental and other federally authorized programs.

In this atmosphere, in the 1990 Clean Air Act Amendments, Congress provided for tribal authority to implement CAA programs on their reservations. The Amendments state that EPA may treat tribes as states for the purposes of the Act (under specific conditions), provide funding, and develop regulations to specify which provisions of the act apply. This action recognized the inherent sovereignty of Tribes, and also recognized the federal trust responsibility to protect the rights of Tribes to continue to exist as self-governing communities.

In light of the short time that has elapsed since the 1990 Amendments, there has been

remarkable progress by Tribes in developing capacity to carry out the CAA program and by EPA's air program in establishing a basic program for enabling Tribes to advance their efforts. To assess this progress, OAR opted to undertake an evaluation of the program. This evaluation provides a number of observations about the Tribal air program and makes suggestions about how EPA can improve its endeavors. However, it is important to acknowledge the progress made to date in difficult circumstances. This report's findings and recommendations are intended to build on those accomplishments, some of which are highlighted in the remainder of this Introduction (the summary and approach of the evaluation are described below).

In 1995, EPA established a Tribal Air Program (Tribal Program) in its Office of Air and Radiation (OAR) to help increase the capacity of Indian Tribes to manage air quality on lands within their jurisdiction. Specifically, As a result of Tribal Program,

As OAR increased its efforts to work with tribes, the Tribal Program was tasked with providing technical and financial assistance to Tribes to help them address CAA requirements on their lands. Nine Tribes received EPA grants to operate air programs between the late 1970's and 1995, mostly to monitor air quality on their reservations. An additional 19 Tribes received grants in 1996, and 20 more procured funding in 1997. The Tribes used these grants to hire technical staff to start the air programs, evaluate existing air quality on the reservations (e.g., by conducting emissions inventories), provide outreach and education on air issues to tribal leaders and community members, and assess whether monitoring stations were necessary on their reservations. In general, between 1995 and 1998 OAR conducted outreach efforts to Tribes on air issues and provided startup funds for Tribes to begin developing their air programs.

In February 1998 EPA promulgated the Tribal Authority Rule (TAR). As required by the 1990 Clean Air Act (CAA) Amendments, the TAR specifies those provisions of the CAA for which a tribe may be treated in the same manner as a state (a necessary step because the CAA was designed for state implementation). Under the TAR, tribes have the discretion whether to develop CAA programs and the flexibility to choose which programs or elements of a program they will adopt. The TAR clarifies that, where necessary or appropriate to protect air quality, EPA must develop CAA regulations for sources in Indian country should a Tribe choose not to. The TAR also defines the process for EPA approval of tribal CAA programs.

Among the various CAA components that a Tribe can include in an overall air program is a Tribal Implementation Plan (TIP). A TIP is developed to ensure that the National Ambient Air Quality Standards (NAAQS) are not exceeded,¹ and represents the Tribe's plan for improving its ambient air quality when it is worse than NAAQS, or to ensure that concentrations of criteria pollutants do not increase significantly. EPA reviews TIPs to ensure that all of its planning elements are approvable under the CAA, and that the TIP contains control measures or strategies that adequately address the air pollution of concern in the area being regulated. Once the TIP is approved by EPA, the provisions of the implementation plan become Federally enforceable in

¹The NAAQS include "criteria pollutants," which are carbon monoxide, particulate matter (PM), sulfur dioxide, lead, and nitrogen dioxide.

addition to being enforceable by the Tribe. EPA develops a Federal Implementation Plan (FIP) if a tribe has not developed a TIP and there is a potential violation of the CAA on the reservation. Four Tribes - the Mohegan, Mashuntucket-Pequot, St. Regis Mohawk, and Gila River - are working towards adopting TIPs, and another ten tribes have asked for and received program approvals to implement parts of the CAA.

While some Tribes have developed or are in the process of initiating TIPs, most Tribes currently have air programs on a smaller scale. Specifically, these Tribes aim to address problems associated with hazardous air pollutants, indoor air quality, acid rain, mobile sources (e.g., diesel emissions from school buses), radiation, or other issues of local concern. Non-regulatory activities include developing education and outreach on various issues. These Tribes are also working to understand their airsheds, complete initial emission inventories, attend training offered at the Institute for Tribal Environmental Professionals (ITEP), and become involved in local, regional, and national issues relating to air quality and Tribes. In addition, Tribes are involved in voluntary programs with EPA, especially as they relate to indoor air (e.g., building codes, activities to reduce indoor air exposures).

EPA works with and provides assistance and grants to Tribes that are developing large air programs - i.e., putting together TIPs - as well as Tribes that are developing smaller air programs - e.g., addressing impacts of mercury deposition on Tribal waterways and fishing. In this report, "Tribal air programs" refers to larger scale programs that have developed TIPs as well as smaller air programs that are, for example, conducting emissions inventories or initiating monitoring efforts.

Summary of Evaluation

During the past several months, OAR and its consultants Industrial Economics, Incorporated (IEC), and Ross and Associates have conducted an evaluation of OAR's Tribal Air Program. The Office of Planning, Analysis, and Accountability (OPAA), and the Office of Policy, Economics, and Innovation (OPEI) provided funding support for the evaluation. The purpose of the Tribal Program evaluation is to assess how effectively the program is using its resources to achieve its key objectives:

- Build Tribal program capacity;
- Address significant air quality problems on Tribal lands; and
- Provide the tools necessary to achieve those ends.

Through this evaluation, OAR aims to review lessons learned to date about the Tribal Program, such as whether the Agency is providing effective technical and financial support to Tribes that are developing air programs, and intends to use the evaluation to inform program management decisions and enhance future program effectiveness. Since OAR does not expect a significant increase in funding or staff for the Tribal Program over the next few years, the recommendations proposed in this report assume that resources for tribal air programs will remain fairly constant. If any of the recommendations that require additional resources are implemented

by OAR (e.g., additional training), this might entail trade-offs between program components.

Evaluation Approach

To initiate the Tribal Program evaluation, we developed an Activities Flow Chart that delineates the main stakeholders associated with tribal air programs and their primary responsibilities and activities (see Exhibit 1). As the exhibit indicates, OAR is responsible for overall coordination and oversight of the Tribal Program. The flow chart also shows the roles of the other primary stakeholders and the key program objectives, including building Tribal capacity, providing the necessary regulatory and technical tools, and addressing significant air risks on tribal lands. As noted above, these objectives form the basis for our evaluation and therefore significantly influenced our approach to this evaluation. Specifically, we determined that the most effective way to determine whether the Tribal Program was fulfilling its objectives was to collect relevant information on Tribal air programs and interview the stakeholders responsible for organizing Tribal Program as well as the Tribes that are developing and implementing air programs on their reservations.

After developing the activities flow chart, we developed a list of interviewees to gather a cross-section of experiences and perspectives in Tribal air programs, including approximately 25 air professionals from Tribes, 25 EPA regional and headquarters staff, and six representatives from nongovernmental organizations that work with Tribes on their air programs (A full list of interview participants is included in Appendix A). Next, we prepared a one-page interview guide (also in Appendix A) addressing the key issues presented by the activities flow chart, including: building Tribal program capacity; funding and grants; technical assistance; regulatory and non-regulatory tools; and communication. We then conducted interviews (primarily by phone) one-on-one or in small group settings with the project participants. In an effort to encourage candid discussions, we indicated that specific comments made during the interviews would remain anonymous and would not be attributed to any individual. More detailed case study interviews were conducted with EPA and Tribal air program staff in Regions 1 and 10. Finally, we collected and analyzed data on resource expenditures from the Regions and EPA Headquarters. Based on our analysis of the interviews and the data and information we collected, we developed the findings and recommendations that constitute this report.

We have also developed some “lessons learned” that summarize the key components of this evaluation. In the lessons learned we recommend that EPA:

- Collect more detailed information on how Regions are allocating grant resources for Tribal air programs.
- More closely track how resources are expended to Tribal air programs, and develop clear criteria for resource distribution.
- Work with Tribes to develop annual performance objectives and measures to evaluate Tribal performance with regard to air program grants.
- Augment its efforts to support Tribes through direct training, outreach, and communication.

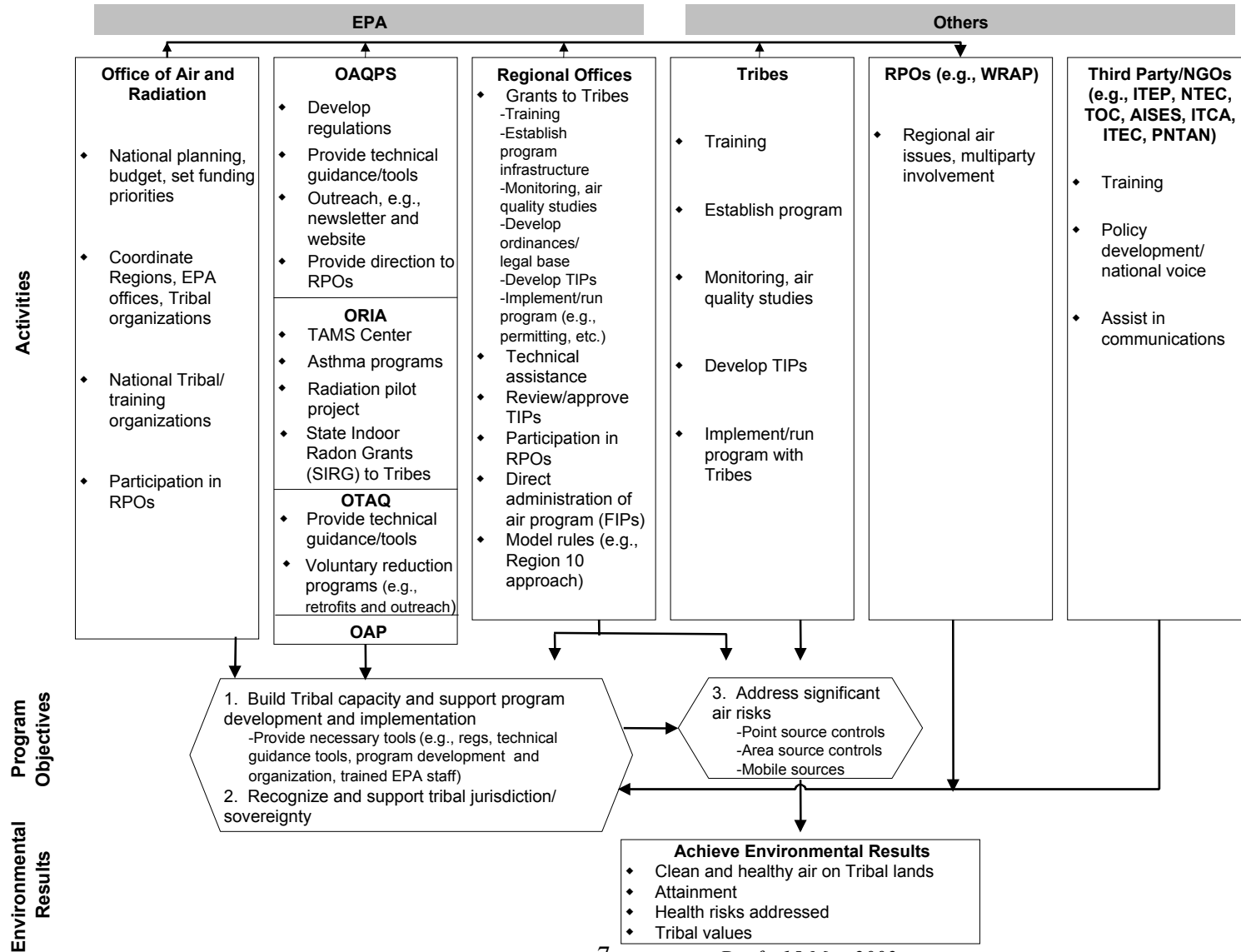
- Synthesize its support mechanisms to Tribes to provide more cohesive assistance to Tribes.
- More directly involve Tribes in decision-making, rulemaking efforts, and guidance documents that affect their air programs.

These lessons learned are discussed throughout the findings and recommendations sections of this report and are described in more detail in the final section.

Structure of the Report

Following the introduction are three sections in this report: Providing the Tools, Building Tribal Capacity, and Evidence of Tribal Capacity. Each of these sections includes some background information, followed by our findings and recommendations. A final section addresses Lessons Learned from this evaluation.

**EPA Tribal Air Program
Activities Flow Chart**



PROVIDING THE TOOLS

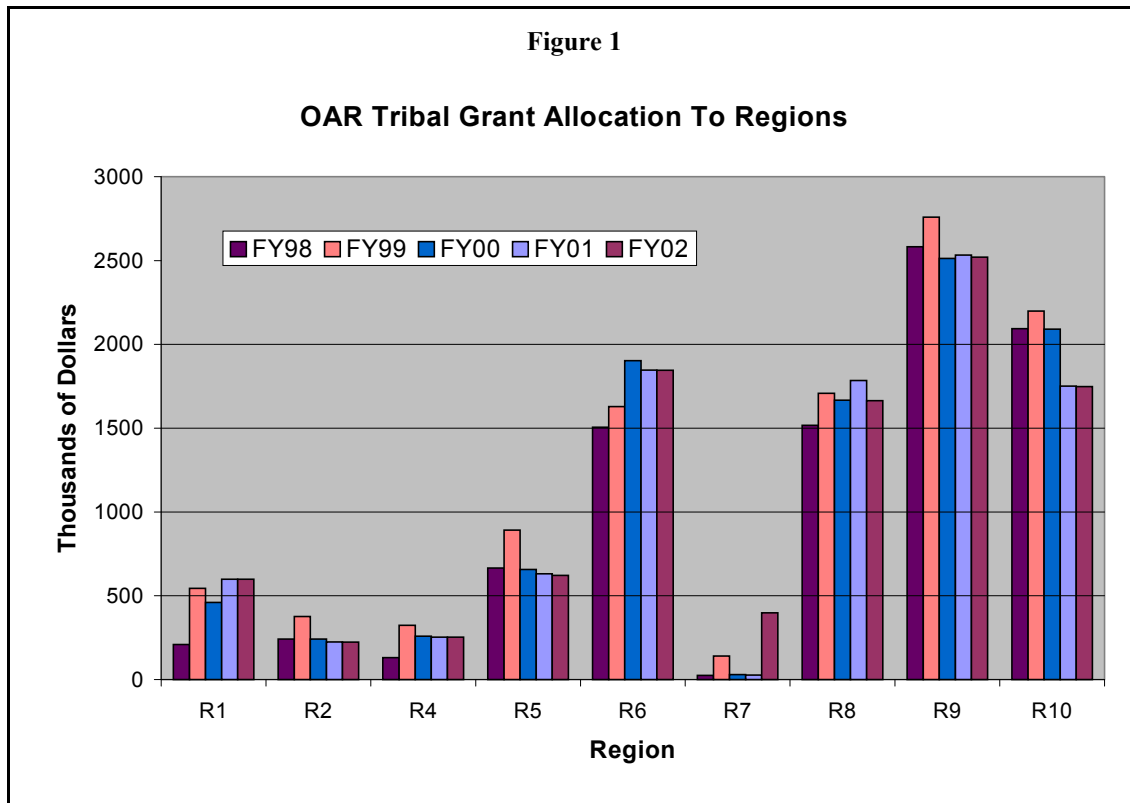
As part of its Federal trust responsibility and under the specifications of the TAR, EPA provides Tribes with tools necessary to build their capacity to develop their own air programs. Specifically, EPA distributes grant funding to Tribes that can be used to perform activities associated with the development of air programs, including: installing air monitors, conducting emissions inventories, or developing regulations for on-site sources. In addition, EPA has the responsibility to provide training to Tribal environmental professionals to enable them to develop and manage air programs. Finally, the Agency has committed to providing guidance and models that Tribes can use to develop their air projects and initiatives. For the purposes of this evaluation, we interviewed relevant stakeholders to determine whether EPA was fulfilling these responsibilities, and to collect recommendations for how the Agency's development or distribution of these tools could be modified or improved to more effectively enable Tribes to shape and manage air quality programs on Tribal lands.

Resources

Resources for Tribal air programs are first disseminated by OAR to the regional offices, and then from the regional offices to Tribes. OAR determines the allocation of some of their State and Tribal Assistance Grant (STAG) funding allocations using a primary criteria of \$75,000 per Tribe receiving an air grant. After allocating resources based on this primary criteria, the remaining funds are distributed using a weighted percentage of five grant criteria:

- Tribal population, 30%;
- Number of non-attainment areas, 20%;
- Number of Title V major sources, 30%;
- Size of reservation, 10%; and
- Number of Reservations (Tribes) 10%.

The funds allocated to each area are then divided among the Regions depending on how they rate in the criteria. For example, Region 9 had 25.62 percent of the total national Tribal population in 2002, and received 25.62 percent of the total funds allocated to the Tribal population criteria. Figure 1 presents OAR's annual funding allocation by Region from fiscal year (FY) 1998 to the present. As the figure demonstrates, funding has been relatively constant since FY 2000.



There are two types of grants allocated from Regions to Tribes under the CAA - grants covered under Sections 103 and 105 - and a funding source from the American Indian Environmental Office's General Assistance Program (GAP). Tribes must submit applications for each of these grants. Grants covered under Section 103 of the CAA (Section 103 grants) are project-specific and available for activities such as air quality assessments. These grants run for a maximum of five years and constitute the current majority of grants allocated to tribal air programs.

Grants allocated under Section 105 of the CAA (Section 105 grants) provide for support of longer-term development of air pollution control programs. These grants address activities such as regulation development and long-term monitoring, and are intended to provide stability to tribal air programs. Section 105 grants are generally ongoing, and not restricted to a particular number of years. In general, Section 105 grants are more accessible to tribes that have received eligibility to be treated as states (i.e., can review permits for off-reservation sources with the same authority as a state). These tribes have to provide a match of five percent to ten percent of the federal assistance they receive; tribes that have not established treatment as a state are eligible for 105 grants but must provide a match of 40 percent. In 2002, OAR allocated a total of \$9,869,600 STAG dollars for Tribes to conduct air program activities. The breakdown of these grants by Region is presented in Figure 2. These funds support a total of 117 grants on Tribal lands nationwide, as is presented in Figure 3 (this total does not include GAP grants).

Figure 2

Tribal STAG Grant Dollars By Region (2002)

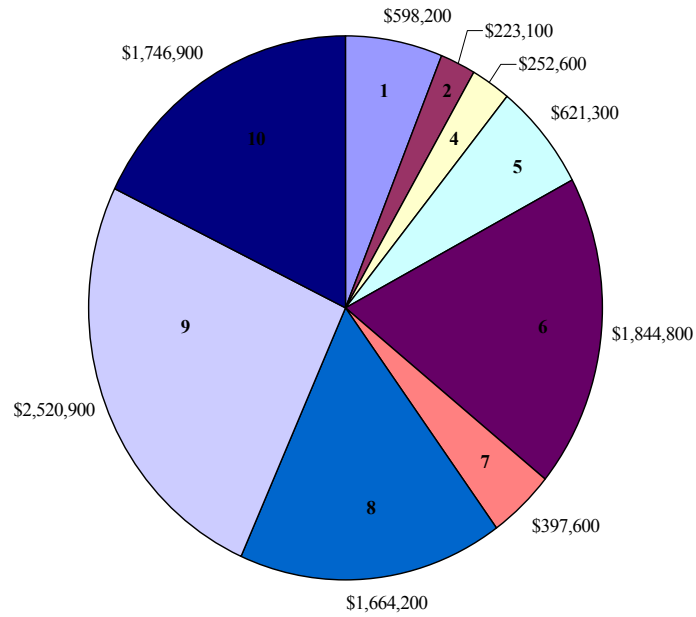
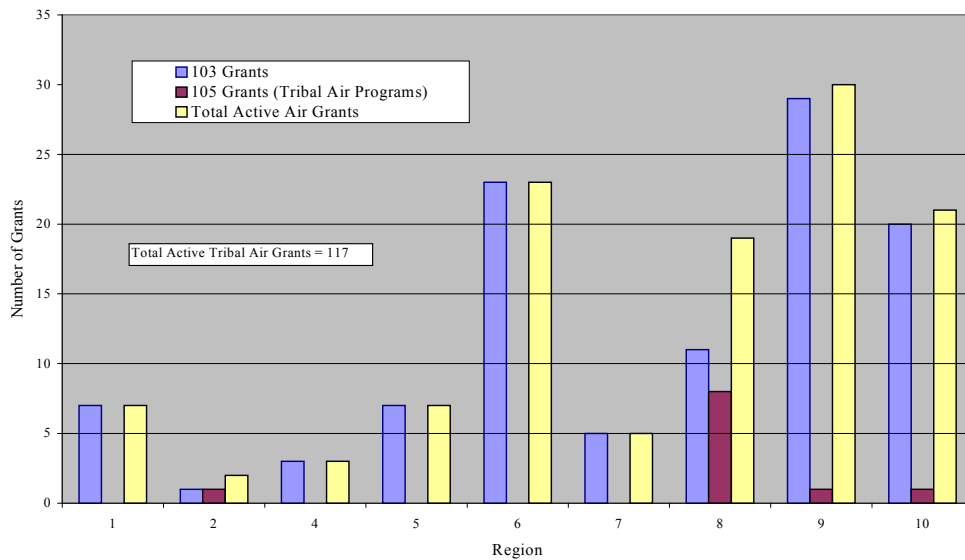


Figure 3

Active Tribal Air Grants By Region



Finally, GAP grants, administered by AIEO, assist Tribes in building the basic infrastructure of a Tribal environmental program (including but not limited to air programs), which may include planning, developing, and establishing the administrative, technical, legal, enforcement, communications, and environmental education and outreach infrastructure. Federally recognized Tribal governments and authorized intertribal consortiums are available for GAP grants, and these entities must submit a work plan as part of the application process. Tribes that receive GAP grants may also receive Section 103 or 105 funding. OAR estimates that approximately 20 to 35 Tribes in the Western Regional Air Partnership region receive GAP funding for their programs. The nationwide demand for this type of funding, although not quantified, is therefore likely higher; additional information needs to be collected on the use of GAP grants by Tribes.

Findings

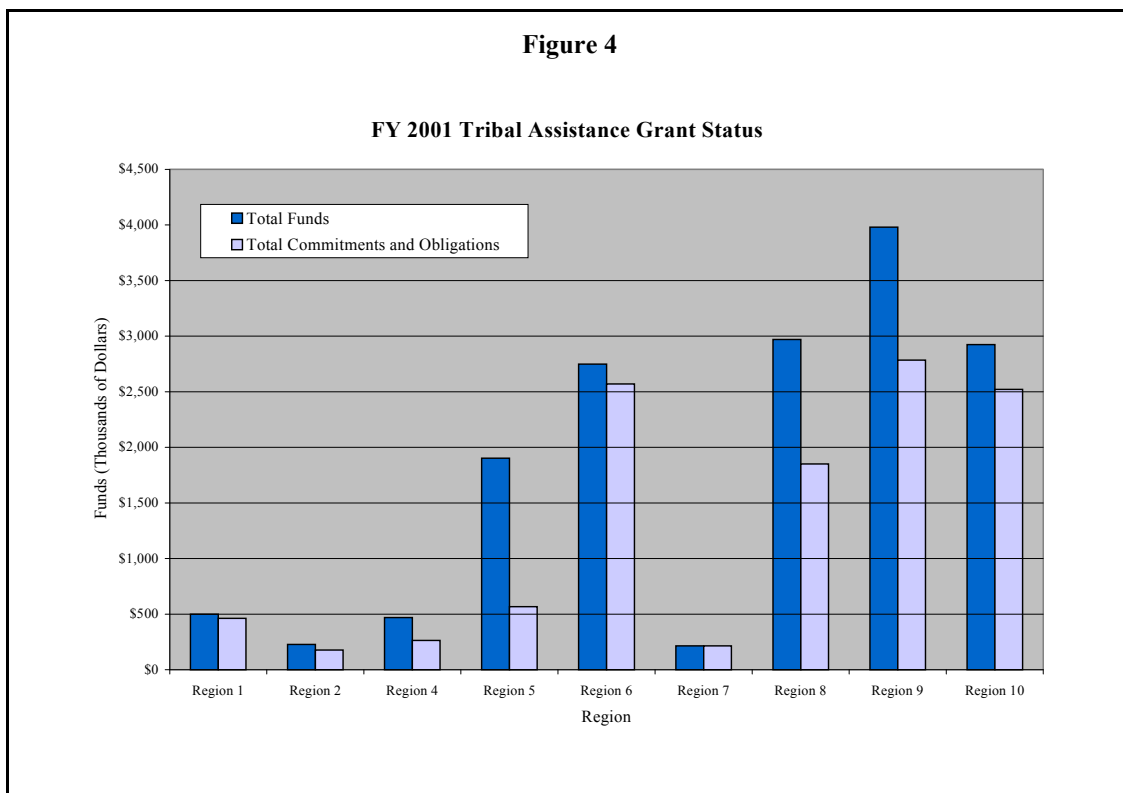
The process and criteria for awarding grants to Tribes differs considerably from Region to Region.

- Many Tribal air program managers perceive that EPA funding is handed out on a “first-come, first-serve” basis or that grant allocations are opportunistic rather than strategic. Some regional representatives indicate that grants are in fact provided on a first-come, first-serve basis because there is little competition in their regions for air grants.
- In some cases where there are a small number of Tribes within a Region, funding decisions are made based on discussions and negotiations with each Tribe regarding its tribal air program plans and activities.
- One Regional coordinator notes that since all requests for grants could be honored with available funds, there was no need to develop distribution criteria. However, because funding shortages now appear likely, defined allocation criteria have become necessary.
- Some Regions have already developed specific grant criteria to determine awards. For example, Region 10 considers the following criteria:
 - type and degree of environmental need;
 - the relationship of the project to environmental planning processes used by the Tribe;
 - demonstration potential of project;
 - the projects role in building partnerships;
 - the Tribe’s past performance in managing EPA grants; and
 - the likelihood of project success.
- Another region does not use formal criteria for grant allocation, but does consider whether the Tribe has a significant air quality need that is driving the grant application. In addition, if the Tribe has previously been a recipient of an air grant, the region takes into account how well the Tribe met the objectives identified in the grant.
- As discussed in the recommendations section below, some Tribal air coordinators and regional air program managers have recently begun discussions to develop criteria that

regions can use to disseminate funds to Tribes.

The demand for grant resources to manage tribal air programs varies depending on factors such as number of on-site sources, monitoring needs, and stage of the program. Similarly, the availability of resources for tribal air programs varies across regions.

- Some Tribal environmental managers have noted that current funding for their air programs is sufficient; others indicate that their air programs are underfunded. Figure 4 demonstrates that in FY 2001, nearly all Regions had available funding that was not allocated. However, in general Tribes and the regions agree that funding is likely to become more constrained within the next two or three years due to increased demand and the expenditure of "carryover" funds at Regions (i.e., when Regions do not expend all of their resources for tribal air programs in a particular fiscal year, they can carry over these funds to the following fiscal year). In fact, several Tribal air program managers and EPA regional and HQ representatives expect this situation to result in a "funding crisis" for the Tribal air program. As one stakeholder noted, "Tribes want to exercise their sovereignty and take advantage of these programs, but EPA can't back them up with dollars."



EPA support (e.g., resources and technical training) is critical at all stages of Tribal air program development, not just the start-up phase.

- Tribes already receiving grants may face increased competition as more Tribes in their Region request grant funding. However, their needs will remain constant or increase in the future as most Tribes expect to rely upon EPA for long-term program funding. For example, once Tribes put monitors in place, they still need funds to continue their efforts. Figure 5 presents the varied activities that Tribes in Region 1 have conducted using their grant dollars.

FIGURE 5		
SUMMARY OF ACTIVITIES CONDUCTED BY REGION 1 TRIBES WITH AIR GRANTS (1997-2002)		
Tribe Number¹	Total Funding/ Years of Grant	Description of Activities
1	\$12,000 1998-1999	<ul style="list-style-type: none"> • Conducted impact analysis of nearby industrial facilities. • Inventoried licenced air pollution sources in watershed. • Continued comprehensive emission inventory. • Attended two training courses.
1	\$249,940 1999-2002	<ul style="list-style-type: none"> • Completed three air quality workshops. • Contracted with laboratory for monitoring assistance. • Making monitoring data available to national database and Tribal members.
2	\$30,000 2000-2002	<ul style="list-style-type: none"> • Analyzed fish tissue for mercury content. • Hired summer intern to conduct fish and sediment samples. • Developed Quality Assurance Protection Plan (QAPP).
3	\$145,000 1999-2001	<ul style="list-style-type: none"> • Assessed and prepared monitoring sites. • Ordered monitoring equipment. • Distributed a fish consumption survey. • Initiated development of QAPP.
3	\$200,000 2000-2002	<ul style="list-style-type: none"> • Received and assembled monitors. • Continued to developed QAPP • Hired biologist.
4	\$130,000 2000-2002	<ul style="list-style-type: none"> • Hired an air quality technician. • Trained air technician. • Researched regional air pollutants. • Hired consultant to analyze fish tissue for dioxin and mercury, assess risk to Tribal resources, and conduct a fish consumption survey to determine human risk.

FIGURE 5

**SUMMARY OF ACTIVITIES CONDUCTED BY REGION 1 TRIBES
WITH AIR GRANTS (1997-2002)**

Tribe Number ¹	Total Funding/ Years of Grant	Description of Activities
5	\$78,293 1997-1999	<ul style="list-style-type: none"> • Met with health officials to discuss available asthma data. • Identified air quality monitoring and assessment needs.
5	\$683,700 1998-2002	<ul style="list-style-type: none"> • Purchased equipment to: <ul style="list-style-type: none"> – test and identify household mold; – collect data on vehicles miles traveled; and – Perform spot sampling on reservation. • Began developing an emissions inventory. • Hired assistant manager. • Attended training workshops. • Developed cooperative relationship with State air program. • Initiated acid deposition monitoring. • Participated with the New England Governor’s Association and the Ozone Transport Commission as founding members of the Clean Air Partnership Committee. • Helped develop Tribal language for 1999 EPA Strategic Plan. • Developed Tribal Air Monitoring website. • Participated in Regional Haze Planning Organization.
6	\$42,000 1998-2001	<ul style="list-style-type: none"> • Made agreement with Water Resources Institute and consultant to conduct fish tissue sampling for mercury and analyze results. • Developed QAPP for fish testing plan. • Hired two temporary staff to collect fish tissue samples. • Conducted fish consumption survey.
6	\$40,000 2001-2002	<ul style="list-style-type: none"> • Participated in Ozone Transport Commission and Regional Haze Planning Commission. • Developed standards and regulations for air quality, odor, and open burning • Hired consultant to prepare a risk assessment on mercury contamination in fish. • Analyzed fish tissue and consumption habits.
7	\$12,000 1998-2001	<ul style="list-style-type: none"> • Assessing and preparing monitoring sites. • Conducting fish tissue analysis. • Developed website.
7	\$249,260 1999-2002	<ul style="list-style-type: none"> • Assessing and preparing monitoring sites. • Conducting fish tissue analysis. • Developed website. • Making monitoring data available to national database. • Developing QAPP

Note:

¹For reasons of confidentiality, the Tribal name has not been included. However, each Tribe is numbered to allow determination of the number of grants or activities completed by specific Tribes.

- Many Tribal air program managers and EPA staff acknowledge that EPA does a better job of supporting Tribes in early stages of air program development. As one interviewee states, “There are many EPA resources dedicated to developing Tribal capacity, but there are not the resources to adequately support the next step for implementing Tribal air programs.”

Several Tribal environmental managers have noted that the short-term nature of grant allocation makes planning and continuity within air programs difficult.

- Several Tribal environmental managers express concern that funding is somewhat uncertain year to year, which affects their ability to develop long term plans for their air programs.
- Tribal stakeholders indicate that there are sometimes time lags between when one grant expires and the next is received. These gaps affect the continuity of their air programs. One Tribal air program manager notes that when her Tribe lost its grant, air program staff were laid off. Soon thereafter, the Tribe’s grant was reinstated and the Tribal air manager had to begin a new hiring process to recruit program staff.
- To create more stability, some Regions prefer to rely on multi-year grants to fund certain Tribal air program activities, such as monitoring.

EPA does not always present a clear picture of the different sources of funding that are available for Tribal air programs. Additionally, the projects or activities that can be conducted under each grant type is often unclear (e.g., the differentiation between 103 and 105 funding).

- One Tribal air program manager comments that “some Regions believe 103 is assessment money and 105 is program money. Other Regions believe Tribes can sustain an air quality program under 103 money.”
- Another Tribal air manager notes that the Regional coordinators view “air grants as projects, not programs” under 103. This Tribe does not have pollution sources on-site and as a result has been unable to obtain a grant to simply monitor air quality as a result of off-site sources, review permits, or keep staff up to date on current issues and discussions. However, because of the burden of 105 funding (under 105 grants, Tribes must pay up to 40 percent of the program costs), the Tribe cannot obtain a programmatic grant.
- Some Tribes would like EPA to issues “decision rules” clarifying when to apply for 103 vs. 105 monies; other Tribes believe the Tribe should determine when it is ready to apply for 105 monies. In addition, some Tribes were not aware that GAP monies can be used to build air program capacity. If EPA widely distributes to Tribes its recent guidance, “Review of Authorities Available for Tribal Air Program Financial Assistance Grants,” the distinction among the different types of grants should become clearer.

- Some interviewees note that EPA has effectively notified Tribes that air grants are available. Moreover, some regions provide grant training to Tribes. As a result, the number of EPA grants applied for and awarded has increased substantially in recent years. According to one representative from an NGO, “As more Tribes get tuned into air quality issues, there are more hands dipping into the same pot.”

Recommendations

EPA could more closely track how resources are expended by tribes that participate in the air program. Some Regions currently collect regular information about expenditures on Tribal air programs, however, a more in-depth understanding of how tribes use their grant monies will help determine whether resources are being used effectively in specific air programs. This will help EPA focus its assistance efforts and work with tribes to develop air programs that appropriately address the air quality issues on their reservations. In addition, this approach can help Regions develop a plan for resource allocation for each tribe to ensure that it provides an appropriate level of funding to allow Tribes to move beyond start-up and into actual air program development.

EPA, working with the Tribes, could help improve the quality of grant proposals to ensure they contain clear objectives and performance measures. As part of this effort, EPA and the Tribes could also develop guidance on how to develop workplans for Tribal air grants. EPA could advise Tribes on the types of performance measures they might want to incorporate into their workplans to assess whether they are making progress towards achieving their air program goals. Effective performance measures often include several characteristics: they relate to a baseline (e.g., number of air monitors at the beginning of the program), report on progress towards strategic goals, are outcome-oriented (e.g., help assess whether the Tribe is making progress towards improving air quality on the reservation), and are easily understandable by stakeholders.

Continuing EPA’s efforts to develop national criteria for grant allocations from Regions to Tribes will help ensure that grants are being allocated in an equitable and efficient way. The regional Tribal Air Coordinators (TAC) have begun this process to develop national criteria. The TAC might consider the criteria used by other related programs. For example, under EPA’s Pollution Prevention Grants program, grants are awarded based on criteria that reflect the program’s overall strategic objectives. At the outset of the program, EPA set goals and objectives that were to be achieved through programs funded by grants. National criteria were then developed that require applicants to demonstrate how activities conducted under the grant will work towards achievement of these goals and objectives.² The criteria developed for OAR’s grant allocation could resemble this process, and could be made transparent to the tribes so that they fully understand funding decisions. To account for the unique air issues faced by Tribes in each region (e.g., reservations with or without major sources on-site), EPA could develop these

² EPA Pollution Prevention Grants FY 2002 Guidance, www.epa.gov/p2/programs/ppis/2002p2guidance.htm. Viewed May 3, 2002.

criteria as a framework that can be adapted by each Region.

EPA could provide more information on the grant allocation process by developing a guidance document that describes the various types of air grants available to Tribes and the application process for these grants. Some Regions already provide this guidance to Tribes, however, others should consider making this information readily available. When the national criteria for grant allocation are developed, a national guidance document could also act as a vehicle to communicate these criteria to Tribes. In addition, EPA Regions should clarify Tribal responsibilities in fulfilling the conditions of each grant and managing for results. EPA could consider developing national criteria outlining these responsibilities to ensure consistency. In addition, EPA could develop training sessions on EPA's process for budgeting and grant management.

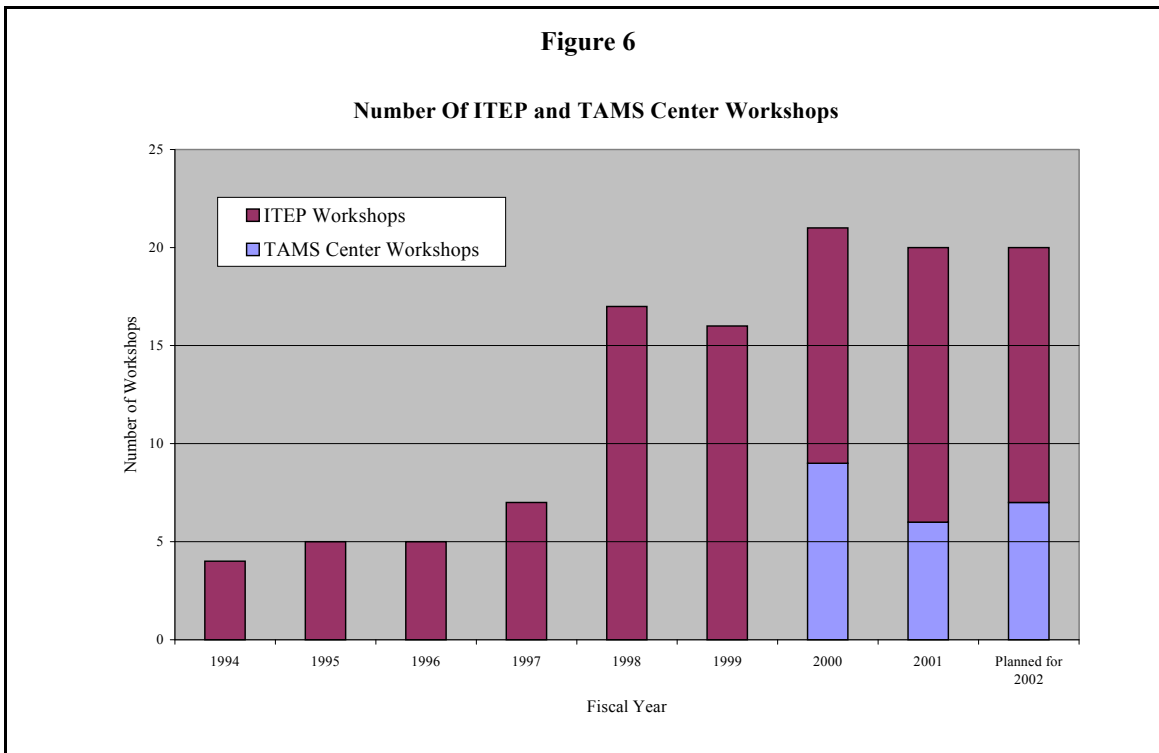
EPA could examine opportunities to increase the number of multi-year grants to Tribal air programs and other parties. Long-term funding allows greater reliability and enables strategic planning. Other organizations supported by EPA, such as the Tribal Air Monitoring Support (TAMS) Center, could also plan more effectively if funding commitments were made for several years into the future. Additionally, long-term grants could help Tribes attract and retain air program staff.

Technical Assistance

One Tribal air program manager comments that technical assistance in the “backbone” of building Tribal air program capacity. Tribal air professionals receive technical assistance from EPA and from other partner organizations funded by grants from EPA. The primary training organization that EPA funds is the Institute for Tribal Environmental Professionals (ITEP) at Northern Arizona University (NAU). ITEP’s mission is “to assist Indian Tribes in the management of their environmental resources through effective training and education programs.”³ OAR has provided the majority of the funding for ITEP's trainings, and ITEP reimburses most of Tribes' expenses to attend the trainings.

EPA’s TAMS Center at the Radiation and Indoor Environments National Laboratory in Las Vegas, Nevada was created in partnership with ITEP to provide additional technical assistance to Tribes. TAMS is primarily responsible for training Tribes on air monitoring and analytical support. As Figure 6 shows, the number of workshops held by these organizations has grown significantly since ITEP was founded in 1994. Some regions have also held additional technical trainings for tribes in their jurisdictions, and OAQPS manages the Air Pollution Training Institute, which provides classroom and self-instructional courses on control technology, permit review, and compliance monitoring and inspection.

³ ITEP website, <http://www4.nau.edu/itep/intro.html>.



Findings

Tribal air professionals rely heavily on ITEP, the TAMS Center, and other organizations to provide technical assistance. However, due to resource and travel issues, Tribal air managers do not always have access to this technical assistance.

- In general, Tribal air professionals see ITEP as a great resource for Tribal air programs. For example, one Tribal air program manager comments that “ITEP does a remarkable job of providing air quality training for the Tribes.” Another Tribal air manager points out that one of the keys to ITEP’s success is that the courses are geared toward and taught by Tribal air professionals. In addition, nearly all Tribal air managers and EPA staff agree that the TAMS Center is a very useful technical resource.

Tribes would like EPA to provide (or fund other organizations to provide) additional types of technical assistance beyond what ITEP and TAMS currently offer.

- As Tribal environmental professionals “become more technically capable, they are asking more difficult questions and starting to outstrip” the available technical training resources.
- Tribal air professionals observe that additional training is needed in other areas such as PM_{2.5} monitoring and QAPP development.
- Several stakeholders report that due to the high demand, Tribal environmental managers have been turned away from training sessions at ITEP. Similarly, the TAMS center is

becoming overwhelmed with requests for a variety of technical assistance on monitoring and analysis.

Both Tribal and Regional stakeholders noted that on-site training and technical assistance is essential to building Tribal capacity and developing air programs.

- Tribal environmental representatives would like EPA to conduct more frequent on-site visits so that they can see the resources Tribes are trying to protect and better understand the issues the environmental staff is facing.
- Tribes need assistance on-site when there are specific problems they are confronting, such as a malfunctioning of their monitor. Tribal environmental managers often need a trainer to sit down and show them how to use and maintain the equipment.
- Several EPA regional Tribal air coordinators express an interest and willingness to visit Tribes more frequently but lack adequate travel funding or staff resources to accomplish this.

Recommendations

EPA could develop additional training materials (e.g., CD ROMs or videos) that address specific technical issues that are not covered regularly in ITEP trainings or otherwise covered in training materials. Stakeholders have suggested some examples of helpful topics focused on monitoring that could be covered in CD ROMs or videos, including:

- Setting up filters on air samplers;
- Calibrating samplers and analyzers;
- Basic electronics and troubleshooting;
- The requirements for measuring various pollutants and setting up monitor systems; and
- Developing QAPP review procedures/guidance and a manual/checklist.

EPA could consider increasing support to TAMS and ITEP so they can expand their course offerings to provide additional training on pressing technical needs. Examples that stakeholders identified include:

- Title V (ITEP is currently planning this training);
- Issues relating to indoor air quality;
- Budgeting and grant management;
- Monitoring for PM 2.5 (addressed to a limited extent in some ITEP courses);
- QAPP development (addressed to a limited extent in some ITEP courses); and
- Developing TIPS.

EPA, ITEP, and technical centers could consider offering courses in a variety of regions to provide access to a broader range of Tribes. More local training within the Region would enable Tribal environmental managers to take advantage of training while not requiring them to

neglect their on-site programs and responsibilities. For example, Region 1 makes an effort to get Tribal personnel involved in their workshops offered to Region and State employees. Further expansion and marketing of the Air Pollution Training Institute's satellite training, and linking the institute's activities to ITEP's courses and expertise, might also serve the purpose of bringing training directly to the Tribes.

EPA could bring technical experts directly to Tribes. EPA Regional coordinators could be given more resources to visit Tribes on-site. Alternatively, EPA could consider establishing, perhaps through a cooperative agreement with states, a technical SWAT Team (either national or region-by-region) to travel to Indian Country to help Tribal air programs address difficult technical issues. EPA also could develop and maintain a list of EPA or State staff who could provide Tribes with additional expertise and technical resources.

The Tribes and EPA could develop a comprehensive database of Tribal professionals who can provide guidance and technical assistance. The American Indian Science and Engineering Society (AISES), an education and outreach organization, is working towards developing a database of Tribal professionals. The TAMS center has also expressed interest in developing a clearinghouse of skilled professionals. EPA could provide AISES or TAMS with additional grants to facilitate their efforts.

EPA could develop a database of technical guidance documents for Tribal lands and include the roster on its website (and intranet site for EPA employees to use). While there is some Tribal air information and guidance available on the OAR, OAQPS, and Regional websites, EPA should consider facilitating additional information transfer between Tribes and Regions to increase the level of understanding of what other programs have tried to accomplish and what tools and models might be available for use. For example, EPA could ask Regional coordinators to be responsible for collecting and posting on a website, relevant work plans, tools, models, methodologies, or contact information for a variety of different Tribal air issues.

Guidance and Related Tools

Guidance from EPA on Tribal air issues is designed to come primarily from Regional coordinators. EPA's guidance can be invaluable to Tribes as they work to understand the key air quality problems on their reservation, the sources impacting air quality, and measures they can take to mitigate the impacts of these sources to protect human health and natural resources. Tribal air professionals can consult with EPA coordinators to devise solutions to problems that arise or to solicit advice on activities or efforts to pursue. Tribes also benefit from less tailored guidance on specific aspects of air programs, such as how to conduct an emissions inventory or developing a QAPP. This type of guidance provide Tribes a jumping off point to new efforts and initiatives, which can then be tailored to the specific issues and concerns of the Tribe.

In addition to the guidance that Tribes receive, several stakeholders identified other tools that would be useful in helping Tribes to build program capacity. For example, numerous Tribes and EPA representatives indicated that the completion of the New Source Review (NSR) rules would represent a significant asset for tribal air programs. EPA has been working to develop two

NSR rules that, when completed, could be adopted by Tribes. First, EPA is developing a minor NSR program, which establishes enforceable emission limits for minor new sources to limit the source's potential to emit, help attain or maintain the NAAQS, and help prevent significant deterioration of air quality. Second is the nonattainment NSR program for nonattainment areas, whereby Tribes could regulate emissions from new major sources and major modifications to existing sources.

Findings

Regional coordinators provide a variety of support to Tribes; some Regions lack the resources to provide significant assistance while other Regions are able to spend considerable time working directly with the Tribes.

- Some Tribal environmental managers note that the Regional offices have been a great source for technical information, grants, and general expertise. Other Tribal air managers and Regional staff express frustration that Regional coordinators have too much work to give Tribes sufficient one-on-one attention.
- EPA offices are often located far from Tribal lands, and it can be difficult for EPA staff to travel and conduct inspections of on-reservation sources. While Regional coordinators would like to be able to visit Tribes in order to address specific problems, they report that they often lack sufficient resources to do so.
- Some Tribal air professionals expressed frustration that their technical contacts at EPA are often new to the program (rather than “seasoned veterans”). These EPA staff may not have the technical expertise/background that Tribal air professionals need.
- OAQPS has recently provided helpful technical assistance to Regions and Tribes. One Tribal air program manager mentioned specifically that OAQPS’s website contains valuable technical information and is an "outstanding resource."

Since many of the Tribal air programs are small and lack strong administrative components, Tribal air programs often need additional administrative support from EPA to build capacity.

- Many Tribal air program managers point out that building administrative capacity/legal expertise is a particular challenge for Tribes. These individuals look to EPA capacity-building efforts to help address this need and believe that EPA should provide extra funding to support administrative functions.
- Tribes are often unaware of the legal issues surrounding the development and implementation of a Tribal air program, for example, being held responsible for ensuring compliance of regulated sources.
- In some cases, Tribes do not have Internet access and cannot access databases and training

materials they need to build their programs.

Due to resource, hiring, and office location issues, Tribal air programs frequently have a difficult time attracting and retaining trained and knowledgeable air program staff.

- Many EPA and Tribal air program managers observe that program staff turnover is a significant problem. Tribal air quality specialists can often find better-paying jobs in other fields/off-reservation.
- Due to limited resources or qualified employees, Tribal environmental programs are often run by a very small staff, limiting the time and attention that can be paid to any particular problem or media.
- For job openings in the air program, Tribes prefer to hire Tribal members or require Council review of job applicants. This approach can slow down hiring processes, but it can enhance a Tribe's ability to train and educate Tribal members.
- Since it is often difficult to attract staff with the right expertise, Tribal air managers frequently must engage in resource consuming training of new staff to help them understand the technical aspects of the air program.

The Region 10 Tribal Air Rules Project (TARP) could be a useful model for Tribes in other parts of the country.

- The TARP established modular Federal Implementation Plans (FIPs) for 42 Tribes in Region 10 where no Tribal or state plans currently exist. These FIPs are designed so they can gradually be replaced with TIPS as they are developed.
- Project participants generally support the approach and production of the TARP. For example, one interviewee notes that, "The TARP is a solid, protective tool for Tribes with less-developed programs." Key to the success of the TARP was the ongoing engagement of Tribal air professionals in the rule's development.
- Also, the TARP is seen as a way to "level the playing field" by avoiding the FIP process to permit new sources.
- Some interviewees expressed concern that the TAR may set up a regulatory environment in which it is difficult for Tribes to be more stringent than the rule.

National EPA guidance/policies are needed on several air issues for Tribes, particularly the NSR rules.

- The delay in issuing the NSR rules for Tribal lands is seen by numerous Tribal air program managers and EPA staff as a "gaping hole" in the regulatory framework. Since Tribes lack permitting authority, to address a major source they may have to wait for the development of a FIP. While FIPs can be useful for Tribes that lack the resources and legal abilities to withstand challenges from stakeholders representing major sources, they can result in a resource-intensive and politically divisive process.

- The following issues are identified by Tribal air managers as needing EPA guidance/policy/regulations:
 - simplified policy regarding regional haze
 - rule on open burning
 - health impacts and visibility (which are often under the purview of local air agencies—which lack jurisdiction on Tribal lands)
 - 103/105 grant award criteria
 - QAPP guidance tailored to Tribes

Tribal air professionals are interested in participating in EPA efforts to develop guidance, policies, and regulations for Indian country.

- While some Tribes are often informed about EPA policy development for air programs on Tribal lands, they indicate they are typically invited into the process towards the end rather than during planning and discussion stages. As one Tribe states, “EPA must recognize that the government-to-government commitment is to work with, not just notify, Tribal leadership about new policies for Indian Country.”

Recommendations

In general, EPA could more frequently communicate and work with Tribal air program staff regarding regulatory, guidance, and policy issue development. Although Tribes are involved in various workgroups and committees under EPA's Tribal air program, nearly all the stakeholders we interviewed indicated that Tribes should be more directly involved in decision-making and policy development. For example, EPA and Tribes could establish a more formal national policy organization - or use an existing organization such as the TOC - that addresses and makes national decisions on current Tribal air issues. This organization could also establish a list of regulatory or guidance needs on the national level. In addition, EPA should keep an updated email list of Tribal air professionals and automatically notify list members of any draft policy and guidance documents, and invite Tribes to help draft and comment on these documents. It is important to note, however, that it is difficult for some Tribes to attend additional meetings or workgroups because of the workload involved in running their programs. Therefore, EPA and Tribes should work together to determine how Tribal air program representatives can efficiently become involved on additional projects.

EPA could consider developing additional guidance and regulatory policies to meet Tribal needs. For example, EPA could develop QAPP guidance and checklists for inspections. Additionally, stakeholders suggest that EPA should explore ways to streamline and provide additional guidance to Tribes on working with the FIP process.

EPA could work with the Tribal air program managers and other groups such as ITEP or AISES to undertake a joint recruiting effort to attract qualified staff for Tribal air programs. The current number of Indian air professionals appears unlikely to meet the demand for qualified personnel in Tribal air programs. Therefore, EPA should consider increasing their support of organizations and efforts designed to educate and attract Tribal members to the

environmental field. For example, EPA and Tribes could further Tribal Program the outreach resources of AISES, which provides educational opportunities and scholarships for American Indians to pursue the study of science, engineering, and technology.

BUILDING TRIBAL CAPACITY

The resources, tools, and assistance EPA provides Tribes are intended to enable Tribal communities to develop the capacity to initiate and manage their own air programs with the ultimate goal of improving air quality on reservations. In addition to these tools, Tribal air professionals gain experience through their participation in Tribal, state, or national air quality organizations and their interactions with other knowledgeable Tribal environmental professionals. Strong communication between Tribes and other governmental counterparts at the state, regional or national level is crucial to the development of Tribal air programs, as environmental managers and technical staff are able to share ideas and tools regarding the development and implementation of air programs. In this section we address factors impacting Tribal capacity, while in the next section we address evidence of Tribal capacity.

Factors Impacting Tribal Capacity

Educational opportunities for Tribal environmental managers and interactions between Tribes, EPA, states, and trainers occur at workgroup and organizational meetings, during training sessions, through informal communication, and internships. Other communication and planning mechanism between Tribes and EPA is Regional Planning Organizations (RPOs). RPOs are essentially workgroups for Tribal air representatives to work with EPA regional and HQ staff on region-specific air issues. There are currently five RPOs, with most working on regional haze and visibility issues. Through conversations with relevant stakeholders on these issues, we developed a sense of the impact of learning opportunities and interactions on Tribal capacity, as well as recommendations to further enhance capacity.

Findings

RPOs vary widely in their ability to address Tribal concerns.

- Several Tribal air professionals note that the Western Regional Air Partnership (WRAP) has successfully integrated Tribal interests into its activities (e.g., development of a SO₂ trading program). At least one Tribal air manager acknowledges the effective role that the National Tribal Environmental Council (NTEC) - a Tribal membership organization with 160 tribes participating - played in facilitating Tribal participation in the WRAP.
- Several Tribal air professionals indicate that it is sometimes a challenge for Tribes to make a commitment to act together on a regional basis. Tribal air managers suggest that additional issue-specific training might encourage Tribes to participate effectively in RPOs.

Intertribal organizations can play a critical role in advocating for Tribal interests and supporting Tribal capacity building efforts.

- Intertribal organizations play a critical role in disseminating information to Tribes. For example, one of the Pacific Northwest Tribal Air Network's first activities has been to develop a resource/phone list of experts in local Tribal air program who are willing to act as mentors or advisors to other regional Tribal air professionals.
- Several interview participants caution that intertribal organizations cannot represent the full spectrum of Tribal perspectives. For example, some stakeholders note that the NTEC is much more geared towards western Tribes.
- Some Regional Coordinators believe that the Tribal executives who participate in Regional Tribal Operations Committees (RTOCs) are sometimes not tuned into technical and environmental issues, resulting in a disjoint between these representatives and the Tribal environmental staff.
- Several Tribal air managers emphasize that national air organizations play an important role but should not be funded "to the detriment of building individual Tribal capacity." Another tribal representative notes that, "If we don't have adequate individual Tribal program capacity, regional organizations are irrelevant."

Tribal air professionals rely upon other air programs as models and knowledgeable staff at other Tribes for information on air issues and sustaining air programs.

- Tribal professionals are able to interact during training sessions and learn from each others experiences. In particular, many tribal representatives noted that ITEP training sessions provide a good opportunity for Tribal air program staff to meet and communicate.
- Once a Tribe has learned how to set up an air program and has tackled some of the key startup issues, they can share their concerns, ideas, and lessons about air issues on their reservations with other Tribal environmental managers. However, because issues may be very unique from Tribe to Tribe, models and tools developed by one Tribe may not always be applicable to other Tribes.

The relationship between Tribes and States varies considerably; some States and Tribes work well together while others do not.

- Some Tribal air professionals turn to the states for technical assistance. For example, Tribes in Region 1 have consulted with States in order to determine how their monitoring efforts can fit into monitoring programs already conducted by the State. Specifically, one Tribe operates a fine particulate monitor for the state program, and the state shares its monitoring data with the Tribes.
- Some Tribes have at times found it difficult to work with States because they perceive that some States view their programs as lacking technical credibility. However, as their air programs and expertise have grown, many Tribes have had the opportunity to demonstrate their technical expertise and build relationships with State agencies.

Engaging Tribal and EPA leadership in air quality issues is critical to capacity-building.

- Tribal air program staff indicate that air quality is not always perceived as a high-priority issue by governmental and business leaders in the Tribal community. Water quality issues are a primary concern of many Tribes because of their reliance on fishing as a primary form of subsistence. Regions 1 and 4 note that interest is growing in air quality issues as Tribes have increased analysis of the link between air and water pollution.

EPA and Tribes may not always agree on what constitutes “capacity building.” As a result, their priorities and program development ideas do not always complement one another.

- One Tribal air program manager notes that “EPA directs the Regions to focus on developing Tribal programs especially where major sources are located,” but observe that few Tribes fall into this category and may therefore be discouraged from developing a Tribal air program. Other EPA Regions and Tribes believe that their air programs might not be afforded as much attention from EPA HQ if they do not focus on establishing regulations.
- Several Tribal air program staff observe that their programs’ priorities may not always match EPA’s priorities. As a result, EPA sometimes appears unwilling to endorse Tribal projects.
- Non-Tribal stakeholders note that at times, Tribes may rely too heavily on EPA and do not make significant efforts to build their own capacity. For example, one EPA region noted that, after they provided a set of national air emissions data to a Tribe, the Tribe expected the Agency to provide detailed interpretation of these data rather than analyze it themselves. One interview participant suggested that while Tribal environmental managers may have the technical proficiency to understand the data, they may not have the time to distill the information themselves.

EPA Headquarters and Regional staff involved in the Tribal air program often lack clearly delineated roles and responsibilities in the program. As a result, at times there has been a duplication of effort on the program by different EPA offices, inadequate support for certain tribal air programs, and poor communication among EPA offices and between EPA and Tribes.

- Several Tribal air program managers indicate that they are unsure which EPA office to contact for technical assistance and ask for increased transparency at Headquarters and Regional offices.

Recommendations

EPA or a Tribal organization could develop, update regularly, and disseminate a current list of Tribal Air Managers to allow for better communication. This list could be used for intertribal networking and for EPA or other organizations to communicate new information, activities, or policies.

EPA and Tribes could make an effort to consolidate and potentially reorganize the large number of Tribal workgroups and committees. Consolidation of the workgroups and organizations could lessen the burden on Tribal air managers. Reorganization may also prevent issues from becoming fragmented between groups. NTEC is currently developing a National Tribal Air Committee (NTAC) that is examining the activities being conducted by some of these workgroups in order to reduce overlap and ensure the efficient use of funds. NTAC may also establish a national Tribal consortium for air quality management. The NTAC Working Group (i.e., its steering committee) is currently finalizing the structure, scope, mission, and planned activities of NTAC. Potential improved communication between groups and committees could facilitate consolidation and reduce the duplication of efforts and activities.

EPA, States, and Tribal non-governmental organizations (NGOs) could develop fact sheets to provide targeted policy and technical information and to report on Tribal air activities, goals, and accomplishments. Some offices and groups are already making progress towards this recommendation. For example, OAQPS is compiling a newsletter for Tribal air managers in an attempt to keep everyone informed about the activities and discussions occurring during workgroups. However, numerous stakeholders requested additional detail about specific Tribal air activities and projects.

EPA could help States understand and accept Tribes as co-regulators. EPA Regional Tribal air program coordinators should encourage States to send permit applications to Tribes for review and to share environmental data with Tribes. Some Tribes are developing memorandums of understanding (MOUs) with States in order to clarify jurisdiction and responsibility for permitting and ensuring compliance for sources on Tribal lands. For example, EPA has developed the Direct Implementation Tribal Cooperative Agreement authority. Under this agreement, Tribes can put sovereignty and jurisdictional arguments with States aside and can implement air quality programs on behalf of EPA. Facilitating agreements can supercede conflicts between Tribes and States that restrict the development of Tribal air programs. OAR also worked on this issue and could continue to facilitate relationships among the tribal, state, and local programs where appropriate.

OAR and Regional Coordinators could work with Tribal air managers to convene environmental management workshops for Tribal leaders to increase the level of interest in air quality issues on Tribal lands. Since air quality issues are secondary to other Tribal environmental issues such as water quality, there is a need for enhanced participation and interest of Tribal leaders in air quality management. Increased interest from Tribal leaders could assist individual Tribal programs in achieving their goals, and influence off-reservation policy that may impact air quality on Tribal lands.

OAR could, perhaps in the context of its strategic planning effort, define the roles and responsibilities of its different program offices as they relate to the Tribal air program. As part of this effort, EPA could develop a plan to improve communications among OAR, Regions, and the American Indian Environmental Office. In fact, EPA has recently formed a workgroup to enhance its communications on Tribal air programs.

EVIDENCE OF TRIBAL CAPACITY

In order to measure the effectiveness of EPA's tools and resources in building Tribal capacity, we have compiled some examples of efforts and activities being undertaken by Tribes nationwide. While our interviews revealed a wide-range of activities, we did not survey all Tribes on their current activities. Therefore, our indicators of Tribal capacity represent illustrative examples rather than a comprehensive analysis. EPA's tools and resources have enabled some Tribes to build capacity and to develop air programs. However, this evaluation did not reveal whether all Tribes who received grants and guidance have been successful at developing comprehensive programs.

Findings

Tribes are undertaking a wide-range of capacity-building activities to enhance their air quality programs.

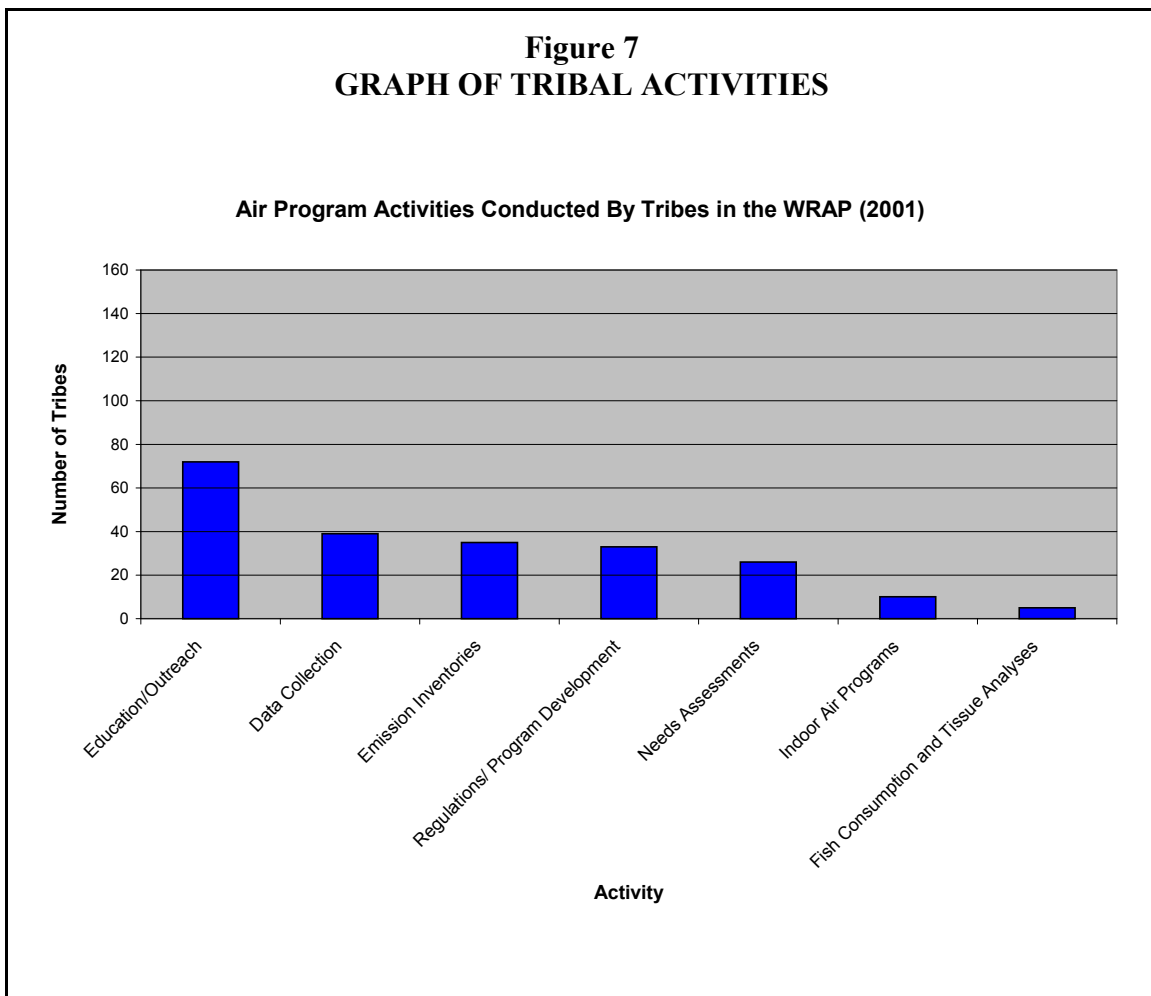
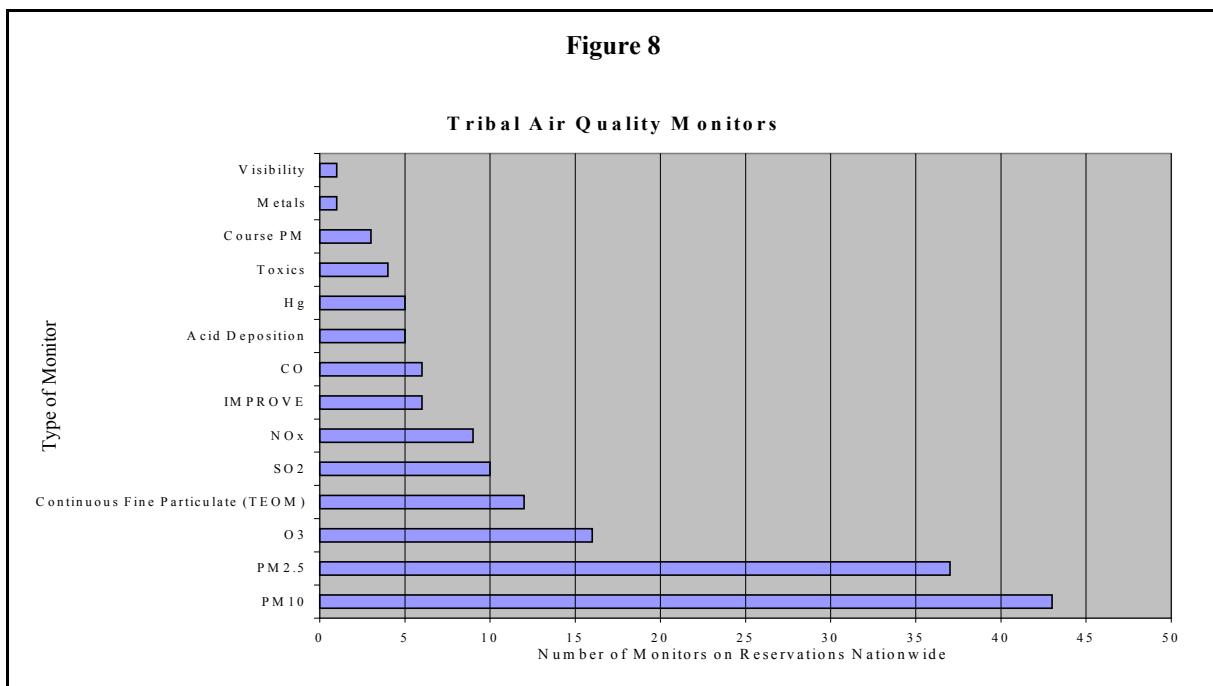


Figure 7 presents activities conducted by Tribes in the Western Regional Air Partnership (based on an ITEP survey from 2001). As the figure demonstrates, education and outreach, data collection, and emissions inventories are the most common activities conducted by these Tribes.

- As Tribes have further investigated air quality issues impacting human health and the environment, they have begun education and outreach programs to inform other Tribal members. Figure 7 illustrates that over 70 Tribes have begun education and outreach activities.
- Nationally, Tribes are monitoring for a wide variety of pollutants, with particulate matter (PM) being the most frequently monitored pollutant. Figure 8 presents the number and types of monitors currently sited on Tribal lands.



- As Figure 9 presents, Tribes in every EPA Region are conducting monitoring and a variety of monitors are sited in each Region. Region 9 currently has the greatest number of air quality monitors (40).

FIGURE 9										
NUMBER AND TYPE OF AIR MONITORS ON TRIBAL LANDS BY REGION										
Type of Monitor	Region									Total
	1	2	4	5	6	7	8	9	10	
IMPROVE	3					2			1	6
Acid Deposition	2	1		2						5
Hg	2			3						5
SO2		1			3		5		1	10
NOx		1			2		5		1	9
PM10				2	4		13	17	7	43
O3			1	2	3		2	6	2	16
CO				2	3		1			6
Continuous Fine Particulate (TEOM)				1				8	3	12
PM2.5			1	3	13		3	9	8	37
Course PM		1		1			1			3
Toxics		2		2						4
Metals		1								1
Visibility							1			1
Total	7	7	2	18	28	2	31	40	23	158

Some Tribes have developed a significant level of capacity in their air quality programs, such as developing TIPs and regulations covering sources on their reservations.

- The Eastern Band of Cherokee Indians (EBCI) in Region 4 has expertise in air visibility issues because of their efforts to monitor visibility degradation on their reservation. EBCI is also the first Tribe in the region to apply for and receive TAS designation. As a result, EBCI is responsible for representing their interests as well as those of five other Tribes in the Region as a voting member on the board of the Visibility Improvement State and Tribal Association of the Southeast (VISTAS).
- The Gila River Indian Community shares a boundary with the Phoenix, AZ metropolitan

area, and the high level of emissions from Phoenix has significantly impacted air quality on the reservation. To affect sources off-site, the Tribe received TAS status in 1998. Currently, Gila River is making significant progress on developing a TIP and plan to take over many air permitting programs currently managed by EPA (e.g., Title V). As part of this effort, the Tribal Council recently adopted the most stringent medical waste ordinance in the United States governing a medical waste incinerator located on the reservation.

Addressing Significant Air Quality Issues

Tribes nationwide face a wide variety of air quality concerns, from air toxics to indoor mold. As a result, the activities and programs Tribes pursue often vary significantly. Some Tribes have also progressed further than others with their air quality program, due to the presence of significant air quality problems to address, level of funding from EPA, technical expertise among air quality staff, or a high level of Tribal interest in air issues. Through our conversations with stakeholders, we collected information and data from Regions and Tribes on the status of their air quality programs and the air issues and problems they face. As with capacity building, these findings represent illustrative examples rather than a comprehensive assessment. In addition, the scope of this evaluation did not enable us to undertake an analysis of the current air quality conditions on Tribal lands.

Findings

Tribes are at very different stages regarding implementation of their air programs. Some Tribes are just initiating their program (e.g., seeking an air grant, looking for staff, awaiting their monitoring equipment), while others are at advanced levels (e.g., working towards a Tribal Implementation Plan or permitting Title V sources).

- For example, the St. Regis Mohawk Tribe in Region 2 has developed permitting programs for minor sources and solid waste incineration. In addition, the Tribe has set up numerous monitors to assess the impact of emissions from Reynolds/Alcoa - a large aluminum smelter - on its air quality. As a result of these monitoring efforts, Reynolds installed state-of-the-art wet and dry scrubbers on their stacks that went beyond existing regulatory requirements. Emissions from Reynolds have since decreased significantly.

The focus of the Tribal air activities will vary depending on the key air quality issues Tribes face.

- Tribal air managers often choose to monitor air quality early in their programs to assess whether any on or off-site sources are impacting air quality on their lands. Many Tribes indicate that their air quality is significantly affected by off-site sources over which they have little control. However, some Tribal air programs are working towards achieving TAS status, in part to gain the statutory authority to review permits from off-site sources that impact Tribal air quality.

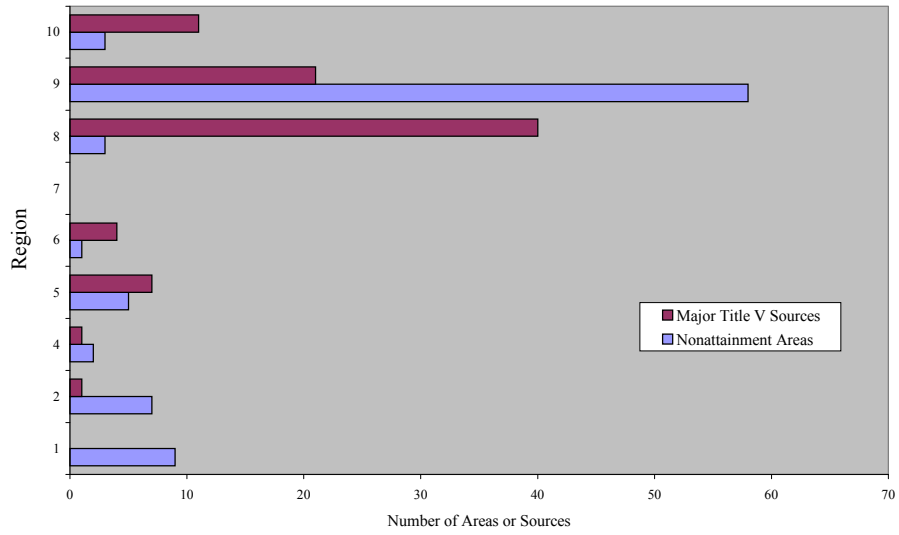
- Some Tribes choose to be more involved in developing air programs, while others continue to rely on EPA implementation. For example, some Tribes indicate it is not cost-effective to regulate sources on their land and therefore leave the regulatory and enforcement activities to EPA.
- Key concerns raised by Tribal air professionals include:
 - area sources
 - particulates
 - fugitive emissions
 - transboundary pollutants, such as regional haze or ozone
 - toxics, persistent bioaccumulatives
 - radon
 - indoor air quality
 - aerial application of pesticides
 - mercury and other types of deposition into waterbodies

88 Tribes have reservation lands in designated non-attainment areas. However, some of these Tribes are challenging their designation as a non-attainment area.

- Figure 10 presents data on the number of Tribes nationally in non-attainment areas.
- One Tribe noted that EPA - OAQPS in particular - has been quite responsive to its request for a review of its designation status.
- Other Tribes have agreed with their non-attainment classification, but have argued that because of the minimal emissions resulting from on-site sources, these sources should be classified as synthetic minors rather than major sources.

Figure 10

Nonattainment Areas and Title V Sources on Reservations



Tribes sometimes face acute air problems on-site, and several Tribes are working to address and resolve these issues.

- Figure 11 illustrates several examples of some significant air toxics issues that Tribes have faced in the past or are currently working on.

FIGURE 11 EXAMPLES OF SIGNIFICANT AIR ISSUES ON TRIBAL LANDS	
New England Tribes Region 1	Tribes in Region I face extensive PCB, dioxin, and mercury contamination, which has affected many fisheries in the Northeast. The Penobscot nation, for example, is affected by deposition and discharges from two nearby paper mills. The Tribes argue that these mills have significantly impacted their treaty right to fish.
St. Regis Mohawk Region 2	The St. Regis Mohawk reservation is directly downwind from an aluminum smelter and auto assembly plant. Because of their concern over a number of toxic issues, the Tribe is conducting monitoring and is involved in negotiations with the smelting facility.
Ponca and Cherokee Nations Region 4	A facility manufacturing carbon black for automobile tires is located in close proximity to these two reservations. Fugitive particulate emissions from this facility settle on cars, houses, lawns, and animals located nearby. Tribal members report high levels of childhood asthma as a result of the high particulate levels.
Shoshone-Bannock Region 10	The Fort Hall reservation of the Shoshone-Bannock suffered significant impacts from a phosphate mine and phosphate processing facility on their reservation. In order to control the sources, Region 10 eventually implemented a FIP.

Some success stories of air quality improvements that have resulted from the Tribal air program are beginning to emerge.

- The St. Regis Mohawk reservation in Region 2 is located directly downwind from several industrial sites, including Reynolds/Alcoa, a large aluminum smelter. The St. Regis Mohawk began monitoring air quality on their reservation; some monitors were cited on the reservation boundary adjacent to Reynolds to ensure high emission levels were detected quickly. As a result of their efforts, Reynolds installed “state of the art” wet and dry scrubbers on their stacks in advance of the regulatory requirements. Since this action was taken, emissions from the source have decreased dramatically.
- As part of the Uranium and Radiation Educational Outreach project, ORIA is working with several Tribes to alert them to the dangers of building houses with mill tailings from uranium mining. In addition, ORIA is working with secondary schools in Tribal communities located near Federal facilities containing radiation, uranium mines and mills, or nuclear power plants. This effort will reach Tribes such as the Spokane Tribe in Washington State (uranium mine), the Laguna Pueblo in New Mexico (largest open pit uranium mine in the U.S.), and the Hopi Tribe in New Mexico (uranium mines). These

Tribes are seeking to make informed decisions about the health effects, environmental impact, and economic benefits associated with past radiation sites and potential future operations. Thus far, workshops have been held in eight communities and more than 200 teachers have been trained on the potential impacts of radiation and radon.

- The Gila River Indian Community is working with EPA Region 9, Arizona Department of Environmental Quality, OAQPS, and Maricopa and Pinal counties to develop a comprehensive air toxics study in the Phoenix, Arizona urban area. This cooperative effort, known as the Joint Air Toxics Assessment Project (JATAP), is one of the first large scale State-Tribal cooperative technical air projects. The JATAP participants are also conducting emissions inventories and monitoring for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) in the Phoenix area.
- EPA is currently working with several Tribes to develop pilot projects to retrofit their school buses with emissions controls (numerous studies have recently raised concerns about the health impacts of diesel exhaust on children who ride school buses). This program is linked to EPA's current efforts to assist states in retrofitting their school buses.
- The Navajo Nation seeks to develop a TIP and a Title V program to regulate on-site sources, with whom it is currently initiating negotiations on permitting issues.
- The Nez Perce Tribe is working closely with EPA and the State of Idaho to develop smoke management plans for grass seed farmers on the reservation.

Recommendations

EPA could develop clear objectives and measures to assess whether Regions and Tribes are making effective progress on building capacity in air programs. In order to effectively evaluate the capacity of Tribes, EPA could develop some key goals and objectives that they hope to achieve through the distribution of grants and tools. We recognize that EPA's role is to support Tribal efforts. Therefore, measures at success need to be specifically tailored to Tribal needs. To initiate this process, EPA could conduct a national survey of key capacity building activities in Tribal air programs (i.e., expand ITEP's survey of the WRAP area to Tribes nationwide). In addition, EPA and Tribes could conduct an assessment of significant air toxics problems on Tribal lands, prioritize these problems, and develop a plan of action to address the key pollutant sources. This effort could be led by a Tribal-EPA consortium, EPA Regions, or one of the EPA air HQ offices.

As they have done in some cases, EPA should continue to review the designation status (e.g., nonattainment status) of Tribes that submit comments or appeals. Specifically, EPA should determine whether off-site sources are causing Tribal lands to be included in nonattainment areas. **EPA could more effectively disseminate Tribal success stories to share lessons learned with and provide a potential roadmap to other Tribes.** For instance, once the Gila River Tribe completes development of its TIP, Regions could inform each Tribe with an air quality program

about the details of the TIP.

LESSONS LEARNED

Based on our analysis of existing information as well as our interviews of EPA staff, Tribal representatives, and NGOs, we have developed a set of lessons learned for OAR to consider as it looks to improve implementation of the air program. We suggest that EPA consider:

- **Collecting more detailed information on how Regions are allocating grant resources to Tribes for air programs.** Regions currently allocate resources to Tribal air programs in a variety of ways. For example, some Regions have developed a formal set of criteria that they use to disseminate resources (e.g., potential of proposed project), while others take a more informal approach (e.g., discussing air quality needs with the Tribes). By collecting the different criteria used by Regions, EPA can work to develop a more consistent national approach to criteria that Regions can adapt to address their unique air quality issues.
- **Tracking more closely how Tribes are using resources.** While some Regions currently collect detailed information about Tribal expenditures, other Regions disseminate the funds but do not regularly follow-up with the Tribes to determine how grant monies are spent. A more in-depth understanding of how Tribes use their grant monies will help determine where resources are being used effectively and ineffectively in air programs. In addition, this approach can help Regions develop criteria for resource allocation for each Tribe to ensure that it provides the appropriate level of funding to Tribes based on the components of their air programs and the activities they conduct.
- **Working with Tribes to develop performance goals and measures to evaluate Tribal performance with regard to air program grants.** Developing objectives and measures will enable EPA to systematically review the efficacy of Tribal air programs, and could be used as part of subsequent allocations of resources. In this process EPA should work closely with Tribes to identify objectives and measures that meet both Tribal and EPA needs.
- **Augmenting its efforts to support Tribes through direct training, outreach, and communication.** For example, EPA could offer additional training on grant and budget management as well as direct technical assistance on the operation and maintenance of air monitors. In addition, the Agency could consider developing alternate outreach materials, such as a comprehensive database of Tribal professionals who can provide guidance and technical assistance.
- **Providing more comprehensive and organized assistance to Tribes.** Many stakeholders noted areas where the Tribal Program's activities and support could be better defined and provided to Tribes. For example, Tribes may receive funding from several sources, yet EPA does not clearly delineate the distinction between these types of grants. In addition,

similar sets of guidance documents and tools are being developed by Tribal organizations, Regional offices, headquarters offices, or Tribal organizations. In response, EPA HQ and Regional responsibilities could be more clearly defined, and the existing set of tools and guidance could be put on a central web site to facilitate improved communication. NTAC's efforts to clarify the goals and efforts of different workgroups and organizations is an effective step towards synthesizing various stakeholder responsibilities.

- **More directly involving Tribes in decision-making, rulemaking efforts, and guidance documents that affect their air programs.** Most Tribes indicate that, when EPA asks them to participate in policy making on air programs, they are invited into the process after these policies are already drafted. To increase Tribal input into EPA's air program, the Agency could involve Tribes in preliminary planning meetings aimed at developing policy or guidance documents.

CONCLUSION

Since 1995, EPA's Tribal Air Program has worked to increase the capacity of Tribes to manage air quality on lands within their jurisdiction. Specifically, the program has provided technical and financial assistance to Tribes to help them address CAA requirements on their lands. Over 100 Tribes have received grants to develop air programs, and nearly all of these Tribes have received some level of technical assistance from EPA. The Office of Air and Radiation undertook this evaluation to determine how effective the program is using its resources to build Tribal capacity, address air quality on Tribal lands, and provide the tools to reach these goals.

Overall, the program has helped Tribes make significant progress toward developing capacity to carry out the CAA on their lands. Tribal air programs currently cover a broad range of activities to address air quality; some Tribes have more advanced programs and are working towards adopting Tribal Implementation Plans or implementing parts of the CAA. Other Tribes are developing programs on a smaller scale, with activities aimed at developing emission inventories, addressing mobile sources, reducing indoor air exposures, and providing outreach and education on air quality issues.

EPA has clearly been successful in getting a number of air programs started on Tribal lands, including monitoring efforts and data collection. In addition, through organizations such as ITEP and TAMS, Tribes indicate that EPA has provided extremely useful technical assistance on air quality issues. On the other hand, EPA staff in several regions have not had the resources to visit and directly communicate with Tribes about their air programs. As a result, many Tribes indicate that they are having difficulty moving their air programs past the initial stages, and that other environmental priorities - such as improving water quality - receive the majority of their Tribes' attention.

Due to limited information, we were unable to fully evaluate the efficiency and effectiveness of the grant programs. Currently, most Regions collect and analyze only limited information on how Tribes use grant dollars for their air programs, and there are few program milestones developed for Tribes. Therefore, to enhance future evaluation efforts, EPA should work with the Regions and Tribes to develop a system that makes it relatively easy for Tribes to submit information on the use of their air grants, and for EPA regions to regularly analyze this information.

With EPA's assistance, Tribes are making significant progress in their development of air programs. To help Tribes continue advancing their programs, the Agency could provide more effective guidance through regular meetings and workshops with Tribal leaders and environmental managers. In addition, EPA could leverage its resources by involving Tribes in decision-making, rulemaking efforts, and developing guidance documents that affect their programs. EPA could also continue its work with Regions and Tribes to enhance communication among the program's groups and develop clear criteria to distribute grant dollars.