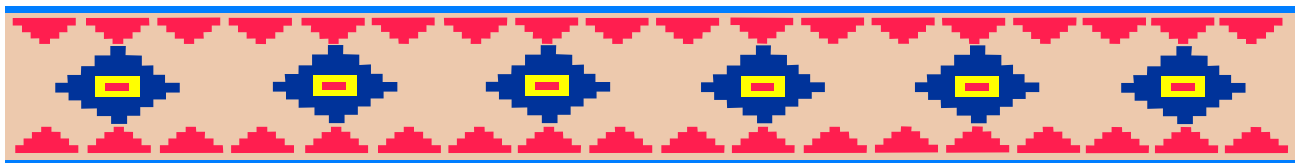**♲EPA**

Guidance and Policy for Implementation of Tribal Air Monitoring Programs

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Abstract

In August of 2005, a Tribal Monitoring Workgroup made up of staff from the Office of Air and Radiation, EPA Regional Office tribal air coordinators, and tribal air professionals was convened with the objective of developing guidance on tribal ambient monitoring.   An early draft version of the guidance was shared with a wider group at the National Tribal Air Association (NTAA) meeting in October 2005, and at other Tribal meetings. As a result of tribal input, the Workgroup agreed that, due to the scope of the topics covered, the guidance should evolve into two separate documents:

1. *Technical Guidance for the Development of Tribal Air Monitoring Programs*- The intended purpose of this guidance document is to provide specifics on how to plan and implement ambient air monitoring programs and is developed specifically for the tribes. The document was completed in August, 2007 and will be posted on the OAR Tribal Website (http://www.epa.gov/air/tribal/airprogs.html) in September, 2007.

2. *Guidance and Policy for Implementation of Tribal Monitoring Program*- The intended purpose of this guidance document is to improve the ability of tribes and Regional Offices to prioritize monitoring needs, choose an appropriate level of funding for ambient air monitoring on tribal lands relative to other air management work, and ensure that monitoring funds are used to best effect on chosen projects. This document is also intended to provide a level of consistency between OAR and the Regions in our expectations of tribal monitoring programs. The intended audiences for this document are EPA Regional Office and Headquarters staff involved in resource allocations, tribal air grant award and management, program evaluation, strategic planning of monitoring networks, technical support to monitoring programs, or using ambient air data collected from tribal monitoring programs.

It has been developed in a question/answer format as a way of distinguishing discreet topics related to ambient air monitoring activities. This guidance and policy document will remain an internal EPA document and will be revised as needed.

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List of Abbreviations

AQI	Air Quality Index
AQS	Air Quality System
CAA	Clean Air Act
CASTNET	Clean Air Status and Trends Network
CFR	*Code of Federal Regulations*
EPA	Environmental Protection Agency
GAP	General Assistance Program
HAP	hazardous air pollutants
IMPROVE	Interagency Monitoring of Protected Visual Environments
IT	information technology
ITEP	Institute for Tribal Environmental Professionals
MDN	Mercury Deposition Network
NAAMS	National Ambient Air Monitoring Strategy
NAAQS	National Ambient Air Quality Standard(s)
NADP	National Atmospheric Deposition Network
NATTS	National Air Toxics Trend Stations
NCore	National Core Network
OAQPS	Office of Air Quality Planning and Standards
OAR	Office of Air and Radiation
OMB	Office of Management and Budget
PEP	Performance Evaluation Program
PM	particulate matter
$PM_{2.5}$	particulate matter $\leq$ 2.5 microns
PSD	prevention of significant deterioration
QA	quality assurance
QAPP	quality assurance project plan
QMP	quality management plan
RPOs	Regional Planning Organizations
SIP	State Implementation Plan
SLAMS	state and local monitoring stations
STAG	State and Tribal Assistance Grants
SOP	standard operating procedure
TAR	Tribal Authority Rule
TAMS	Tribal Air Monitoring Support Center
TIP	Tribal Implementation Plan
$\mu g/m^3$	micrograms per cubic meter
WRAP	Western Regional Air Partnership

BACKGROUND

The Environmental Protection Agency's (EPA) Indian Policy, originally signed in 1984 by Administrator William Ruckelshaus, sets forth the principles that guide EPA in working with tribal[1] governments. In Principle 3 of that Policy, EPA states that "The Agency will take affirmative steps to encourage and assist tribes in assuming regulatory and program management responsibilities for reservation lands." The statement under this principle identifies grants as a mechanism that EPA will use "….within the constraints of EPA's authority and resources..."

Section 301 (d) of the 1990 Clean Air Act Amendments provides federally recognized tribal governments the authority to implement Clean Air Act programs for their reservations and other land for which they can demonstrate jurisdiction. The Tribal Authority Rule (TAR) promulgated on February 12, 1998, further delineates the authority of tribes to implement air quality programs under the Act.

The EPA Office of Air and Radiation (OAR) support tribes in ambient air monitoring activities, as needed, to assess and manage air quality. The funds that support the OAR Tribal Program are appropriated by Congress to assist tribes in developing and implementing air quality management programs with no specification of specific amounts for specific types of activities, such as air monitoring. Funds under the State and Tribal Assistance Grants (STAG) appropriation are allocated among the Regional Offices, which are responsible for awarding grants to tribes and tribal consortia, where appropriate. These grants are used by tribes for activities such as: identifying specific air quality issues; deploying and operating monitoring stations for various pollutants; participating in the work of regional planning organizations; providing education and outreach to tribal leaders and community members; developing and adopting air quality regulations; and ensuring tribes are represented in regional and national policy developments and initiatives.

Since 1999, funding of tribal grants has remained relatively constant while EPA's outreach to tribes and the growing awareness of air quality issues among tribes has led to steadily increasing numbers of applications and grants being awarded. In FY1995, the EPA Regional Offices awarded nine grants to tribes to conduct air quality work; by FY2003, grants were awarded to 115 tribes.

The EPA anticipates that requests by tribes for air grants will continue to increase. Air quality is becoming more of a priority for many tribes as they become more aware of the potential impacts of airborne pollutants from local and distant sources, as air pollution transport issues become more evident, and as tribes participate with states on shared air concerns through Regional Planning Organizations and other regional and national initiatives. Tribes generally have a much better understanding of the need for and importance of air programs than they did only a few years ago.

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[1]   For the purposes of this document, the terms "tribe," "tribal", and "tribal government" refer to federally recognized Indian tribes that are acknowledged by the Secretary of the Interior to exist pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. Section 479a. See 67 Fed. Reg. 46328 (July 12, 2002). These terms also refers to tribal consortia, as appropriate, where tribal governments have authorized consortia to act on their behalf.

Tribes are diverse in their air quality problems, challenges, and capabilities. In addition, tribes face non-air risks to the health of their members, as well as other challenges and disadvantages, that are different from those facing non-tribal communities. Because of the diversity in situations and goals from tribe to tribe, EPA has taken the approach of delegating to the Regional Office level the task of assisting tribes in identifying their goals and the task of managing the available resources to help meet those goals. Because Regions understand individual tribal situations, effective decisions about funding and in-kind assistance are best made at the Regional Office level.   Regional Offices have taken the initiative on helping tribes set air quality goals and design ambient monitoring to support them.   Each Region has prioritized requests from tribes when they collectively exceed the tribal air management grant funds available to the Regional Office. Regional Offices also negotiate, award, and manage grants to individual tribes. Regional Offices provide in-person, telephone, and written guidance and assistance to the tribal governments at all these stages. To date, Regional Offices and individual tribes have entered into many grants that have dedicated a significant portion of the available tribal air management resources to plan, establish, and operate ambient air monitoring stations in Indian country.

This guidance is rather general in nature, reflecting the need to accommodate the diversity of tribal situations.[2] Even though EPA should not and does not have a national strategy for what types of monitoring should be conducted by specific tribes, EPA can and does have a national strategy (or approach) for administering resources that it directs to supporting tribal monitoring. EPA's budget for supporting tribal air quality management work of all types is not large enough to allow approval of all requests from tribes for funds for monitoring programs. EPA therefore makes decisions about what tribal work to fund. While these decisions are made at the Regional Office level and are not guided by a specific national strategy, there are general principles that the Regional Offices follow.

As the number and size of tribal air programs continue to expand, while total funding remains constant, EPA Regions will be required to make more constrained decisions on which grant proposal to award. It is important that management policies ensure grant funds are used effectively and that there is sufficient Regional flexibility to consider and weigh the unique circumstances of individual tribes. Since federal funds are not likely to increase in the near future, it will be important to ensure that the funds are distributed appropriately and be based on Headquarters and Regional strategic goals. These goals must be articulated in clear and consistent grant criteria. The draft document titled: *Protecting Public Health and Air Quality*

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[2] The available strategic guidance (excluding technical guidance on monitor operations and maintenance) includes the following documents, and perhaps others at the individual Regional Office level:
1. 4-page section titled "Tribal Air Quality Management" in the *Final National Program and Grant Guidance for Fiscal Years 2006-2008*, April 27, 2005.
2. Memo from Jeffrey R. Holmstead, "Criteria for Providing Funds to Tribes from the State and Tribal Grant Assistance Appropriation for 103 and 105 Grants," January 27, 2005.
3. "MENU ITEM*:* Air Quality Monitoring Activities*,"* in *The Tribal Air Grant Framework - A Menu of Options For Developing Tribal Air Grant Work Plans and Managing Grants for Environmental Results*, September 2004. --
   http://yosemite.epa.gov/R10/AIRPAGE.NSF/webpage/Tribal+Air+Program+Main+Page
4. Guidance for Conducting: TRIBAL AIR QUALITY ASSESSMENTS, U.S. EPA Region 10, April 15 2005.

Resources on Indian Country: A Plan for EPA/Tribal Partnerships 2008-2013 provides these goals and should be used by the EPA Regions as basis for formulating the grant criteria. This document will be referred to as the "*2008-13 Plan*" for the remainder of this document and is currently being reviewed as a draft.

Although this document addresses EPA goals, Headquarters and Regional Offices have met with interested tribal professionals to prepare this strategic guidance on tribal air monitoring, and to recommend how EPA will prioritize requests for funding assistance.

OVERVIEW

1. Who are the intended readers and users of this document?

The intended audiences for this document are EPA Regional Office and Headquarters staff involved in resource allocations, tribal air grant award and management, program evaluation, strategic planning of monitoring networks, technical support to monitoring programs, or using ambient air data collected from tribal monitoring programs. Higher level EPA managers and staff with experience and responsibility in these topics have reviewed the document to ensure that it reflects EPA intentions and policies. Other EPA staff, especially new staff, should use this document as guidance in their own work related to tribal monitoring programs and in explaining those programs to others. State monitoring officials will find the document useful in improving their understanding of tribal goals and how EPA strives to help tribes meet their goals so they can collaborate more efficiently with tribes whenever collaboration serves state and tribal objectives.

In addition, tribal environmental professionals may also benefit from this document. It should be useful to those tribal professionals who want to apply for EPA funding support for ambient air monitoring, or whose tribes are already receiving funding, by helping them understand EPA practices and the reasons for them.

Finally, it should be noted that unlike most EPA programs, the goals of the tribal air monitoring program have been set by the tribes with general guidance from Regional Offices and OAR. A result of this decentralized approach is that individuals inside and outside of EPA who are not personally involved in working with tribes on monitoring projects need the benefit of reporting systems to be able to be aware of and assess what is being accomplished towards the tribal goals with available resources. The preparation of this document included one cycle of such assessment and reporting of current and recent tribal air monitoring programs (see Question 20). This document will provide useful documentation for possible future independent reviews of the tribal air monitoring program. Such reviews might be conducted by EPA's own Inspector General, the Government Accountability Office, or the Office of Management and Budget.

2. What is the purpose of this document?

The intended purpose of this guidance document is to improve the ability of tribes and Regional Offices to prioritize monitoring needs, determine an appropriate level of funding for ambient air monitoring on tribal lands relative to other air management work, and ensure that the funds are used to best effect on chosen projects. With support from headquarters offices, the Regional Offices should:

1. provide a strategy for applying resources in support of tribes which leaves the formation of a vision to the individual tribes themselves,
2. provide information resources for tribes as they determine their need for monitoring and prepare work plans and grant applications, as well as a one-stop resource for locating technical information[3],
3. ensure that tribal goals for air monitoring projects and what accomplishments will be considered "success", are clearly stated and documented in grant agreements (or other suitable forms) before resources under EPA management are applied,
4. ensure that milestones and/or timetables are articulated within the grant,
5. track progress in meeting those goals, and make adjustments when appropriate, and,
6. recognize the need for flexibility to address the unique needs of individual tribes.

Another intent of this document is to provide a level of consistency between OAR and the Regions in our expectations of tribal monitoring programs. Some of these expectations include:

- Monitoring expectation – There should be an expectation that ambient air monitoring will be implemented following requirements similar to the state and local monitoring organizations or to the specific program (i.e., IMPROVE) for which they are participating. There is an expectation that upon grant approval, monitoring and data reporting would commence within an appropriate and agreed upon time period.
- Efficiency expectation- There is be an expectation that the most efficient methods for meeting a particular monitoring objective be implemented. There have been circumstances where tribes and/or states and tribes have worked together to achieve objectives of mutual benefit and at resource savings. The potential for teaming and cooperation should be encouraged in the planning process.
- QA expectation- Regardless of the type of monitoring, appropriate quality systems will be developed for any monitoring program prior to commencement of routine monitoring. In particular, any monitoring for NAAQS comparison must meet 40 CFR Part 58 Appendix A requirements. OAQPS has developed a graded approach[4] to help tribes develop these documents. This approach provides the Regions flexibility during review and approval of the required quality assurance documentation (see question 18).
- Data expectation- There is an expectation that monitoring results will be reported to AQS or the appropriate national data base with very few exceptions. Data should be reported, at a minimum, within 9 months of the start of routine monitoring implementation and then at agreed upon timeframes (i.e., quarterly).

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[3] In July, 2007 a Technical Guidance Document for the Development of Tribal Monitoring Programs was developed to provide the "one-stop" resource.
[4] http://www.epa.gov/ttn/amtic/geninfo.html Graded Approach toe Quality Assurance

- Monitoring completion expectation- There must be some expectation agreed upon by the tribes and Region as to the length of the monitoring program. This length needs to be based on the objective of the monitoring activity and subsequent data evaluation, but should be articulated in the grant workplan or program documentation so false expectations on commitments to long term monitoring are eliminated. Any tribal monitoring should be assessed at least every five years and a written determination made either to continue or discontinue funding the activity.
- Technical support expectation- Some tribes will need more technical help developing monitoring programs than others. In addition, some Regions have different technical capabilities. Good communication must be established to understand what technical needs a tribe has, prior to approving a monitoring program, and to determine ways to meets these needs in order to ensure monitoring program success.

The following questions and answers address these expectations in more detail in an attempt to provide an appropriate level of communication and consistency in the implementation of air monitoring programs among EPA Regions and Headquarters which in turn will provide tribes with a set of consistent expectations.

3.   What are the guiding principles for working with the tribes on air monitoring?

The purpose of listing these guiding principles is to promote understanding and observance of the principles by EPA staff, and to help tribes anticipate and understand the basis for future EPA actions. Most of these principles flow from the Clean Air Act, the EPA Indian Policy, the Tribal Authority Rule, and other existing EPA rules and policies on budget, quality assurance, ambient monitoring, etc. Individual EPA Regional Offices may have their own guidelines or grant criteria. In the course of developing this guidance document, Regional Offices have ensured their guidelines and criteria do not conflict with the principles stated here. EPA's guiding principles include the following:

(1)   EPA has a responsibility to relate to each tribe on a government-to-government basis, and a trust responsibility to act in the tribe's best interest. The federal Indian trust responsibility is a legally enforceable fiduciary obligation, on the part of the United States, to protect tribal lands, assets, resources, and treaty rights, as well as a duty to carry out the mandates of federal law with respect to American Indian and Alaska Native Tribes. To the extent possible, EPA should also take into account the tribe's preferences. EPA is obligated to consult with tribes at an appropriate level. Input from tribal environmental professionals was obtained starting at an early point in the development of this guidance/strategy. However, EPA's consultation responsibilities may require continued discussions between tribal leaders and appropriate EPA staff or management.

(2)   Tribes set their own air quality goals. As sovereign nations, tribes can set air quality standards below the NAAQS. EPA strives to assist tribes in setting air quality goals and in determining how monitoring can help clarify and/or accomplish those goals.

(3)   Monitoring supported by EPA grant funds should always be for the identified purpose

of characterizing and/or managing specific known or suspected short term and/or long term risks to environmental values that depend on maintaining or restoring good air quality, including:

    a. Human health risks
    b. Ecological risks
    c. Cultural resources and values, including those related to visibility.

(4)   EPA and each tribe receiving funding to conduct monitoring should reach a clear understanding, before operations commence, of the duration of the funding or the timing and process for future decisions regarding continuation of the funding. There needs to be periodic re-evaluation of the need for and value of ongoing monitoring, for example on a three-to- five year cycle.

(5)   EPA should support tribal capacity building, for example, by helping to develop the capabilities of tribal staff. Contractor support may be necessary and appropriate in some situations, but generally is not the preferred approach to carrying out monitoring. In the area of ambient monitoring, capability includes development of monitoring objectives, development/execution of quality assurance plans, installation and operation of the monitors, information management and reporting to AQS, and understanding the implications of and using the observed ambient concentrations for appropriate air quality management purposes. EPA should seek to provide tribes sufficient support and opportunity to progress through these stages.

(6)   EPA has limited resources in its enacted budget to help pay for tribal air quality management in general. EPA is therefore unable to support all monitoring in Indian country that may have value to the affected tribes. Question 11 also provides some guiding principles for the allocation of federal funds for monitoring projects.

(7)   There needs to be consistency/fairness across tribes, but also flexibility to address unusual or unexpected tribe-specific situations.

(8)   Decisions affecting specific tribes should be made at a level where individual situations can be appreciated.

(9)   EPA should encourage all parties to take advantage of all available data on ambient air quality where technically relevant. Operating monitors may provide useful information on air quality some distance from their location and on transport into and out of state and tribal lands.

(10) Tribes should have equal opportunity to participate in programs that are not inherently tied to state/tribe distinctions, and to benefit from resources used to support those programs, where such access is consistent with program goals.[5]

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[5] For example, EPA's CASTNET monitoring program is intended to monitor acid deposition across broad areas for the purposes of national objectives. CASTNET is funded separately from the state and tribal air grant (STAG) funds. Some CASTNET sites are currently located in Indian country. As new sites are contemplated, tribal lands in the right areas of the country should be considered equally with state and federal lands.

(11) Grant procedures and grant performance must comply with applicable laws and regulations.

(12) EPA will work with tribes to ensure that there is timely EPA and public access to data collected with federal funds. EPA will need to explain the significance and need for this access to tribes generally and to each grant recipient. EPA should help tribes understand the significance of their data quickly so tribes are never less aware than others of the data and the data's implications.

(13) This EPA guidance does not limit any tribe's right to monitor for whatever air pollutants it chooses in its own portion of Indian country, but rather addresses how EPA will make decisions on what to fund and support within its available resources.

4. What input has EPA received from tribal environmental professionals and tribal leaders regarding EPA's support for ambient air monitoring by tribes?

In a general sense, tribes are happy that EPA is trying to provide support for ambient air monitoring activities. Through EPA outreach, training and communication efforts, the tribes feel more a part of the monitoring community and are appreciative of EPA providing opportunities to be an integral part of the monitoring planning process.

Although EPA is making progress to include tribes in these planning processes, the tribes have identified issues and concerns in current ambient air monitoring support.

One point of concern is the budget allocation for tribal air programs. As tribes become more aware of their air quality issues, and more tribes attempt to secure funds for monitoring activities, they also become aware of the limited funds available to support these activities. The tribes realize that more often they will be in competition with other tribes for these federal funds and have expressed negative feelings with this competitive approach. Many tribes do not have the time or the expertise to write "winning" proposals, so smaller tribes that may have legitimate monitoring needs tend to be at a disadvantage to larger tribes or tribes that have had past success. In addition, the tribes may not be aware of all the different grants and/or resources available to them.

Tribes would like to follow as many of the monitoring requirements as possible but because they are often small organizations and resource limited, they can not always afford to implement certain requirements or secure and keep the technical expertise they need. Tribes have hired and trained monitoring personnel only to see them hired at higher salaries by private, state, or local agencies. This turnover means that training is required at higher frequencies but also that monitoring and or data reporting may be interrupted until replacements can be found. In addition, some requirements, like QA programs, require a level of independence that may be very difficult to meet by some tribal monitoring agencies. Tribes believe EPA needs to be sensitive to these issues and try to find workable solutions to the issues.

Data submission to AQS has become an issue with some tribes. The tribes feel the current level of AQS support has not been sufficient to meet their needs and because data submission to AQS occurs so infrequently (every quarter at most), the tribal information technology (IT) person has a hard time maintaining his/her skills. Although, we cannot require anyone to input data to AQS more frequently, the Tribes should be aware that they can input their data on a more frequent basis (e.g., monthly). EPA Regions have received feedback from state and local AQS users, who upload data to AQS monthly, that inputting the data more frequently makes the process easier each time they do it (they need to remember what they did 30 days ago instead of 3 months ago). Those who continue to upload data quarterly tend to have the most problems with AQS.

Both the Institute for Tribal Environmental Professionals (ITEP) and the OAQPS National Air Data Group are working with the EPA Regions to create some additional options to either provide more capacity building opportunities for the tribes or provide mechanisms (contractors, circuit riders) to get the monitoring data into AQS. However, some tribes wanting to continue monitoring (using federal funds) may not want to submit data to AQS for various political or cultural reasons and now feel they are being forced to comply. These tribes may decide to discontinue monitoring or monitor using other funds to avoid submission requirements.

Tribal members participated in the development of the National Ambient Air Monitoring Strategy (NAAMS) and as of 2006, have had a representative on the National Ambient Air Steering Committee. One of the motivations for tribes to want to monitor the air quality is human health issues- it is not a scientific interest in this subject. Some tribal professionals feel this motivation is not addressed in the National Ambient Air Monitoring Strategy (NAAMS)[6], but the document has many useful details that address tribal air monitoring.

The NAAMS highlights the fact that the NCore strategy could benefit from including tribes because the tribes can provide additional monitoring sites, fill data gaps, and identify background conditions. These are the reasons why tribal air monitoring could help the entire NAAMS. Tribes feel an institution/organization with a nationally recognized leadership role in working with tribes on environmental issues, such as ITEP, should be identified to do the "representativeness" analysis for all tribes, in certain regions of the US.   Identifying those tribes that are not currently represented by the NCore network should be made. These tribes should have access to the regional air monitoring data to determine the status of their air quality. This project should also be aimed at locating tribes that would serve to fill data gaps, and those that have air pristine enough to provide background conditions. An example of how this could be performed is the data gathering work ITEP performed for the Western Regional Air Partnership (WRAP) in 2001. In this case, ITEP was able to gather data for about 156 of the 237 federally recognized tribes in the WRAP region. This project identified several challenges and opportunities for tribal air quality programs in the Western U.S., and could be used as a template all over the U.S.

5. Does this guidance supersede or change any previous guidance or procedures?

This guidance document is not intended to modify any existing EPA policies on tribal air quality management, nor is it intended to set goals or timetables for the tribes. General tribal grant

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[6] http://www.epa.gov/ttn/amtic/monstratdoc.html

requirements are published at 40 CFR Parts 31 and 35. Nothing in this document is intended to supersede any part of the applicable regulations. This guidance document provides information on applying resources in support of tribes as it relates to the *2008-13 Plan*, but it leaves the formation of a vision concerning ambient monitoring programs to the individual tribes.

IMPORTANCE OF AIR MONITORING PROGRAMS AND EPA-TRIBE RELATIONSHIPS

6. How can having an ambient monitoring program be important to a tribe?

Tribes may need to conduct ambient air monitoring for a variety of reasons which include the following: (1) attainment with health and welfare-based National Ambient Air Quality Standards (NAAQS); (2) impairment of visibility and biological diversity for vistas within or near reservations; (3) supporting designations as a Federal Class I area; (4) measurement of toxic air pollutants for health and ecological effects; (5) collection of near-real time data for reporting Air Quality Index (AQI) to the tribal community and to EPA's AIRNOW real-time mapping program; (6) monitoring air quality related to tribal environmental and cultural resource concerns; (7) participation in a Regional/State monitoring network; and (8) determining air quality background levels and establishing air quality baselines. From these monitoring activities appropriate regulatory decisions or voluntary measures can be pursued to restore air quality as needed. In addition, tribal participation in ambient air monitoring may also serve to increase the tribal community's awareness of the health risks of indoor air and its association with asthma and respiratory disease.

This spectrum of air quality issues is frequently shared with states, since pollutant transport and meteorological systems ignore political boundaries. Tribes have a need to understand the short- and long-term effects of long distance transport on tribal lands and the effects of atmospheric deposition on the ecology of their lands. Tribes also need air monitoring data to identify the role of off-reservation sources and/or to build a case or partnership for controlling those sources. Examples of programs for tribal participation include IMPROVE, CASTNET, NADP, MDN, ozone, $PM_{2.5}$, precursor gas (CO, NOy and SO_2) and toxic air quality monitoring. Any measurement contribution from tribal monitoring efforts may be viewed as an asset to a larger integrated national need for air quality measurements. Similarly, tribes should perceive some level of ownership of air quality data collected on non-tribal lands that has relevance to tribal air quality issues.

7. What facilities, staff capabilities, and other resources (apart from funding) does a tribe have to possess to make ambient air monitoring a realistic possibility?

Staffing--

A recent document titled: *Technical Guidance for the Development of Tribal Air Monitoring Programs*[7] has been developed to provide the tribes with information necessary to plan and implement an air monitoring program. This document can also help EPA Regional personnel who may not be familiar with the implementation of ambient air monitoring. One section of that

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[7] http://www.epa.gov/air/tribal/airprogs.html

document provides a discussion on the technical staffing necessary to implement an air monitoring program. There are a number of important functions, depending on the type of monitoring accomplished, that tribes must be able to accomplish or have funds to accomplish. Table 1 identifies these functions and provides some of the key activities within the functional category. Not all functions are needed for long periods of time so the tribe may feel that it can contract out some of the functions that are needed. For example, the tribe may wish to contract out the information technology (IT) function to have the monitoring instruments connected to a data logging system that would transfer data to a local data base and eventually to an external data base like AQS. This part of the process might be considered a "one-time" event needing a particular expertise whose function might not require a full time person. However, someone within the tribe must have the ability to understand this IT function to ensure data collection is operating properly on a day-to-day basis. Regardless of whether the tribe possesses the expertise in-house or will contract for these functions, resources will be needed and should be identified in grant documentation to cover the activities in Table 1.

Table 1 Monitoring Functions that Need Some Level of Staffing or Expertise

Function	Activities
Procurement	- Purchasing capital equipment and consumables - Developing contracts and maintenance agreements - Applying for EPA grants
Technical	- Setting up a monitoring site, electricity, communications - Developing standard operating procedures - Selecting and installing monitoring equipment - Calibrating equipment, performing quality control - Shelter and equipment maintenance
Data Analysis (Statistical)	- Understanding population and measurement uncertainty - Developing sampling designs - Developing networks to achieve objectives - Assessing/interpreting data (data quality assessments)
Quality Assurance	- Developing quality systems, QMPs/QAPPs - Developing data quality objectives - Implementing technical systems audits, performance evaluations - Validating data - QA reporting
Information Technology	- Selecting information technology (data loggers and local data base) - Developing analyzer outputs to data loggers and data transfer to local data base - Transfering data from local data base to external data repositories (AQS, etc.)

Facilities--

Depending on the particular pollutants being measured and the type of instruments used to make these measurements or collect a sample, a facility should be available that is capable of calibrating instruments, performing repairs, storing spare parts/equipment, shipping and archiving samples (e.g., cold storage), and is capable of housing the information management system including backing-up and archiving electronic data securely. A question that might be posed is "does the tribe have a facility which can provide instrument repairs such that a minimum amount of data loss (1 month) would be expected if an instrument (analyzer/sampler) went down? A tribe may not have the facilities or capabilities to perform calibrations, maintenance or repairs but if this is the case, then the grant documentation should describe how

these activities will be accomplished with a minimum loss of data, and the resources that will be allocated to this activity.

8. Does EPA support the full cost of a tribe's monitoring program? How does the degree of funding for tribes compare to that for state/local agencies?

During the development stages of a tribe's monitoring program, EPA may support the full costs of monitoring through the use of CAA §103 state and tribal assistance grant (STAG) funds. Section 103 grants are for air program planning and short-term projects and have the advantage of not requiring the tribe to match any of the federal funds. Since many tribal monitoring programs may be using data to compare to National Ambient Air Quality Standards (NAAQS), which may take 1 year to plan, 1-3 years for data collection, and 1 year for information management, data reduction and assessment, a rule of thumb for use of 103 funds might be 3-5 years for any specific monitoring project.

After the initial monitoring period, if the tribe wants to continue monitoring, they may seek CAA §105 funds for the monitoring program [8]or continue to apply for §103 funds.   There is no guarantee the §103 funds will available for a particular tribe to continue monitoring past the initial funding period.

§105 funds have the potential advantage that recipients are guaranteed some level of funding and can not have their grant reduced without an opportunity for a hearing; the disadvantage is that the tribes must provide some matching funds for monitoring. The match can not be made up from other federal government funds. Information on tribal match requirements can be found in 40CFR § 35.575 or 40CFR § 49.4{q} http://www.gpoaccess.gov/cfr/index.html. In addition, the tribes should be made aware that becoming eligible to receive §105 funds does not mean that tribes can compete for the §105 allocated for state and local monitoring organizations.

40 CFR part 49.4 makes it clear that the 105 grant federal maximum contribution of three-fifths (60%) for State and local monitoring agencies does not apply to all tribes. There are differences in the maximum federal financial assistance that can be provided depending on whether the tribe has demonstrated eligibility to be treated as a state under 40 CFR part 49.6

Demonstrated Eligibility to be Treated as a State --

As described in 40CFR Part 35.575, for tribes that receive funds under §105 and that have demonstrated eligibility to be treated as a state under 40 CFR part 49.6 "the Regional Administrator may provide financial assistance up to 95% of the approved costs of planning, developing, establishing or improving an air pollution control program, and up to 95% of the approved costs of maintaining the program." After two years the Regional Administrator can reduce the maximum federal share to 90% if it is felt, based on objective assessment, that the tribe has the ability to increase its share.

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[8] Ambient air monitoring is just one of many §105 activities.

Not Demonstrated Eligibility to be Treated as a State --

If the tribe has not demonstrated eligibility under 40 CFR part 49.6, the Regional Administrator may provide financial assistance under Section 105 in an amount up to 60% for planning and maintaining a monitoring program.

In general, since many tribes are small, run small monitoring programs, and may be operating with limited resources, the federal contribution tends to be larger than those for state and local monitoring agencies that have been operating for a significant period of time. However, the amount of federal financial assistance granted to each tribe will reduce the overall amount of tribal assistance within the Region, so decisions will need to be made to either fund fewer programs with a higher percentage of federal funds or fund more projects but allocate fewer federal funds to each.

9.   **What are the differences between EPA's relationships with States regarding monitoring and EPA's relationships to tribes regarding monitoring?**

Congress has delegated authority to EPA to ensure that environmental programs designed to protect human health and the environment are carried out throughout the United States, including Indian country. However, there is a different relationship between the EPA and state and local agencies and the EPA and tribes. All the CAA regulations and related CFR requirements related to ambient air monitoring have been developed primarily for state and local monitoring agencies. Although state and local agencies are consulted on the development of the ambient air monitoring regulations and can provide comment on these regulations, once the regulations are promulgated and approved, the state and local monitoring agencies are expected to follow these requirements.

In contrast, the tribes are responsible for setting the vision of their ambient air monitoring networks and many of the ambient air monitoring requirements do not necessarily apply to the tribes. As described in the *2008-13 Plan,* the OAR tribal program strategy is designed to define, create, and enhance partnerships that protect human health and air quality in Indian country by ensuring the full implementation of both regulatory aspects of the Clean Air Act (CAA) and accompanying voluntary programs while recognizing the special relationships, policies and legal context of the government-to-government relationship. The goal, as it is related to ambient air monitoring, may be approached:

- through direct federal implementation of federal regulations and voluntary programs designed to protect air quality. EPA is responsible for nationwide implementation of the CAA and will develop federal plans and regulations as appropriate.

- by helping tribes acquire the tools and expertise necessary to implement delegated CAA regulatory and/or voluntary programs that address their needs.

- by helping tribes acquire the tools and expertise necessary to implement their own tribal regulatory or voluntary programs under their sovereign authority.

No matter the method, the ultimate intent is to ensure that Indian country is afforded the same air quality protections and participation as are provided to other parts of the United States, with an emphasis on tribal implementation where possible, in accordance with existing federal and EPA policies.   EPA works with the tribes to determine what part of the CAA regulations they plan to implement, through their tribal authority, and implements programs that tribes may not currently have the capacity to implement.

When tribes are implementing ambient air monitoring for specific objectives, such as comparison to the NAAQS, then 40 CFR 58 requirements for network and siting criteria, method use (federal reference or equivalent methods), and QA requirements must be followed. In addition, when tribes are cooperating or participating in national programs such as IMPROVE, there is an expectation that the implementation requirements of these programs will be met.

Tribes implementing monitoring for other objectives not national in scope will not need to meet all the CFR requirements. However, if EPA funded, the tribe will need to develop an appropriate QA project plan which will describe the appropriate siting, methods and quality assurance activities needed to achieve the objective. EPA Regions can work with the tribes to ensure the usability of this information and may suggest that it conform to as many of the ambient air monitoring requirements as applicable without being cost-prohibitive. This will allow the data to be used for multiple purposes.

GRANTS FOR TRIBAL AIR MONITORING

10. What is EPA trying to accomplish by giving Congressionally appropriated funds to tribes for air quality management, including ambient monitoring?

OAR and the EPA Regions are committed to working with tribes to develop and implement CAA programs in Indian country. One of OAR's primary tools in this effort is to award CAA grants in order to help build tribal knowledge and increase the tribes' capacity to manage air quality issues. General Assistance Program (GAP), CAA §103 and CAA §105 grants all allow EPA to provide support to tribes for this purpose.

> **GAP:** The Indian General Assistance Program (GAP) provides resources to tribes to "build the basic infrastructure of a tribal environmental program, which may include planning, developing, and establishing the administrative, technical, legal, enforcement, communications, and environmental education and outreach infrastructure." (See "Guidelines on the Award and Management of General Assistance Agreements for Indian Tribes" at http://www.epa.gov/indian/tgrant.htm, March 2000, page 11). The planning and development elements of a GAP program can include specific activities related to assessing environmental degradation and acquiring the tools to complete the assessment. For instance, a tribe may want to know the extent of degradation in its air quality to determine whether or not a dedicated tribal air program would be warranted. In such a case, a tribe could incorporate into its GAP work plan activities to set up an ambient air quality monitoring network to characterize the air quality of the reservation as part of building their capacity to operate and manage an environmental program. In addition,

GAP funds can be used to develop QA documentation such as quality management plans or quality assurance project plans as well to fund travel to QA training activities.

CAA §103: are used for special projects, generally for limited terms, to study the causes and prevention of air pollution, including demonstrations, experiments, surveys, and research, such as that will demonstrate uniquely effective or efficient means for preventing air pollution or its adverse effects. A federally-recognized reservation is not a prerequisite to a recognized tribe receiving such a grant. Through CAA §103 grants, tribal air pollution control agencies, among others, may conduct and promote research, investigations, experiments, demonstrations, surveys, studies and training related to air pollution. Tribes typically use this funding source to research and investigate the air quality within and affecting lands within their jurisdiction.

CAA §105: are used for implementing ongoing programs for the prevention and control of air pollution. Tribes that have established eligibility to receive CAA §105 grants under the Tribal Authority Rule and have assessed their air quality and demonstrated a need and commitment to manage air pollution on their reservation will receive first consideration for funding. Through CAA §105 grants, tribes may develop and implement programs for the prevention and control of air pollution or for the implementation of national primary and secondary ambient air quality standards.

11. What is the process by which EPA gets Congressionally appropriated funds to individual tribes for air quality management, including ambient monitoring?
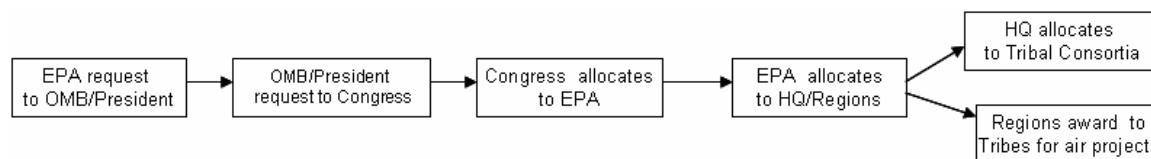
Ambient air monitoring is one of many activities that are supported by federal funds for air quality management.   The following information provides a brief synopsis of how funds are provided in support of air quality management in Indian country. Although this section goes beyond ambient air monitoring, it provides a beneficial understanding of the current allocation techniques and how ambient air monitoring fits into the overall allocation scheme.

Each year, EPA requests a certain amount of funding for use in providing grants to tribes to support air quality management.   For the last several years, Congress has appropriated about $11 million for this purpose.[9]   An increasing number of tribes have become interested in establishing monitoring stations, and not all interested tribes will be able to obtain EPA financial support for ambient air monitoring if resources for tribal air quality management remain steady. Many Regional Offices report that they are not able to meet all requests to provide grant funds for tribal air monitoring.   The experience of working across Headquarters and Regional Offices

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[9] In FY2005, EPA proposed to Congress that there be separate amounts of air grant funding for states and tribes. EPA observes these two separate ceilings in its operating plan under the enacted FY2005 budget. EPA has proposed the same separation for FY2007, and EPA has issued grant and technical guidance for FY2007 based on this separation. The proposed 2007 budget provides ~ $ 11 million, see http://www.epa.gov/ocfo/budget/ .

and with tribal professionals has better informed EPA staff and EPA budget decision-makers about the tension between resources and needs. Based on this growing tension, in April of 2005, a workgroup representing each of the Regions participating in the Tribal Program (as appointed by their respective Division Directors) and OAR convened to discuss revising the principles by which the tribal STAG allocation to the Regional Offices was determined. Meetings were held roughly every two weeks, and the Workgroup arrived at a set of draft recommendations[10]. Additional input was received from EPA's Air Program Managers followed by discussions with EPA's Air Division Directors and extensive outreach and discussions with tribal government representatives nationwide.

General Principles for STAG Distribution

The principles generally fall into three categories: 1) to target funds based on priority considerations as surrogates for risk; 2) to target funds based on stability considerations, and; 3) to balance support for new and ongoing programs (such as §103 and §105). The Workgroup's approach was to reach consensus while recognizing that a balance was required between considerations for priority and stability. These principles were developed by the entire group, discussed, refined and restated as the following:

1. EPA supports the development of tribal air monitoring programs to assess, understand and address problems affecting the health and environment of federally recognized Indian tribes. While all tribes are eligible for support, our priorities are to address areas with the highest risks and those where the greatest results are being realized when funds are unavailable to meet every request.
2. As stated in the January 27, 2005 Assistant Administrator memo on awarding STAG funding to tribes: "We should recognize that some tribal governments made long-term commitments to develop and implement air quality programs (programmatic commitment), and; "We should also recognize tribes that have emerged or are expected to emerge as leaders or key participants in providing tribal input into external factors that affect air quality management nationwide" (leadership and involvement).
3. Funding levels to each Region should remain relatively stable over time.
4. All federally-recognized tribes and tribal consortia are eligible for funding regardless of their air quality status, but are not assured of receiving a grant due to limited funds.
5. Every Region with federally recognized tribes should receive some portion of the available funding each year.
6. Grant resources are limited so Regions must prioritize on what basis tribes receive funds.
7. In allocating tribal resources at the national level (Region by Region), relative need, capability, and past accomplishments also need to be considered.
8. The allocation should support the ongoing operations of CAA 105 tribal air quality programs.
9. EPA will seek the input of the tribes in devising a strategic and equitable funding allocation.
10. Adequate funding coverage of large, complex tribal air quality programs should receive priority consideration.

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[10] April 24, 2007 Memo from Darrel Harmon to Beth Craig and Regional Air Directors on STAG Allocation Revisions

Headquarters will continue to hold back funds to support national priorities, specifically the national tribal training program through the Institute for Tribal Environmental Professionals (ITEP) and the Tribal Air Monitoring Support (TAMS) Center..

12. What principles do OAR and the EPA Regional Offices try to apply as they make decisions to award grants for air quality management projects proposed by tribes and then as they administer those grants?

Tribal air grants are critical to the development and continued operation of tribal air programs. To ensure the successful development and implementation of tribal air programs to address the most serious risks and concerns, the Agency will use the following criteria to evaluate tribal air grant requests. This will ensure that available funding is expended to meet the greatest environmental needs, while also meeting the goals of the Clean Air Act and the EPA Indian Policy. Regional Offices may develop more specific criteria based on this policy.

In order to ensure that EPA is targeting its funding to ensure the greatest possible health and environmental benefits, funding decisions should address one or both of these overriding factors[11]:

1. Significant Air Quality Related Health Concerns: A tribe has, or is believed to have, a significant air pollution problem that has an adverse impact on human health. An air pollution problem would include but not be limited to: a reservation or a portion of a reservation being designated nonattainment; air toxics issues; atmospheric deposition/bioaccumulation issues; and indoor air quality concerns (except radon). On-reservation population size (tribal and non-tribal) may be used as part of this factor.

2. Significant Air Quality Related Environmental and Cultural Resource Concerns: A tribe has reasonable concerns that air pollution is having an adverse impact on cultural resources or the environment within its jurisdiction. Issues such as visibility concerns and modeled or monitored Class I increment violations under the Prevention of Significant Deterioration regulation would be addressed here. Again, on-reservation population size (tribal and non-tribal) may be used as part of this factor.

To better clarify the decision making process, the following five criteria should be used in addition to the overriding factors. Where tribes are addressing similar issues, these criteria should be used to support decisions that increase the chance of successful implementation of tribal air quality management programs.

1. (a) Programmatic Commitment: We should recognize that some tribal governments made long-term commitments to develop and implement air quality programs.

   (b) Leadership and Involvement: We should recognize tribes that have emerged or

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[11] For Regions awarding first time grants to tribes where these factors are unknown, the Region may award a grant for an initial assessment or determination. Any additional grant would then be awarded based on whether there is a significant air quality health issue.

are expected to emerge as leaders or key participants in providing tribal input into external factors that affect air quality management nationwide.

   (c) Staffing and Facilities: We should recognize tribes that have the staffing and facilities to plan, implement, assess and report air quality monitoring programs.

2. Prior Demonstration of Grant Performance: A tribe has either successfully completed the work plan activities and objectives for a prior grant or grants, including timely submission of reports, deliverables and required grant and financial management activities with additional consideration for having established and sustained some air quality project management capacity.

3. The tribe is located where essential data can be gathered. This factor may be important in network monitoring, particularly where it is important to collect data that describe background or attainment conditions, to quantify transport, and to assess attainment status, as well as to assess conditions such as deposition and toxics.

4. The tribe has demonstrated a commitment to working on air quality issues or participated actively in collaborative air quality management planning with federal, state, local or tribal air quality agencies, such as through a Tribal/EPA Agreement that contains an air component, or an air-related Memorandum of Understanding or Intergovernmental Agreement.

5. The tribe has submitted a proposal for innovative ways to improve air quality that is likely to be transferable to other areas.

Regional Office Responsibilities in the Grant Process

As mentioned in the background, because of the diversity in situations and goals from tribe to tribe, EPA has taken the approach of delegating to the Regional Office level the tasks of assisting tribes in identifying their goals and the task of managing the available resources to help meet those goals. Because Regions understand individual tribal situations, effective decisions about funding and in-kind assistance are best made at the Regional Office level. In general the EPA Regions are responsible for:

- articulating and distributing pertinent information to tribes through websites, list serves, conference calls and meetings,
- answering technical questions as they are related to ambient air monitoring or the development of the grant, and
- processing and awarding grants.

A tribe will need to work with its EPA regional contact to begin development of a work plan that will be required in order to receive grant funds. This is especially important in the planning phase, as many of the air monitoring development steps can be incorporated into the work plan objectives. EPA Regional personnel can provide guidance on how to write an

adequate/appropriate work plan but should not assist in the actual technical development or writing of tribal grants since this assistance could provide an unfair advantage to a tribe.

<u>Criteria for Grant Funding from Regional Offices</u>

The purpose here is to assist tribes that apply for CAA funding to draft more effective work plans for projects that will develop tribal knowledge of air quality issues and build tribal expertise to manage air quality in Indian country. The CAA envisions an approach to air quality management that includes:

- Goals and standards to protect public health and the environment.
- Assessing air quality through emissions inventories and monitoring.
- Determining necessary reductions in pollution.
- Federal, State or Tribal Implementation Plans.
- Education or outreach programs and other voluntary measures.
- Implementing and enforcing control measures.

The tribe should try to develop performance measures that help to measure progress on achieving the environmental results of their grants. Approvable work plans need to have (1) one or more objectives, (2) activities that support the achievement of the objectives, and (3) outcomes or deliverables that will produce environmental results within the objective.   To assist tribes in writing effective grants, OAR developed a document entitled: *Tribal Air Grants Framework: A Menu of Options*[12]. In addition, the EPA Office of Grants and Debarment has a website that provides tips on writing a grant proposal[13]. This information can help the tribes develop comprehensive/acceptable proposals and workplans.

Through the grant negotiation process, applicants produce work plans with supporting budgets to address both the needs of the particular reservation or tribal community, as well as EPA priorities. See Appendix A in this document for significant features of the tribal air application process. This document should be reviewed to determine its current relevancy.

Once a determination is made that air quality monitoring may be appropriate on the reservation or tribal land, the following elements should be addressed in a grant funding proposal:

- Identify the pollutant(s) which should be monitored and the proposed monitoring method (filter based or continuous monitors) and the frequency of monitoring.

- Identify potential monitoring location(s) and justify the purpose of each monitoring site.

- Provide assurance that each monitoring site will comply with EPA's siting requirements found in 40 CFR 58 Appendix E if this is necessary for the type of monitoring being conducted.

- Commit to have EPA approve the Quality Assurance Project Plan (QAPP) before data collection or monitoring begins.

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[12] http://www.epa.gov/air/tribal/grants.html
[13] http://www.epa.gov/ogd/recipient/tips.htm

- Ensure that the tribal air monitoring specialist will be adequately trained in the operation and maintenance of the monitor, data management, chain-of-custody procedures, and quality assurance requirements.

- Assure that the quality-assured data will be entered into EPA's national air quality database system (AQS) or other appropriate national databases.

- Plan for periodic analysis of the data and how it contributes to understanding and managing air quality on the reservation or tribal land, including the anticipated need for future monitoring of the same or different types. EPA has a requirement that states assess their networks every 5 years. This interval may also be appropriate for tribes.

While funding limitations and other considerations of the grant process, as well as rules applicable to competition in Regions where this process is used, prevent any guarantee that a particular grant proposal will be selected for funding, it is hoped that work plans will help tribes develop proposals that can effectively address air quality issues in Indian country. This guidance is intended to serve as a reference for both tribal and EPA staff during CAA grant and program development.

Applicants are encouraged to contact their EPA Region for information on applicable procedures prior to developing a work plan and supporting budget. The EPA Region can provide information on any competition or particular criteria applicable to grant applications they process.

13. Can tribes participate in NATTS, local scale air toxics, IMPROVE, CASTNET, NADP, and/or NCore monitoring programs?

EPA guidance does not limit any tribe's right to monitor for whatever air pollutants it chooses in its portion of Indian country with their own funds. Therefore, tribes have the opportunity to participate in any national monitoring program provided the tribes are providing the funds for that activity. EPA will not obligate or even strongly encourage a tribe to conduct any particular monitoring that would be mostly helpful in meeting national objectives unless EPA is providing extra resources beyond those originally designated in its budget for support of tribal air quality management. Consequently, the December 2005 draft of the NAAMS says very little of a strategic nature regarding tribal monitoring. We do not presently see any reason why the next version (to be completed in 2008) should do so either, although we are open to input on this.

The following is a condensation of what the National Strategy does say about tribal monitoring:

Tribal nations generally are seeking to expand ambient air monitoring efforts, and it is generally recognized that there exists substantial need for tribal air monitoring support.

Nothing in the national Strategy imposes requirements on tribal monitoring or mandates linkages of tribal air monitoring with national networks.

Tribal participation can benefit all parties as opportunities exist for tribes to operate NCore multi-pollutant sites, particularly in rural areas where there remain significant spatial gaps in monitoring. There are many rural tribal airsheds that could be considered

pristine and therefore excellent candidates for background monitoring sites, potentially filling in important gaps in the nation's network. Under the 2005 NAAMS, tribes will be given fair consideration for hosting sites of national interest, and the associated funding. In making determinations on sites for rural monitors, EPA is committed to considering Indian country on an equal basis, such as for CASTNET or a possible new mercury deposition network. It is also possible that some NCore multi-pollutant rural stations might best be sited in Indian country.

These comments should not be perceived as suggesting that the tribal monitoring priority is or should be to foster a connection to national networks. Monitoring priorities must be based on tribal decisions, which in many cases involve developing a better characterization of local exposure to air pollutants, and involve funding separate from funds that would be used to host national network sites. The linkage to national programs should be perceived as leveraging opportunities that simultaneously benefit tribes and the state/national networks. As an example, tribes in Maine have worked with the State of Maine Department of Environmental Protection and EPA Region 1 to develop a cooperative air monitoring network that shares important resources (shared QA and data management support) and serves the needs of both monitoring agencies.

14. Does EPA attempt to set overall goals for its support to ambient air monitoring by tribes? How does EPA evaluate success in meeting those goals?

The EPA is very aware of the importance of being able to document that the tribal assistance portion of the Air Program has clear goals, guides participants to meet those goals, tracks progress, and makes adjustments when needed.

As described in the *2008-13 Plan,* OAR has developed a broad set of 5 goals:

1. Provide financial and technical support to tribes, with assistance from the Regions, to assess their air quality (and potential health concerns) within their jurisdiction.
2. Build tribal capacity to implement air quality programs.
3. Support a wide variety of training activities, outreach and detailed technical support.
4. Ensure that the appropriate mechanisms and tools exist to address regulatory and non-regulatory program needs in Indian country.
5. Develop and implement the use of voluntary programs to address the specific needs of tribes in areas such as indoor air quality outreach, mobile source emissions and exposure to ultraviolet (UV) radiation.

Goal 1 has a measurable objective that states:

- By 2011, air quality assessments in Indian country, such as air quality and deposition monitoring, emissions inventories, and toxics assessments, will be tribally-driven and reflect tribal priorities and needs. At least three tribes will complete assessments each year between 2007 and 2011, and at least two new tribes will undertake new assessments each year between 2007 and 2011.

A number of the goals support air monitoring activities but EPA tries to allow the tribes the flexibility to determine their air monitoring needs within the context of the overriding factors described in question 12.

Evaluating Success

Within the context of allowing the tribes to set their own ambient air monitoring goals (which then in effect also become EPA goals), through the EPA Regions decision making process of selecting the most appropriate grants to fund, and ensuring that the individual grants have measurable outcomes and environmental results, we can determine whether our goals are being met. Question 15 provides more information about developing the appropriate grant proposals which would provide measurable outcomes for evaluating the success of an ambient air monitoring program.

One of the keys to measuring success is being able to supply management and interested parties with information about tribal monitoring programs, how the monitoring program's information is being used, and the key assessments that demonstrate success. OAR is cooperating with the Regions to develop a Tribal Database that will be able to accommodate these important pieces of information so that we can more easily report this information to EPA management. This database is expected to be operating and collecting data in 2008. Some of the information in this database will be derived from "pulling" information from other databases and some will be input directly from the EPA Regions. Tribes will not be required to maintain or physically input data directly to this system.

15. How does EPA ensure that funds given to a specific tribe for ambient monitoring are used efficiently?

One way to ensure that funds provided to the tribes are used efficiently is to ensure that workplans/proposals submitted for federal funds have:

1. One or more **objective,**
2. **activities** that support the achievement of the **objectives**, and
3. **outcomes** or **deliverables** that will produce **environmental results** within the **objectives**. The tribe should also develop **performance measures and milestones** that help to measure progress in achieving the environmental results.

Since there will be a possibility that the Regions will have to make choices on which project to fund, it will be important to communicate to the tribes that federal funds will be allocated to those projects that clearly provide objectives, activities, outcomes/deliverables, performance measures/milestones and environmental results and address the appropriate quality principles and attributes described in Question 14.

In regards to whether funds are being used efficiently, the Regions will need to gage their response based on whether the monitoring projects are long-term or short-term. Short-term monitoring projects may be more driven to answer a specific question and therefore it may be less efficient to develop infrastructure (capital equipment, staff and facilities) than a long-term

project. However, there is also a capacity building goal to tribal monitoring projects so the Regions need to weigh this goal while ensuring that programs are operating as efficiently as possible. With these aspects in mind, Regions should review the workplan with an eye to whether the objectives are being accomplished efficiently from the standpoint of:

Technology – Will the objectives best be met with the technology chosen or can the objective be met just as well with something less costly or over shorter periods of time?
Cooperation – Could the tribe partner with other entities that might help meet the objectives?
Infrastructure- Is the tribe requesting funds for infrastructure that might not be the most efficient use of funds for this particular project?

As an example, a tribe might propose a short term $PM_{2.5}$ monitoring program (initial objective to assess if the tribe has $PM_{2.5}$ problems it should be aware of) for which the tribe requests funds that includes development of a $PM_{2.5}$ filter weighing laboratory. It might be more efficient from the initial assessment aspect of the project to utilize the TAMS laboratory, a state laboratory or a contract lab rather then purchase laboratory equipment, develop a lab with adequate filter weighing conditions, and hire/train personnel to weigh filters.   However if the tribe's initial assessment found that $PM_{2.5}$ was an issue and there was a commitment to long-term monitoring, then a laboratory might be considered feasible and an efficient use of funds.

During the communication process with the tribes on funding ambient air projects, there should be a discussion of project completion. The completion should be related to when objectives have been met or when environmental results are achieved (declaring success) and therefore should be articulated in the proposal/workplan. If a tribal ambient air monitoring project meets the objective for which it was funded we should declare success in order to fund other priority projects within the tribal community. Discussing the issue of project start and completion with the tribes up front will acknowledge the importance of meeting the objectives and provide the tribes lead time to either find other sources of funds or apply for additional funds that may further the objective or improve the environmental results.

It is important that the tribes identify the performance measure/milestones that will allow the tracking of progress and that these are described in the grant agreements so that both the tribes and EPA know what they are, are in agreement, and can work cooperatively towards a successful project or product. These measures and milestones should be set such that they can be reviewed at some appropriate frequency (e.g., quarterly) so that if problems are occurring, they can be discovered quickly, and EPA can assist the tribes to get the project(s) back on track. It is important to document the goals that are achieved since it can communicate the success of these monitoring programs and help garner support for more resources in the future.

By establishing a good communication process with the tribes and having well documented goals and performance measures, we can avoid situations where projects falter or do not meet performance measure and milestones. If a project is not meeting expectations, it should not come as a late surprise to the tribes or EPA. Depending on the outcome of discussions, it may be necessary to discontinue funding the project until it can be determined what the best method might be to get the project back on track.

16. How much time does EPA allow a tribe with a new grant for ambient monitoring to "come up to speed" in correctly operating its new monitors before the tribe should be expected to have a QAPP in place, be running the monitors routinely, and be reporting data to AQS?

Each tribe will have different abilities to implement a monitoring program but in general, a good rule of thumb would be to provide about one year from the award of a grant for a new type of monitoring for tribes to prepare for that monitoring.

It is important to recognize the work involved in developing a new monitoring capability. The tribe will have to:

- identify and purchase the appropriate equipment and consumables,
- select and build/procure site(s) including outfitting electrical and communications services,
- develop information management systems including local systems and communication to national data bases,
- seek the necessary expertise and or the necessary training to implement monitoring, and
- develop QA documentation (QMPs/QAPPS/SOPs).

The document *Technical Guidance for the Development of Tribal Air Monitoring Programs* provides more detail on activities and personnel necessary to develop and implement a monitoring site or network and should be used to assist the tribes make good monitoring decisions. EPA Regions should encourage as much collaboration with successful monitoring organizations to help in the selection of equipment and information technology. Tribes should also be aware of the training opportunities offered by Headquarters, the Regions, ITEP, TAMS, RPOs, state monitoring organizations and through various national organizations.

It is an EPA requirement to have a QAPP in place and approved before an environmental data operation begins (see Question 18).

MONITORING REQUIREMENTS AND DATA REPORTING

17. Why is it important to both EPA and tribes for tribes to report their ambient air data to AQS? Are there other alternatives that are acceptable to EPA if preferred by a tribe?

While recognizing the sensitivity of tribes to the use of their data, OAR expects tribal grants to include a grant condition for quality-assured monitoring data to be submitted on a timely basis to the Air Quality System (AQS) or other relevant databases (e.g., AQS is not able to receive the data from the CASTNET or IMPROVE networks at this time.). The following are some advantages to submitting data to AQS:

- Builds tribal capacity and familiarity with EPA staff and systems.
- Demonstrates that tribes are active in environmental issues.
- Brings tribal participation to national awareness when tribal data is used in NAAQS decisions, trends evaluations or through participation in the Air Quality Index.

- Makes data available to EPA tribal staff who must assess grant performance and plan future directions.
- Provides automated range checking, data quality assessments and ensures all calculations are accomplished as required in EPA regulations which eliminates the need for this programming at the tribal offices.
- Ensures data meet an acceptable level of quality and comparability which helps in data sharing and building partnerships.
- Can become the final data repository and data archive.
  - AQS data are secure and can be recovered
  - Can be retrieved in different formats
- AQS system is available at no cost which is like getting a database for free for life. AQS provides:
  - Enhancements to the data bases and reports. Recent enhancements to AQS eliminated tribal concerns regarding use of state codes to enter tribal data.
  - Training
  - Support team for assistance through help desks and conference calls
- Taking advantage of other sophisticated Web tools like AirNow and Air Explorer and the numerous reports available.

Although AQS reporting is a "front-end" investment in time for the tribes, the pay-off is the wealth of statistical data evaluation and mapping tools that become available to the user once their data is in the AQS system. EPA also encourages tribal participation in AirNow, but this does not need to be a condition required in the grant unless this is one of the primary reasons for monitoring.

As indicated in answers to Question 20, only about 70 percent the tribes performing air monitoring are presently submitting data to AQS. This needs to change. OAR has worked with ITEP to develop a strategy to increase the number of tribes reporting data to AQS through a number of approaches that the Regions will have to communicate to the tribes. However, the first approach will be to ensure that grant conditions require the submission of data to AQS for relevant tribal air monitoring programs.

There does not appear to be any acceptable alternative to tribal submissions to AQS that would not increase burdens on EPA Regions or OAR staff to support such an alternative system. Prior to AQS re-engineering, when the system was mainframe based, there was a monitor type "9" that was used to secure certain monitoring data from access to the general public. During the re-engineering process OAR discussed this secured data with general counsel and it was determined that this process should be discontinued. Most tribal concerns related to data submission stem from other entities with an "agenda" being able to access the raw data and make assessments that could be detrimental to tribal issues. Any alternative system that would provide data to EPA (e.g., in the EPA Regions) would still be accessible by the public through the Freedom of Information Act and so would not ameliorate this concern. EPA "Regional" tribal databases would make it difficult to perform headquarters assessments particularly when and if NAAQS attainment decisions need to be made, in addition to the fact that one cannot take advantage of many of the new web applications available to information supplied to AQS.

18. Why is it important that tribes adopt and follow a quality assurance project plan (QAPP)?

Although tribes are not bound by EPA's monitoring rules, they are bound by grant regulations which include the development of quality systems for any project that involves environmental data operations, which include air monitoring. EPA QA Policy 5360.1[14] requires that all organizations funded by EPA for environmental data collection develop quality management plans (QMPs) and quality assurance project plans (QAPPs) before collecting data. In addition, monitors in Indian country must be properly sited, use adequate technology, and follow prescribed QA procedures in 40 CFR Part 58 Appendix A (including reporting quality data to AQS) if a tribe wants to use data from the monitor to compare to the NAAQS. Independent of the requirement, these documents are important because they:

• Identify the reasons for collecting data and for collecting it in a specific way.
• Document how the data are collected and how quality is maintained.
• Ensure data will be collected in the same way
  – from day to day, and
  – from one person to the next.

Tribes should look at the development of QAPPs and standard operating procedures (SOPs) as an investment. Tribal monitoring programs are known to have high personnel turnover rates which can cause delays and downtime in various phases of the monitoring program until new personnel are found and brought up to speed. The QAPPs and SOPs, if written properly, serve to preserve the institutional technical knowledge of the tribes monitoring approach and can be used as a training tool. This alone is reason to ensure these documents are in place. In the past, EPA has been able to use the QAPPs and SOPs to defend an agencies data; without them, data may be considered suspect.

Guidance for the development of these QA documents can be found on the EPA Quality Staff's website[14]. In addition, EPA has provided flexibility to EPA organizations on how they implement this policy, allowing for use of a graded approach. Since EPA funds the collection and use of data for a number of monitoring objectives and for organizations with a broad range of capabilities, flexibility in the QMP and QAPP requirements are necessary. For example, data collection for the purpose of comparison to the NAAQS will require more stringent requirements, while monitoring programs for special purposes may not require the same level of quality assurance. The level of detail of QMP and QAPPs, as explained by the EPA quality Staff in the EPA Quality Manual, "should be based on a common sense, graded approach that establishes the QA and QC requirements commensurate with the importance of the work, available resources, and the unique needs of the organization." The ambient air program has developed a graded approach that will help the tribes develop both QMP and QAPPs. In April, 2007 the graded approach[15] was distributed to the Regional Tribal Air Coordinators and the Regional Ambient Air Contacts.

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[14] http://www.epa.gov/quality1/
[15] http://www.epa.gov/ttn/amtic/geninfo.html

QA requirements and/or guidance have been developed for most of the major national monitoring programs. Many programs such as the $PM_{2.5}$ Chemical Speciation Network and the National Toxics Trends Network (NATTS) have developed program QAPPs that can be (and are suggested) adopted by the monitoring organization by providing written confirmation to the EPA Regions. There is an opportunity for tribes and states to consolidate monitoring sites into one primary quality assurance organization (PQAO). This will allow tribes to adopt one QAPP and set of SOPs. However, there should be written confirmation of this activity that is on file in the Regional Office, the QAPP should identify all monitoring sites and organizations for which the QAPP/SOPs apply, and each tribe should have these documents available at their offices.

OAR has worked with ITEP to develop a generic ambient air monitoring QAPP software product called Turbo-QAPP. Turbo-QAPP mimics the functions of software like Turbo-Tax to lead tribal monitoring personnel through the development of their project specific ambient air monitoring QAPPs. Turbo-QAPP should help tribes by providing most of ambient air monitoring guidance for the criteria pollutants within a click of a mouse. For information on Turbo-QAPP, contact ITEP http://www4.nau.edu/itep/index.asp.

Once the tribe has finished writing the QAPP, it is submitted to the Regional Office for approval. QAPPs should be written and approved before any "official" data is collected. The QAPP provides the funding organization some assurance that the monitoring organization has performed adequate planning to control and assess the quality of its data before funds are spent on data of questionable quality. In many cases, EPA provides funding for the tribal monitoring organization to purchase the necessary equipment and consumables to start a monitoring project as well as time to become familiar with the instruments in order to develop an adequate QAPP.

19. How does EPA help tribal monitoring programs satisfy the 40 CFR 58 Appendix A requirement to have adequate and independent performance evaluation audits (NPAP and PEP)?

Most of the QA requirements in 40CFR part 58 Appendix A are performed by the monitoring organization. These checks are very important and should be submitted to AQS along with routine data. Requirements like the National Performance Audit Program (NPAP) and the $PM_{2.5}$ Performance Evaluation Program (PEP), although they are the responsibility of the monitoring organizations, are being performed through federally implemented programs using STAG funds.

The Appendix A QA requirements are specific to data that are collected for comparison to the NAAQS. Tribes monitoring for NAAQS comparison purposes must follow these requirements including participation in the NPAP and PEP programs. This should be acknowledged during grant negotiations. Tribes monitoring for other purpose are encouraged to participate in these two programs, as well as the other QA requirements in Appendix A, but it is not a requirement.

The tribes, similar to all state and local monitoring organizations, have the option of implementing the program themselves (through a number of options including contracting) or utilizing the federally implemented program with an appropriate redirection of STAG funds to EPA contracting to support the audits. Tribes will need to meet specific criteria for adequacy and independence before being able to self-implement the audit programs. In addition, there are

some cases where a Regional Office or the states may be able to perform these audits for the cost of consumable supplies.

Tribes requiring the audits or wishing to participate in them need to make this decision each year. In April, 2007 OAR developed a whitepaper that explained the options available to the tribes. There are a number of ways presented in this paper that might be applicable to tribes within the Region. This document should be a used as a "communication" starting point to provide an understanding of the programs and the specific options available for implementation. A form, included in the whitepaper, could be used during the grant application process to collect the information needed to address implementation decisions each year.

STATUS OF MONITORING NETWORKS

20. How many tribes are monitoring their air quality using funds from EPA? Are the data from this monitoring available to others?

The OAR Tribal Program has accomplished significant gains in the short number of years since it's inception in 1996. Currently (as of 2007) 120 tribes receive grant support and are operating 150 air quality monitors in Indian country. Tribes have continued to progress from assessments to program development and 26 tribes have received eligibility determinations of CAA authority under the Tribal Authority Rule. Eighteen tribes have conducted emissions inventories that have been submitted to NEI and we continue to provide training and technical support for this activity. This assessment work continues as new tribes become engaged in the air quality program and gain the staffing and expertise to begin this work.

Other tribes have begun to move beyond the assessment phase into program development. These more experienced tribes are beginning to complete Tribal Implementation Plans for submission and approval– two have been submitted to date and several more are in development. Tribes have also expressed interest in PSD redesignations to reclassify their airsheds for optimum protection against deterioration, and to-date, nine tribes have redesignated their airsheds to Class 1 under PSD. Over 100 tribes participate in Regional Haze planning organizations, and the Western Regional Air Partnership is co-chaired by Councilman Lloyd Irvine, of the Confederated Salish and Kootenai Tribes. We expect this trend to continue, and the Tribal Operations Committee is reflecting this increasing interest in air programs in Indian country. EPA continues to strive to support the ongoing needs in this growing program.

Over the past several years, 96 tribes have implemented air monitoring programs using tribal air grants provided by EPA (84 tribes were collecting ambient air data as of July 2007). The best available information is a recent (though incomplete) survey of the Regional Air Tribal Coordinators compiled by ITEP (2007). As expected, most of the data collection activity is located in the Indian country west of the Mississippi River where about 80 percent of the monitoring sites are located, primarily in Regions 6, 8, 9 and 10. To date, approximately 70 percent with monitoring programs have reported their data to AQS or other national data bases (IMPROVE, CASTNET) and about half of those tribes submitted their data themselves while the other half relied on some type of assistance (another tribe, an EPA Regional Office, a State

agency or a contractor). Of the six criteria pollutants, data is being collected primarily for ozone, PM_{10}, and $PM_{2.5}$.

21. How does EPA help a tribe understand its air quality as well as possible if the tribe cannot get EPA funding to run a monitoring program or not enough funding?

In the absence of monitoring on tribal lands, EPA assists the tribes by providing access to important data evaluation tools and data sources. OAR has recently completed revision on a document titled: *Technical Guidance for the Development of Tribal Air Monitoring Programs,* which was developed to help tribes gain a better idea of the ambient air monitoring process and provide information on resources and tools that help to build and sustain air environmental monitoring programs. Within this document, a section has been developed for tribes that are not implementing air monitoring that provides information on various web-based tools for air quality assessments and the types of models available and how they are used. In addition, the document provides an attachment (Attachment G) that provides web links to many ambient air data sources and tools, most of which are available on the OAR website[16].

EPA has been very successful at building various data assessment tools but tribes also need to understand the basis for using these tools and require training on various aspects of air quality monitoring and assessment. There are many avenues available for training. In particular, EPA works with the Institute of Tribal Environmental Professionals (ITEP)[17] to sponsor training courses at the Tribal Air Monitoring Support Center (TAMS). TAMS was created through a partnership between tribes, the ITEP and EPA. It is the first technical training center designed specifically to meet the needs of tribes involved in air quality management and offers an array of training and support services to tribal air professionals. EPA, both Headquarters and the Regions, participate in many of the training activities and this assistance should continue to be encouraged.

Many EPA Regions offer training on various aspects of air monitoring. If Regions have particular strengths in certain areas and are willing to provide training, it would be very useful to share this expertise with other Regions. For example, if a few Regions have expertise in AQS reporting they might be able to provide this training to tribes in Regions that are not as familiar with AQS or do not have the same capacity to help tribes in this area.

ADDITIONAL INFORMATION

22. Where can a tribe get more information on ambient monitoring and on other air quality topics that relate to monitoring?

The Ambient Monitoring Technology Information Center (AMTIC)[18] is the foremost website for the ambient air criteria pollutant network. The site is operated by EPA's Ambient Air Monitoring Group (AAMG). AMTIC contains information and files on ambient air quality monitoring programs, details on monitoring methods, relevant documents and articles,

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[16] http://www.epa.gov/air/airpolldata.html
[17] http://www4.nau.edu/itep/index.asp
[18] http://www.epa.gov/ttn/amtic/

information on air quality trends and nonattainment areas, and federal regulations related to ambient air quality monitoring. AAMG is in the process of revising this website and looks for the regions to help provide review/critique to make this website more useful.

The guidance document mentioned in Question 21, *Technical Guidance for the Development of Tribal Air Monitoring Programs* was developed to help the tribe plan and implement a monitoring program and assess the data collected from their program. This document includes:

- steps for identifying goals and objectives for conducting air monitoring,
- information for planning and selecting the appropriate type of monitoring network including discussions of staffing, network design, monitor selection, quality system development and training,
- costs for operating a monitoring network, funding sources and tips and resources for writing a grant proposal and work plan,
- implementation of monitoring networks,
- data acquisition, management and reporting, and
- data analysis and interpretation including information on modeling techniques.

The document might be considered the "yellow pages" of information on ambient air monitoring. It is not intended to provide the details of each specific monitoring program but it can provide the key attributes and web addresses that would lead one to those details. Although it is somewhat skewed toward traditional "NAAQS" monitoring, it attempts to be "generic" and does contain fact sheets (Appendix A) of many of the major national air monitoring programs like IMPROVE, CASTNET, PAMS etc. Each of these facts sheets contain the pertinent web addresses where more information on the programs objects, methods, guidance or data attributes can be found. The document was completed in August, 2007 and will be posted on the OAR Tribal Website[19] in September, 2007

Appendix B of this document also provides some general background on ambient air monitoring and may be very useful as a guide to the tribes.

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[19] http://www.epa.gov/air/tribal/airprogs.html

APPENDIX A

THE TRIBAL AIR APPLICATION PROCESS

Summary of Significant Features of the Tribal Air Application Process:

- Progressive application process: Proposals and abstracts only by deadline, followed by internal EPA review, negotiation with the applicant, and full application package submitted after work plans and budgets have been finalized.

- Proposals may be mailed (Return Receipt Requested) or emailed to EPA. A Project Officer will contact the applicant's staff after the internal review period to arrange timelines for revisions and submission of the final application.

- Tribes currently receiving financial support through CAA §105 will receive priority for ongoing funding. Multi-year work plans will be accepted from current recipients with demonstrated administrative, financial and programmatic capability.

- Tribes or consortia seeking to apply for funding to assist EPA with implementation of the CAA rules and regulations should clearly indicate this on their proposals.

- Tribes with questions about what authority they should seek funding under can discuss the available options with EPA once their proposal is accepted for further negotiation.

Funding Opportunity Description:

Background and Purpose: It is EPA policy to work with tribes on a government-to-government basis to enhance environmental protection in Indian country and tribal communities. The 1990 Clean Air Act Amendments included several provisions authorizing tribal governments to develop Federally enforceable programs to manage air quality in Indian country. The Tribal Authority Rule of 1998 created the Treatment as an Eligible State mechanism through which tribes could qualify to assume responsibility for incremental portions of the CAA, as they developed the capacity and desire to do so. Until tribes have the technical capacity and choose to develop independent air quality management programs, EPA has the responsibility to implement the CAA throughout Indian country. EPA welcomes tribes to partner with them in carrying out CAA implementation activities.

Eligibility Information:

Matching Costs: A contributing match is required of applicants under CAA §105. However, no match is required of grant recipients under CAA §103 or DITCAs.

Eligible Recipients: Federally-recognized tribes and tribal consortia are eligible to receive funds. A tribal consortium is defined as a partnership between two or more tribes authorized by the governing bodies of those tribes to apply for and receive assistance under the particular EPA

grant program. A tribal consortium is eligible to receive grants if the consortium can adequately document compliance with the following requirements:

1. A majority of its member tribes meet the eligibility requirements to receive CAA grants;
2. All member tribes that meet the eligibility requirements authorize the consortium to apply for and receive the grant; and
3. Only member tribes that meet eligibility requirements will directly benefit from the grant project and the consortium will agree to a grant condition to that affect;
4. Consortia must include tribal resolutions or other official documentation from each - eligible member tribe with its full application. Resolutions should specify the period of time authorized by the member tribe to apply for the consortia project.

Eligible Activities:

CAA §105: Implementation of programs for the prevention and control of air pollution or implementation of national primary and secondary ambient air quality standards, including activities related to the planning, developing, establishing, carrying-out, improving, or maintaining of such programs.

DITCAs: Assisting EPA with any activity required to implement the Clean Air Act or its supporting regulations.

CAA §103: Investigations, experiments, demonstrations, surveys and studies relating to the causes, effects, extent, prevention, and control of air pollution..

Funding Priorities:

This grant opportunity for tribes and tribal consortia is exempt from the EPA Grants Competition Policy (EPA Order 5700.5A1) under Section 6(c)2. All applications that meet the requirements set forth in program regulations and guidance will be funded so long as funds are available, with funding priority based on the three factors of (1) severity of air pollution, (2) sources of air pollution subject to tribal jurisdiction, and (3) size and population of the reservation. Less funding is available to tribes and tribal consortia in federal fiscal year 2006 than in recent years.

Base Funding: We anticipate that an increasingly large portion of grant funding to be first awarded to assure base funding for all federally recognized tribes and consortia having established eligibility under CAA §105 or with whom DITCAs have been negotiated. For that reason, we expect to provide much less funding for special projects and initial air quality assessment needs. Tribes are encouraged to explore the availability of other sources of funding for these activities, simultaneously with submitting proposals under this grant opportunity. Any proposals that are also being submitted to other funding sources for consideration should be so indicated clearly on their face page, stating the name of the other program and the extent to which there are similar objectives in both grant applications.

- Consistent with the national CAA allocation formula, base funding is considered not less than $25,000 per year for most tribes. Tribes with large reservations may receive up to $150,000, although there is no limit and funding is based on workplan negotiations with the appropriate Regional Office

- We would like to provide funding for up to three years to those existing recipients with a strong record of achieving outputs and outcomes and otherwise demonstrating sound grants management. Multi-year proposals are encouraged; but applicants should discuss these with their project officer before submitting them.

Additional Funding Opportunities: Regions expect to have sufficient funding for a limited number of CAA §103 special projects. Because the funding opportunities are expected to be limited, EPA is requesting a limited amount of information about proposed projects. Consortia and tribes without reservations may wish to apply under this provision. Abstracts are due by the same deadline as base funding proposals. All abstracts will be reviewed, and applicants with projects having a good likelihood to be funded will be requested to develop full work plans and budgets for those projects.

Circuit Riders: Tribes or consortia interested in pursuing funding for CAA activities or support on multiple reservations may wish to consider a CAA §103 proposal based upon using a "circuit rider" where there are common needs by two or more tribes within a reasonably lose geographical area. This could increase the likelihood of funding for tribes with relatively low priority based upon the four factors that will be used in the evaluation

Required Proposal Elements:

Base Funding Proposals: Proposals should be postmarked and must contain the following information to be considered:

-- Work plan, to contain the following elements:

1) Narrative description of risks to human health and the environment to be addressed by the applicant, and their relation to any environmental assessment or strategy efforts conducted to date.
2) Plans describing how the proposed work will help address environmental and human health risks;
3) Outputs (i.e. grant deliverables) related to the proposed activities and objectives and description of how these outputs are expected to contribute to eliminating or reducing environmental and human health risks; and
4) For each set of planned actions to be funded under the grant; the estimated work years, estimated funding amounts and a time frame for their accomplishment;
5) A performance evaluation process and reporting schedule in accordance with 40 CFR 35.515.

-- Budget Narrative: A budget narrative, broken out by federal object categories and by each year of the project, must be included in the proposal.

Management Capacity:

All grant applicants must demonstrate sound financial, administrative and programmatic management capability.

For current or previous recipients, this includes:
- timeliness and completeness of reports;
- progress under the current work plan;
- absence of duplicative activities in proposed work plan and budget; and
- amount of unexpended funds.

For recipients with past performance issues, the application should include a discussion of the steps the applicant has taken to address issues and correct past administrative, financial or programmatic challenges.

If the applicant has not applied for an EPA grant in the past, or past performance merits the review of the applicant's administrative or financial systems, a pre-award review may be required prior to the submission of an application. A Project Officer will contact the applicant to schedule this review if necessary.

Award Administration:

Applicants awarded funding must comply with the terms and conditions of the grant award as well as the federal regulations governing the award and the administration of environmental programs for tribes and tribal consortia, found in Title 40 of the Code of Federal Regulations (CFR), Parts 31 and 35, Subpart B (40 CFR 35.500-35.518). EPA highly recommends that grant applicants carefully review and understand all grant award documents prior to accepting the grant. If questions or concerns arise during that review, contact your tribal coordinator.

APPENDIX B

<u>BACKGROUND FOR PLANNING TRIBAL AIR MONITORING</u>

Introduction

This appendix contains general background on ambient air monitoring, as well as other technical information that is not specifically about tribal monitoring. It is intended to assist tribal professionals who are not already familiar with this material, so that they can participate more easily and effectively with EPA staff. In order to be brief and understandable to tribal professionals unfamiliar with the history, complexity, and technology of air monitoring and related topics, this section consists of thumbnail sketches and pointers to other documents for fuller descriptions. The thumbnail sketches are simplified and do not convey all provisions or nuances. They are intended to assist tribal staff in understanding the more detailed references, and in discussing these topics with EPA specialists and more experienced tribal professionals. Additional substantial amounts of information concerning (1) technical issues related to monitoring, emissions inventories and air data, (2) health and ecosystem-related topics, as well as (3) the Clean Air Act and associated EPA rules, and (4) government policies, program planning, budgets and grants, can be found by tribal professionals working through the following Internet addresses:

- -- Clean Air Act -- http://www.epa.gov/air/caa/
- -- Chief Financial Officer (EPA) -- http://www.epa.gov/ocfo/index.htm
- -- American Indian Environmental Office (EPA) -- http://www.epa.gov/indian/index.htm
- -- Tribal Air (EPA/OAR) -- http://www.epa.gov/air/tribal/
- -- Technology Transfer Network (EPA/OAR) -- http://www.epa.gov/ttn/
- -- Institute for Tribal Environmental Professionals -- http://www4.nau.edu/itep/programs/

Ambient Monitoring Technology Information Center (AMTIC)

The AMTIC Internet website contains information and files on ambient air quality monitoring programs, details on monitoring methods, relevant documents and articles, information on air quality trends and nonattainment areas, federal regulations related to ambient air quality monitoring, as well as information on training, contacts and related Internet sites. The AMTIC Internet website is a valuable starting point for tribal members seeking information on a wide range of air monitoring topics; its Internet address is:

-- http://www.epa.gov/ttn/amtic/

Existing State/Local/Tribal Monitoring Networks

Ambient air monitoring programs make it possible to evaluate the status of the atmosphere compared to clean air standards and historical information. A review of various air monitoring networks (e.g., SLAMS, NAMS, PAMS, SPMS, including

tribal monitoring) is provided as part of the National Ambient Air Monitoring Strategy. That strategy and other relevant information (including types, purposes, history, funding) of monitoring networks, including tribal programs, are provided at the following addresses:

      -- http://www.epa.gov/oar/oaqps/qa/monprog.html#Ambient
      -- http://www.epa.gov/oar/oaqps/montring.html
      -- http://www.epa.gov/ttn/amtic/files/ambient/monitorstrat/naamstrat2005.pdf
      -- http://www.epa.gov/ttn/amtic/amlinks.html
      -- http://www.epa.gov/castnet/
      -- http://vista.cira.colostate.edu/improve/Default.htm
      -- http://nadp.sws.uiuc.edu/
      -- http://www4.nau.edu/tams/services/index.html
      -- http://www.epa.gov/air/tribal/tribetotribe.html

Quality Assurance (QA) of Air Monitoring Programs

EPA uses its Quality System to manage the quality of environmental data collection, generation, and use; the primary goal is to ensure that data are of sufficient quantity and quality to support decisions for protecting the public and the environment. The Ambient Air Monitoring Quality Assurance program applies these principles to air quality data. This is accomplished through effective communication and cooperation with monitoring organizations, which include EPA, State, Local, Tribal agencies, the academic community and industry. To address QA requirements and associated resource needs, the following tools are routinely provided: guidance documents, The National Performance Evaluation Program, data quality assessments and reports, ambient air quality assurance training, and example QA project plans (QAPPs). Information on QA tools, QA requirements, and example applications should be given major consideration in the development of tribal monitoring programs; this information is available at the following Internet addresses:

      -- http://www.epa.gov/quality/index.html
      -- http://www.epa.gov/airprogm/oar/oaqps/qa/index.html
      -- http://www.epa.gov/ttn/amtic/quality.html
      -- http://www.epa.gov/ttnamti1/files/ambient/airtox/nattsqapp.pdf

National Ambient Air Monitoring Strategy

The overarching goal of the draft National Ambient Air Monitoring Strategy is to improve the scientific and technical competency of the nation's air monitoring networks while increasing the ability to protect public and environmental welfare, and to accomplish this in flexible ways that accommodate future needs in an optimized resource constrained environment. Objectives in achieving this broad based goal include: manage the Nation's air monitoring networks, establish a new air monitoring approach, provide a greater degree of timely public air quality information, improve network efficiencies, foster the utilization of new measurement method technologies, encourage multi-pollutant measurements, provide a base air monitoring structure, develop and implement a major public information and outreach program, seek input from the scientific

community, provide air monitoring platforms and data bases, and assess funding levels needed to maintain support for this monitoring strategy. The impact of this strategy on tribal monitoring is also addressed, including operation of monitoring sites by tribes. Tribal monitoring programs should consider their activities in relation to implementation of this strategy and should be poised to influence the strategy as it evolves. The draft monitoring strategy document (December 2005) and supporting documents, which provide both a description of the strategy and reflect ongoing components of the strategic plan development, are available at the following Internet addresses:

> -- http://www.epa.gov/ttn/amtic/monstratdoc.html
> -- http://www.epa.gov/ttn/amtic/monitor.html

Air Quality System (AQS)

The AQS is EPA's widely used repository of ambient air quality data. AQS stores data from over 10,000 monitors, 5000 of which are currently active. State, Local and Tribal agencies collect the data and submit it to AQS on a periodic basis. Tribes conducting air monitoring programs should strongly consider submitting the resulting air data to AQS, if they are not already doing so. A detailed description of AQS, supporting manuals and guides, web-based access, information on training, and links to other sources of air quality information, including State/Local/Tribal agencies, is provided at the following Internet address:

> -- http://www.epa.gov/ttn/airs/airsaqs/

ITEP and TAMS Support

The Internet home page for the Institute for Tribal Environmental Professionals (ITEP) states that "ITEP was established in 1992 to assist Indian tribes in the management of their environmental resources through effective training and educational programs." The subcomponent for the Tribal Air Monitoring Support Center states that "The Tribal Air Monitoring (TAMS) Center was created through a partnership between tribes, the Institute for Tribal Environmental Professionals and the United States Environmental Protection Agency. It is the first technical training center designed specifically to meet the needs of tribes involved in air quality management and offers an array of training and support services to tribal air professionals. The TAMS Centers mission is to strive to develop tribal capacity to assess, understand and prevent environmental impacts that adversely affect health, cultural, and natural resources." It provides technical support to tribes for all aspects of monitoring including workshops, a resource library, and one-on-one technical assistance through the Professional Assistance program. Listings of training programs and services available to tribal programs are provided at the following Internet addresses:

> -- http://www4.nau.edu/itep/
> -- http://www4.nau.edu/tams/

National Emissions Inventory (NEI)

The National Emissions Inventory is a national data base of air emissions information with input from numerous State and local air agencies, from tribes, and from industry. This data base contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPS). The data base includes estimates of annual emissions, by source, of air pollutants in each area of the country, on an annual basis. Emissions estimates for individual point or major sources (facilities), as well as county level estimates for area, mobile and other sources, are available currently for 1990 and 1996 through 1999 for criteria pollutants, and for 1999 for HAPs; a final version of the 2002 NEI will be ready in early 2006. The NEI emissions data base is a key source of information useful to tribal air programs. More information about the NEI data base and the compilation of criteria pollutant and HAP emissions inventories, and links to the data base, are available at the following Internet addresses:

> -- http://www.epa.gov/ttn/chief/net/index.html
> -- http://www.epa.gov/ttn/chief/eiinformation.html

Air Quality Models

Air quality models, and how they can provide insight to ambient air quality in Indian country when monitoring is not available, should be of particular interest to tribes. There are three types of air quality models: dispersion, photochemical, and receptor models used in assessing control strategies and source impacts. Source code and associated user's guides and documentation are routinely provided for preferred/recommended models, screening models, and alternative models. In addition, guidance is provided for applying air quality models in regulatory applications for State Implementation Plans (SIP) demonstrations and revisions, as well as permit applications for new source reviews, including Prevention of Significant Deterioration (PSD) regulations. These latter applications are particularly relevant for estimating air quality impacts in Indian country. Also available is the Model Clearinghouse which is designed to help record the interpretation of modeling guidance for specific regulatory applications. Modeling contacts within the EPA Regional Offices and State environmental agencies can assist tribes in the regulatory application of air quality models. Detailed information on models, codes and guidance in their use is available at the following Internet addresses:

> -- http://www.epa.gov/ttn/scram/
> -- http://www.epa.gov/scram001/guidanceindex.htm
> -- http://www.epa.gov/scram001/guidance_clearinghouse.htm

The NSR/PSD Programs (relationship to monitoring needs)

The New Source Review (NSR) and the Prevention of Significant Deterioration (PSD) programs apply to new major stationary sources and major modifications locating in areas designated as attainment or unclassifiable for the NAAQS. These programs generally require the permit applicant to conduct a source impact analysis, using monitored data and air quality models. For the NSR program, the impact analysis must demonstrate that the new or modified source will not

cause or contribute to a violation of state or national air quality standards or cause an adverse impact to visibility in any federal Class I area. The PSD program is generally designed to provide a more comprehensive source impact analysis than the NSR program, including effect on air quality related values, e.g., visibility, that have been identified for Class I areas. NSR and PSD are major pollutant control programs that should be of concern to tribes. Coordination of NSR/PSD and the use of air monitoring data in source impact analyses, to identify existing (representative) conditions and potential future impacts, should be addressed by tribes; relevant information is available at the following Internet addresses:

> -- http://www.epa.gov/nsr/
> -- http://www.epa.gov/ttn/amtic/files/ambient/criteria/reldocs/4-87-007.pdf
> -- http://www.epa.gov/ttnamti1/files/ambient/visible/r-99-003.pdf

Benchmarks for Health and Ecosystem Effects

General Air Benchmarks. Air Quality indicators, concentrations of criteria pollutants relative to the NAAQS, effects on health due to toxic air pollutants, and other ambient measures such as visibility and acid deposition, all provide benchmarks of the nation's air quality; these benchmarks are directly relatable to the needs of tribal programs. The 2003 Report on the Environment makes extensive use of indicators in assessing the status of health and ecosystem effects; preparation of a report that reflects 2006 has begun. The Report on the Environment, and associated information on criteria and toxic air pollutants, is available at the following Internet addresses:

> -- http://www.epa.gov/indicators/index.htm
> -- http://www.epa.gov/indicators/roe/html/roeTOC.htm
> -- http://www.epa.gov/ttn/naaqs/
> -- http://www.epa.gov/air/visibility/index.html
> -- http://www.epa.gov/airmarkets/cmprpt/arp03/summary.html

Air Toxics and the Integrated Risk Information System (IRIS). IRIS was prepared and is maintained by EPA as an electronic database containing information on human health effects that may result from exposure to various chemicals in the environment. It was developed in response to the need for consistent information on chemical substances for use in risk assessments, decision-making and regulatory activities. The collection of computer files covering individual chemicals contains descriptive and quantitative information concerning (1) oral reference doses and inhalation reference concentrations (RfDs and RfCs, respectively) for chronic noncarcinogenic health effects and (2) hazard identification, oral slope factors, and oral and inhalation unit risks for carcinogenic effects. Information on IRIS and other sources of air toxics information that may prove useful to tribal programs are available at the following Internet addresses:

> -- http://www.epa.gov/iris/index.html
> -- http://www.epa.gov/ttnatw01/hlthef/hapindex.html
> -- http://www.epa.gov/air/toxicair/index.html

National Air Toxics Assessment (NATA)

In February 2006, EPA released the results of its national-scale assessment of 1999 air toxics emissions. The purpose of the national-scale assessment is to identify and prioritize air toxics, emission source types and locations which are of greatest potential concern in terms of contributing to population risk. EPA uses the results of these assessments in many ways, including:

- to work with communities in designing their own local-scale assessments,
- to set priorities for improving data in emissions inventories, and
- to help direct priorities for expanding and improving the network of air toxics monitoring.

The national-scale assessment includes 177 air pollutants (a subset of the air toxics on the Clean Air Act's list of 187 air toxics plus diesel particulate matter (diesel PM)). The assessment includes four steps that focus on the year 1999:

1. Compiling a national emissions inventory of air toxics emissions from outdoor sources.
2. Estimating ambient concentrations of air toxics across the United States.
3. Estimating population exposures across the United States.
4. Characterizing potential public health risk due to inhalation of air toxics including both cancer and noncancer effects.

Results are available at:

http://www.epa.gov/ttn/atw/nata1999/

Indoor Air Issues (radon and mold)

Radon and mold can both be problems in indoor environments. Radon is odorless and tasteless, and may exist at concentrations that exceed action levels in homes. Indoor air containing radon is the second leading cause of lung cancer in the United States. Molds can gradually damage homes and furnishings and can cause potential health problems avoided. Internet addresses with additional information on radon and mold, associated effects, and mitigation strategies available for consideration by tribes are available at the following Internet addresses:

-- http://www.epa.gov/iaq/index.html
-- http://www.epa.gov/mold/index.html
-- http://www.epa.gov/radon/index.html
-- http://www.epa.gov/iaq/atozindex.html