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Chapter 4 Potential TIP Program Elements

As previously discussed, the TAR provides tribes with the flexibility to adopt partial TIPs, so long as the adopted program elements are "reasonably severable" from the program elements that are not included in the TIP.[1] Data from emissions inventories and air quality monitoring, can be used to determine the air quality goals and needs of your reservation and which TIP elements, if any, your tribe may want to adopt. Or, the tribe may choose to implement some TIP program elements without air quality monitoring data or an emission inventory in order to address gaps in regulations. This chapter focuses on the potential TIP elements that your tribe can adopt to help reach the tribe's air quality goals, including:

- maintenance strategies
- attainment strategies
- source preconstruction permits
- regional haze plans

Maintenance Strategies

What is a maintenance strategy?

The goal of a maintenance strategy is to limit air pollutant emissions so as to maintain pollutant concentrations at levels below the NAAQS.

If your tribe has good reason to believe that existing air pollutant concentrations on your reservation are below the National Ambient Air Quality Standards(NAAQS) your goal may be to develop a maintenance strategy for one or more air pollutants.[2] Your tribe may also choose to develop a maintenance strategy for only a portion of your reservation (instead of the entire area) if another portion has been designated nonattainment. The goal of a maintenance strategy is to limit air pollutant emissions so as to maintain pollutant concentrations at levels below the NAAQS.

What are the basic steps for developing a maintenance strategy?

To develop a maintenance strategy, your tribe would obtain data (including that from an emissions inventory and air quality monitoring) and conduct analyses necessary to accomplish the following objectives, as applicable:

» Establish enforceable emission limits
» Write enforceable regulations
» Prevent downwind NAAQS violations
» Create an appropriate compliance schedule

" Establish enforceable emission limits

Your tribe can establish enforceable emission limits for new and existing emission sources on your reservation. Most emissions limits are on equipment, although your tribe can establish a maximum emissions level or "cap" for a facility. To determine at what level emissions limits should be set, ascertain the amount of emissions your tribe could permit that would still allow the reservation to meet its air quality goals. Your tribe may wish to consider innovative approaches to establishing enforceable emission limits, such as averaging and bubbling. Bubbling enables a source to average emissions from the entire facility, while averaging enables a source to average emissions from several similar emission points within the facility.

" **Write enforceable regulations**

One basic purpose of regulations is to list the actions that the owners and operators of sources must take to help achieve your tribe's air quality goals. To be enforceable, regulations must be clear and specific. Regulations could include technology-based standards and market-based standards, which are discussed in the upcoming Attainment strategies section - *Identify appropriate control measures*. The methods of determining compliance must be clear for both sources and the tribal air program staff. Your tribe also needs to adopt regulations in accordance with tribal law and administrative procedures (see Chapter 6 for more information) and your tribe must have the authority to enforce the regulations (see Chapter 5 for more information).

For many types of sources, the states and/or the Environmental Protection Agency (EPA) have regulations which can be used as models for your tribe's regulations. The EPA has also written many guidance documents to assist states and tribes in developing enforceable regulations. Resources that can help your tribe write enforceable regulations include:

» The State and Territorial Air Pollution and Program Administrators/Association of Local Air Pollution Control Officials (STAPPA/ALAPCO) publishes reference guides that contain "menus of options" for controlling various sources of pollutants (www.4cleanair.org/).

» The EPA Office of Air and Radiation's (OAR) Policy and Guidance Information web site is designed to provide access to rules, policy, and guidance documents produced by the OAR. This site provides easy access to both current and historical regulatory information (www.epa.gov/ttn/oarpg/).

» The EPA's Air Quality Office in your region can help your tribe identify existing state and local regulations that can serve as models for your tribe's regulations (see Appendix A).

» Appendix G, *TIP Enforceability Checklist*, provides general criteria that can be used to determine if regulations are clearly written and approvable.

» Appendix J, *Regulation Development*

" **Prevent downwind NAAQS violations**

The Clean Air Act (CAA) section 110(a)(2)(D) prohibits emissions from one area from negatively impacting air quality in another area. The EPA is responsible for resolving problems over inter-jurisdictional transport of air pollutants. More information about EPA intervention can be found later in this chapter under *Regional Air Quality: Can EPA intervene in regional air quality problems?*

Tribes may submit a TIP that includes enforceable emission limits and compliance schedules and not include evidence that the emission limits are adequate to prevent NAAQS violations. The EPA can fully approve such TIP elements as progress toward developing a more complete implementation plan that meets the tribes air quality goals. In such a case, if necessary and appropriate, EPA will determine if the tribe's emission limits will prevent NAAQS violations.

" **Create an appropriate compliance schedule**

If your maintenance plan establishes new emission limits, it should also set an expeditious schedule by which sources must comply with the regulations. The CAA generally requires states to implement emission control programs within 3-5 years. Some emission reductions should be achieved each year until the regulations are fully implemented. In addition, your maintenance plan should include a schedule for periodic review of your emissions inventory and modeling data, if applicable. Reviewing the air quality data for your reservation will help your tribe determine if your tribe is meeting your goal to maintain air quality better than the NAAQS.

What can be done about new sources of emissions?

Construction of new sources on the reservation could add enough emissions that the goals of maintaining the NAAQS would not be met. Therefore, your tribe may also want to adopt, as a separate TIP element, a preconstruction permit program to review plans for new major sources of emissions (and major modifications to existing emission

sources) and issue permits that limit emissions from those sources.

The Prevention of Significant Deterioration program (PSD) is a preconstruction permit program for areas with air quality that is better than the NAAQS. There is a federal PSD program, which EPA administers, that applies in Indian country. The PSD program can help your tribe preserve good air quality while still allowing economic development to occur.

Under a PSD program, the tribe can require major sources wanting to locate on your reservation to model their projected air quality impacts at various distances from their proposed locations (i.e., 20 km, 30 km, 40 km, 50 km). You can then limit emissions from the sources to reduce the impact on the air quality.

If your tribe chooses to adopt and administer a PSD program it will help you develop communications with jurisdictions that border your reservation. By alerting your neighbors of any emission increases on your reservation, they can account for those emissions in their air quality planning. Furthermore, by increasing communication with surrounding jurisdictions, your tribe will be more informed of emission changes outside its reservation that may affects its air quality.

Your tribe can also establish a similar program to review construction plans for minor new sources. More information can be found later in this chapter under *Source Preconstruction Permits*.

How does your tribe start creating a maintenance strategy?

To start creating a maintenance strategy, it may be useful to inventory the sources, types, and quantities of air pollutants emitted on your reservation. Your tribe may also want to determine the current concentrations of those pollutants relative to the NAAQS through ambient air quality monitoring and/or modeling. In addition to the references provided in this document, the Air Quality Program of your regional EPA office can assist your tribe in this effort (see Appendix A).

Attainment Strategies

What is an attainment strategy?

The existing concentrations of some pollutants on your reservation may be above the NAAQS if there are significant sources of air pollution on your reservation or in adjacent areas. In those cases, or in the case where EPA has designated your reservation as being nonattainment, your goal may be to develop an attainment strategy to reduce the concentrations of those pollutants to levels below the NAAQS. Your tribe may also choose to develop an attainment strategy for a portion of your reservation (instead of the entire reservation) if it is appropriate.

The goal of an attainment strategy is to reduce the concentrations of pollutants to levels below the NAAQS.

Your tribe may decide to concentrate its efforts on regulating the existing sources of emissions, and possibly on regulating new sources of air pollution, as well. As your tribe develops an attainment strategy, it should consider how to best maintain a balance between its air quality regulations, its economy, and its culture. The appropriate balance will depend on the relationships between these and other factors, and the values, goals, and priorities of your tribe.

What are the basic steps for developing an attainment strategy?

To develop an attainment strategy, your tribe would obtain the data (including that from an emissions inventory and air quality monitoring) and conduct the analyses necessary to accomplish the following objectives, as applicable:[3]

» Ascertain the effect of emissions from sources within and outside the TIP area

» Determine emission reductions needed to attain or maintain the NAAQS for the pollutant(s) of concern

» Identify which emission control measures to use to bring your area into attainment and allow it to stay in attainment

» Write enforceable regulations that require sources to implement emission control measures that result in verifiable emission reductions

Everglades National Park, FL

With a rich cultural history dating back to 10,000 B.C., the Everglades are the tribal homelands of the Tequesta in southeast Florida; the Calusa in the southwest; and the Jeaga and Ais along the east coast north of the Tequesta; and the Mayaimi, Creek, and Seminoles near Lake Okeechobee.
(Photo courtesy of the National Parks Service)

» Prevent downwind NAAQS violations

» Create a schedule that sources will follow to comply with the regulations, ensuring progress toward attainment

» Develop "contingency measures" for situations in which air quality improvements do not occur according to schedule

The EPA has prepared policy memoranda related to attainment strategies which are available at EPA's site for NAAQS policy and guidance memos (www.epa.gov/ttn/oarpg/t1pgm.html). Literature in the fields of engineering, policy analysis, and economics discusses emission control measures for specific sources and how to package individual measures into a comprehensive plan. Since the Tribal Authority Rule (TAR) allows tribes to adopt severable TIP elements and to build a TIP in a modular fashion, your tribe may select the requirements that meet its air quality objectives (provided such elements are not integrally related to program elements not included in the TIP). Your tribe should contact the regional EPA office before submitting your TIP (see Appendix A). The following discussion of attainment strategies presents a general framework for planning.

" **Ascertain the effect of emissions from sources within and outside the TIP area**

The information in your tribe's emission inventory on the types and amounts of pollutants emitted by sources can be used to determine the impacts of those sources on pollutant concentrations on the reservation. Another reason the air quality on your reservation may be worse than the NAAQS is air pollution from nearby, non-reservation sources being transported across your reservation boundaries. Sources of pollutants outside the TIP area may be a concern if your reservation is adjacent to or surrounded by a state nonattainment area, or if it is downwind of major sources of emissions that are not under your tribe's jurisdiction.

Your tribe may want to ascertain the potential effects that pollutants from sources outside the TIP area have on your reservation's air quality. Therefore, an appropriate air

quality model, as recommended in EPA's Guideline on Air Quality Models,[4] can be used to estimate the effects of emissions from those sources and activities, located both on and off the reservation, on the reservation's air quality. The modeled pollutant concentrations, when added to an overall background (natural) pollutant levels on the reservation, gives an estimate of the total concentration of each pollutant. The effects of emissions from sources located off the reservation on total pollutant concentrations can be estimated by running the model with only those sources, and separately running the model with sources located on the reservation.

Some pollutants, such as ozone and fine particulate matter, are not emitted directly from a source, but rather are formed in the atmosphere through chemical reactions with emissions from many sources over a large area. These secondary pollutants are regional in nature and consequently are inappropriate for the type of analysis described above.

Your tribe can only regulate sources within its jurisdiction. However, if your tribe determines that emissions from sources outside the TIP area are causing your reservation's air quality to exceed the NAAQS, or if your tribe worries that such emissions may cause future air quality problems on your reservation, there are steps your tribe can take. For more information, see the section on *Regional Air Quality* later in this chapter. Your tribe can also approach the regional office for assistance in making these assessments.

" **Determine the necessary emission reductions**

To determine the emission reductions needed from sources on your reservation, the monitoring data your tribe collects must be compared to the NAAQS. To make this comparison, your tribe needs to calculate the "design value" for each pollutant of concern. The design value is the monitoring data in the same form and over the same averaging period as the NAAQS. The method for calculating the design value depends upon the units and averaging time of the NAAQS.[5] Your tribe should follow EPA's data handling conventions and computational formulas when determining design values. More information on the data analysis requirements can be found

Sources outside your TIP area, such as this industrial complex, may transport pollutants onto your TIP area.

in the Code of Federal Regulations (CFR) at 40 CFR 50 (accessible at www.access.gpo.gov/nara/cfr/ index.html).

If the design value for a pollutant is greater than the NAAQS, the area violates the NAAQS for that pollutant. For example, the NAAQS for carbon monoxide (CO) is 9 parts per million (ppm) for an 8-hour average concentration. If the design value for CO on your reservation is 10 ppm, it indicates that the concentration of CO in the ambient air exceeds the NAAQS and your design value must be reduced by at least 1 ppm or ten percent.

To reduce the ambient concentration of CO, your tribe could: (1) reduce the CO emissions by a fixed amount (about 10 percent) from every source in your emission inventory; or (2) reduce the CO emissions from different sources by different amounts (based on the cost effectiveness of control options or other factors important to your tribe). For the latter strategy, your tribe could use air quality modeling to test different combinations of reductions before deciding which combination to use.

Some pollutants, such as ozone, are formed from more than one precursor pollutant through complicated atmospheric chemistry; these pollutants would require more complex strategies to determine which precursor pollutant emissions to reduce, by how much, and from which sources.

" **Identify appropriate control measures**

The hurdle that proposed control measures must clear is whether, taken as a group, they can achieve the emission reductions necessary to decrease pollutant concentrations by the amount indicated by the design value (see above).[6] A fundamental choice that your tribe will make when selecting control measures is whether it will adopt a technology-based or a market-based strategy.

Control measures may be technology-based or market-based.

With a **technology-based strategy**, your tribe would require a process change or an emission limitation for a piece of equipment or process. For example, your tribe might set the maximum allowable sulfur dioxide emission rate from a process; set the maximum allowable volatile organic compound content allowed in coatings (such as those used in the manufacturing wood products); require

work practices such as wetting dry, dusty materials at construction sites to reduce particulate matter emissions; or require the installation of a certain pollution control device for reducing emissions. These measures are technology-based.

If your tribe prescribes emission limitations or emission-reducing actions for each source or category of sources, regulations must require the use of Reasonably Available Control Technologies (RACT) or Reasonably Available Control Measures (RACM).[7] RACT is typically for large point sources such as industrial facilities, while RACM is for area sources such as agricultural operations.

Nez Perce National Historical Park, ID

For thousands of years the valleys, prairies, mountains and plateaus of the inland northwest have been home to the Nez Perce people. The park also houses the battlefield from the War of 1877, where the Nez Perce people fought the U.S. Army. (National Parks Service)

The EPA has many resources to provide guidance for the selection of appropriate control measures. The Clean Air Technology Center (CATC) is a resource on all areas of emerging and existing air pollution prevention and control technologies, and provides public access to information on their use, effectiveness, and cost. In addition, the CATC will provide support, as resources allow, related to the technical and economic feasibility, operation, and maintenance of these technologies. The RACT/BACT/LAER Clearinghouse within the CATC contains information from state and local air pollution control agencies that can be used in determining what types of controls and pollution prevention measures have been applied to and/or are required for various sources, the effectiveness of these technologies, and the annualized cost of purchase, operation, and maintenance.[8] More information on the CATC is available at www.epa.gov/ttn/catc/.

A **market-based strategy**, or economic incentive program, achieves air quality objectives by providing market-based incentives or information to emission sources.[9] There are four main types of economic incentive programs:

» *Emission trading programs* limit the total emissions from a certain type or group of sources and allow the sources to trade or buy emission credits to comply with their individual emission limits

» *Financial mechanism programs* include fees paid by emitters for each unit of emissions, or subsidies that promote pollution-reducing activities or products

» *Clean air investment funds* allow sources with high costs for reducing emissions to pay into a fund instead; the funds are then used by the regulatory authority to procure emission reductions elsewhere

» *Public information programs* include educational programs, product certifications, "ozone action days," and other information people can consider when making choices that affect air quality

A market-based strategy is most successful when several large sources that continuously monitor emissions participate. Your tribe may consider requiring certain sources to join an existing regional market-based trading program to achieve emission reductions. Guidance on developing an economic incentive program can be found in *Improving Air Quality with Economic Incentive Programs* (EPA-452/R-01-001, January 2001), available at www.epa.gov/ttn/oarpg/t1main.html and through EPA's Air and Radiation Docket and Information Center (Docket Number A-97-27) by calling (202) 260-7548.

The selection of control measures depends on several factors, including:

- Number and types of sources
- Pollutants to be reduced
- Expertise, experience, and number of air program staff
- Effectiveness, cost and fairness of various control measures

The best regulatory approach for your tribe depends on the number and types of sources your tribe is regulating, the pollutants to be reduced, the expertise, experience, and number of your air program's staff, and other considerations. Your situation is likely to be different from that of other tribes. If your tribe chooses a technology-based approach, it will restrict the flexibility that sources have in complying, but it will create a program that is relatively easy to implement. If your tribe chooses a market-based approach, it will provide maximum compliance flexibility (which may reduce the total cost of compliance for sources), but will create a more complicated system to implement.

Only careful investigation of the options for limiting emissions from the sources under your jurisdiction will tell which control measures are best for your tribe. Because

"best" could mean several things, another important part of the air quality planning process is to explicitly state the criteria that your tribe will use to select control measures. Criteria may include effectiveness, cost, and fairness. Questions to ask when selecting control measures include:

» How well does the method reduce emissions?
» How certain are the reductions using the method?
» Are the reductions sufficient to ensure the source is not causing an air quality violation downwind?
» What is the total cost? Cost per ton of pollution reduced? Up-front capital cost? Annual operating and maintenance cost?

" **Write enforceable regulations**

As discussed above under Maintenance Strategies, regulations must be clear and specific and the methods of determining compliance must be clear for both sources and the tribe's air program staff. Regulations need to be written in accordance with tribal law and administrative procedures (see Chapter 6 for more information) and your tribe must have the authority to enforce the regulations (see Chapter 5 for more information).

For many types of sources, the states and/or the Environmental Protection Agency (EPA) have developed many resources and guidance documents to assist in developing enforceable regulations. In addition, Appendix G, *TIP Enforceability Checklist*, provides general criteria that can be used to determine if regulations are clearly written and approvable and Appendix J, *Regulation Development* provides useful information.

" **Prevent downwind NAAQS violations**

The Clean Air Act (CAA) section 110(a)(2)(D) prohibits emissions from one area from negatively impacting air quality in another area. The EPA is responsible for resolving problems over inter-jurisdictional transport of air pollutants. More information about EPA intervention can be found later in this chapter under *Regional Air Quality: Can EPA intervene in regional air quality problems?*

Tribes may submit a TIP that includes enforceable emission limits and compliance schedules and not include evidence that the emission limits are adequate to prevent NAAQS

violations. The EPA can fully approve such TIP elements as progress toward developing a more complete implementation plan that meets the tribes air quality goals. In such a case, if necessary and appropriate, EPA will determine if the tribe's emission limits will prevent NAAQS violations.

" **Create an appropriate schedule for emission reductions**

Your attainment strategy should include a schedule by which sources must comply with regulations. The compliance date should allow the sources to comply without great economic difficulty and ensure attainment of the NAAQS as soon as possible. The CAA generally requires states to implement attainment strategies within five years of less

Your tribe may want your schedule to ensure that reasonable further progress (RFP) is made in annual emission reductions. RFP, or annual incremental emission reductions, are required for state nonattainment areas. To make RFP, some emission reductions should be achieved each year (i.e., new regulations take effect of new sources must comply each year) until the attainment strategy is fully implemented.

Your tribe may or may not decide to demonstrate RFP through the schedule you develop. However, when tribal lands are part of a multi-state jurisdictional area, if the tribe does not show that the emission limits in their TIP are adequate to prevent NAAQS violations and make RFP, EPA will review the emission limits and compliance schedules to assure that they will not interfere with the overall plan to attain the NAAQS in the area. In cases where sources on tribal lands would interfere with an area meeting it's attainment date, EPA will develop a FIP to reduce emissions from those sources, where necessary and appropriate, since the tribe is not required to meet the attainment date.

" **Develop appropriate contingency measures**

The tribe should discuss with the regional office the need for including contingency measures in the TIP. Contingency measures should accomplish about 1 year's worth of progress toward meeting the NAAQS, or an additional 20 to 25 percent of the emissions being

reduced.[10] For example, if emissions must be reduced 100 tons per year to attain the NAAQS, contingency measures should be capable of reducing emissions by an additional 20 to 25 tons per year. Your tribe should also establish criteria for determining when and if the contingency measures have to be implemented, and set a schedule for implementing them, if needed. If your tribe does not include contingency measures in their TIP, EPA will adopt additional measures to fill the gap, where necessary and appropriate.

What can be done about new sources of emissions?

Construction of new sources on the reservation could add enough emissions that the goal of the TIP to attain and maintain the NAAQS would not be met. Therefore, the tribe may also want to include source preconstruction permit programs as a seperate TIP element in their TIP. The program, applicable to areas with air quality that is worse than the NAAQS, is a nonattainment New Source Review (NSR) program. You can limit the impacts of emissions from new major sources and major modifications to existing sources with a NSR program. Tribes can also establish a similar program to review construction plans for new minor sources. For more information, see the *Source Preconstruction Permits* section later in this chapter.

How does your tribe start creating an attainment strategy?

To start developing an attainment strategy, your tribe will need to determine the emission reductions necessary to attain and maintain the NAAQS for the pollutant(s) of concern. Your tribe will also need to identify the sources of air pollution that need to be controlled and the emission control measures your tribe wants to require to achieve these emission reductions. Your tribe's attainment strategy may include adopting a source preconstruction permitting program and creating a mandatory schedule for sources to implement emission control measures. Contingency measures for situations in which emission reductions do not occur according to schedule are another element your tribe can include in an attainment strategy. In addition to the references provided in this document, the Air Quality Program of your regional EPA office can also provide guidance as your tribe creates an attainment strategy (see Appendix A).

Source Preconstruction Permits

What is New Source Review?

Reviewing plans for a proposed new source.

The New Source Review (NSR) program requires all new major sources or existing sources with major modifications in both nonattainment areas and attainment areas to obtain preconstruction permits.[11] The definition of major stationary source and major modification varies with the air quality status of the area and the type of pollutant.[12] In general, major sources are sources that emit over a certain amount of a pollutant (the "major source threshold" for that pollutant); minor sources are sources that emit less than that amount. A major modification means any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the CAA.[13]

For example, in attainment and unclassifiable areas, a major stationary source is defined as any source that emits, or has the potential to emit,[14] 250 tons per year (or, for specific types of sources, 100 tons per year) of any pollutant subject to regulation under the CAA. Serious particulate matter nonattainment areas and moderate, serious, severe, and extreme ozone nonattainment areas have lower thresholds for determining what is a major source.

The NSR permit requirements are determined on a case-by-case basis. The permits specify emission limits and control requirements for each emission point at a source, as well as the monitoring, recordkeeping, and reporting requirements. The CAA created three separate NSR programs to address different situations involving new and growing facilities (see Table 4-1).

Table 4-1. Overview of the New Source Review Programs

Program Name	Program Abbreviation	Applicable Areas	Applicable Sources
Nonattainment New Source Review	nonattainment NSR	Nonattainment	New major sources Existing major sources with major modifications
Prevention of Significant Deterioration	PSD	Attainment, Unclassifiable	New major sources Existing major sources with major modifications
Minor New Source Review	minor NSR	Nonattainment, Attainment, Unclassifiable	New minor sources Any modification to minor sources Minor modifications to major stationary sources

If your tribe does not adopt a major NSR program, the EPA may adopt, without unreasonable delay, Federal Implementation Plan provisions as are necessary or appropriate to protect air quality.

The nonattainment NSR and PSD programs, collectively known as major NSR, are federal regulations under the CAA. Implementation of the federal NSR programs can be delegated to individual states and tribes. A tribe should contact the Regional Office is it wishes to have such programs delegated. If a source wants to locate in Indian Country, and your tribe has not or does not want to adopt a major NSR program, EPA would do a source-specific FIP. Minor NSR programs are state, local, and tribal programs that apply to sources smaller than those in the major NSR programs. EPA is in the process of developing these programs.

Both the major and minor new source review programs focus primarily on the criteria pollutants (ozone, nitrogen dioxide, lead, carbon monoxide, sulfur dioxide, and particulate matter) regulated by the NAAQS. State minor NSR programs frequently cover additional pollutants, including many toxic air pollutants, which are not covered in their SIPs.

The core procedures in the major NSR programs are: (a) evaluating the consequences of allowing facilities to start

operations or to expand; (b) requiring the most effective emissions control measures for these facilities; and (c) including informed public participation in the evaluation of consequences and selection of emissions control measures. These procedures must occur before the construction or expansion of a facility begins.

If emissions from a new major source or major modification may affect a national park or wilderness area, the evaluation may also include the impact of emissions on visibility and natural and cultural resources in the park or wilderness area. Federal land managers can assist with this effort. For lands owned by the government of the United States, a federal land manager is the representative of the department or agency with authority over such land, such as a Regional Forester or individual Forest Supervisor for US Forest Service lands.

What is the nonattainment NSR program?

The nonattainment NSR program deals with large point sources such as this petroleum refinery.

Numerous requirements in the CAA apply to new major sources and major modifications at existing sources in nonattainment areas. For example, a facility covered by nonattainment NSR must install control equipment ensuring the Lowest Achievable Emission Rate (LAER). The economic costs are not considered when defining the applicable control technology to obtain LAER. The LAER is defined as the more stringent of the following limitations:

» The most stringent emission limitation contained in a SIP of any state for the same class or category of source (unless it is demonstrated that this limitation is unachievable)

» The most stringent emission limitation achieved in practice

Another requirement of the nonattainment NSR program is that increases in emissions from new major sources and major modifications must be matched or offset by greater emissions reductions from other sources (called “offsets”), thus ensuring that progress is made toward decreasing the total emissions for the area and meeting the NAAQS.[15]

Nonattainment NSR programs must meet all the requirements established in the Code of Federal Regulations (CFR) at 40 CFR 51.160-165, and Part D of the CAA. State air regulators have developed nonattainment NSR programs which tribes can use as models when developing their own programs. Your regional EPA office can also provide assistance and guidance (see Appendix A, *Tribal Contacts at EPA*). The EPA is developing an example nonattainment NSR program. Once it is promulgated, your tribe will be able to adopt it by reference. NSR guidance documents are available from EPA at www.epa.gov/ttn/nsr/.

What is the PSD permitting program?

The purpose of the Prevention of Signification Deterioration (PSD) permitting program is to prevent air quality that is below the NAAQS from deteriorating more than an incremental amount. If the air quality on your reservation is currently better than the NAAQS, your tribe may want to adopt a PSD permitting program which would allow for air quality goals more protective than the NAAQS. The PSD permitting program applies to all new major sources or major modifications of existing major sources in attainment and unclassifiable areas. With a PSD program, your tribal permitting authority can require the best available air pollution control technology (BACT) to be installed when large new sources are constructed or expanded. BACT is defined as an emission limitation based on the maximum degree of reduction of each pollutant [subject to regulation under the PSD program] which your permitting authority determines is achievable through application of production processes and available methods, systems and techniques. BACT is to be determined for each source on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs. [See section 169(3) of the Clean Air Act.]

The PSD permitting process typically takes from 3 months to 1 year. However, complicated or controversial permits can take longer. In order to obtain a permit, a source and the permitting authority must do the following:

Yosemite National Park, California

Indian people have lived in the Yosemite region for as long as 8,000 years. By the mid-nineteenth century, when native residents had their first contact with non-Indian people, they were primarily of Southern Miwok ancestry. However, trade with the Mono Paiutes from the east side of the Sierra for pinyon pine nuts, obsidian, and other materials from the Mono Basin resulted in many unions between the two tribes.

» Evaluate the BACT, which is based on the most stringent control available for a similar type of source that is technically and economically feasible
» Perform an ambient air impact study
» Conduct additional impact studies including visibility, soils, and vegetation

Under the PSD permitting program, the "baseline" concentration of regulated pollutants must be determined. The baseline is the ambient concentration level of a pollutant that exists at the time of the first application for a PSD permit in the baseline area. The baseline concentration can be determined using existing data representative of air quality in the area where the new source will be located. If representative data do not exist, your permitting authority can require the permit applicant to establish a site-specific monitoring network, and monitor the air quality for a period of at least one year immediately before applying for a permit to construct. Your permitting authority can also require the permit application to monitor the meteorological parameters of the area to facilitate modeling the potential impacts of emissions from the new source.

The ambient concentration resulting from total emissions from all sources (both permitted and non-permitted sources) is not allowed to exceed the baseline plus an increment set in the CAA and in EPA's regulations.[16] Owners of new and growing facilities must show how much the increase in emissions will increase the concentrations of air pollutants in Indian country. The total effect of the increased emissions from new and modified sources on pollutant concentrations may not exceed the baseline plus the increment, nor exceed the NAAQS. In most cases, the baseline plus the increment will result in an emissions ceiling more stringent than the NAAQS (see Figures 4-1 and 4-2).

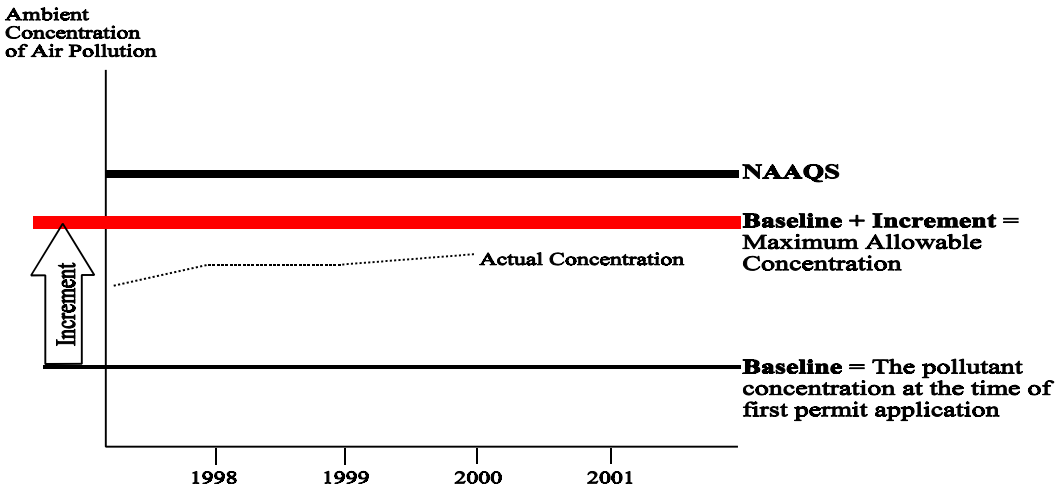

Figure 4-1. *PSD Program: Baseline + Increment = Ambient Standards More Stringent Than NAAQS.*

Under the PSD Program, the maximum allowable ambient concentration equals the baseline plus the increment. Therefore, standards can be more stringent than the NAAQS.

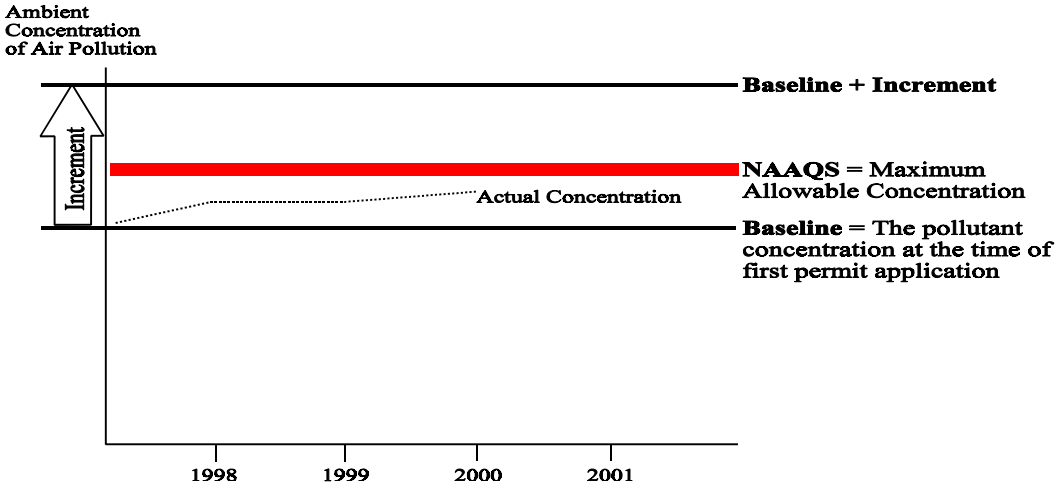

Figure 4-2. *PSD Program: NAAQS Remain Maximum Emission Level*

There could be cases where the baseline plus the increment would exceed the NAAQS. However, the NAAQS are a ceiling that ambient concentrations are NOT allowed to exceed.

The increments are smallest for Class I areas and largest for Class III areas. Only very little degradation of air quality is allowed in Class I areas.

The increments are smallest for Class I areas and largest for Class III areas (attainment area classifications are discussed in Chapter 3).[16] Therefore, Class I areas (which include national parks, national wilderness areas, national monuments, national seashores, other areas of special natural, recreational, scenic, or historic value, and areas reclassified as Class I) receive the greatest protection. Only very little degradation of air quality is allowed in Class I areas. To permit a major new facility or major modification of an existing facility in a Class I area, an offset from another facility in the area may be necessary.

Apart from your tribe's decision whether to adopt your own PSD program, your tribe has some freedom to change the classification of your reservation and thus affect the amount of allowable emissions growth from new and growing facilities. The CAA automatically classifies most attainment areas as Class II, but a federally recognized Indian tribe may apply to change the classification of its reservation to Class I or Class III.[17] Reservations that have been reclassified from Class II to Class I include those of the Northern Cheyenne, Flathead, Fort Peck, Spokane, and Yavapai-Apache Indians.

Your tribe's governing body can request reclassification by submitting a proposal to the EPA, notifying the appropriate state(s), and holding a public hearing. See Appendix H (*Procedures for Area Reclassification to Class I*) and the CAA section 164 for more detailed information on the statutory and regulatory requirements for redesignation.

The EPA has developed a PSD permitting program. The EPA must administer the PSD permitting program in any state or reservation that has not developed its own PSD permitting program or received a delegation of authority from the EPA to implement the federal program. Your tribe may request delegation of PSD administration if it has the technical knowledge and legal authority to implement and enforce the requirements. Alternatively, your tribe can develop your own PSD permitting program and submit it as part of your TIP. One way your tribe can establish a PSD permitting program is to incorporate the federal PSD permitting program by reference into your TIP (this process

is different than delegation).[18] The federal PSD permitting requirements and the requirements that state and tribal PSD permitting programs must meet are found at 40 CFR 51.165(b), 51.166 and 52.21.

What is minor NSR?

Minor NSR programs can be developed in both attainment and nonattainment areas and apply to smaller new facilities and facility expansions that are not large enough to qualify as major new sources or major modifications. Examples of common minor sources include gasoline stations, automobile refinishing shops, dry cleaners, incinerators, and small industrial facilities. A minor NSR program allows a state or tribe to exercise oversight over the growth of pollution from minor sources to ensure such sources will not cause or contribute to a violation of the NAAQS, while still allowing growth to occur.

A minor NSR program can also provide permitting flexibility. In minor NSR, a source with a potential to emit above the major source threshold can agree to enforceable emissions limits below the major source threshold. The source would not be required to undergo the more complex major NSR and lower emissions would be ensured. Such a source is called a "synthetic minor" source.

There is no federal minor NSR program and the CAA is not specific on what is required in such a program. Therefore, states and tribes currently have flexibility when designing these programs. Existing minor NSR programs vary greatly, and can differ in attainment and nonattainment areas. Typically the programs require emission limitations and monitoring, recordkeeping, and reporting to ensure compliance with the emission limits. State air regulators have developed minor NSR programs. Your tribe may want to consider using a state's minor NSR program as a model when developing its own minor NSR rules.

How does your tribe start creating a preconstruction permit program?

Your emissions inventory will help your tribe identify the types of sources a preconstruction permit program on your reservation will need to regulate. Information on permitting can be found in the references provided in this document. In addition, the EPA tribal air coordinator for your region can help your tribe determine which, if any,

existing NSR or minor NSR programs may be useful models for your tribe to use, and assist your tribe in the development of its preconstruction permit program (Appendix A).

Regional Air Quality

Why is regional air quality important?

According to the CAA section 110(a)(2)(D), emissions from one area are not supposed to negatively impact another area's air quality. Sources are not allowed to:

» Contribute significantly to nonattainment in other areas
» Interfere with maintenance of the NAAQS in another area
» Interfere with measures implementing prevention of significant deterioration in other areas
» Interfere with measures protecting visibility in other areas

Testing visibility with an IMPROVE monitor.[17] This is an Optec LPV-2 transmissometer, with the transmitter end of the instrument on a rooftop in Denver, Colorado. It's corresponding receiver end is located on another rooftop a distance away. (Air Resources Specialists, Inc.)

However, pollutants such as sulfur dioxide, nitrogen oxides, ozone, and fine particulate matter can travel great distances from the source. Therefore, urban and rural areas working to reduce ozone may be fighting a losing battle if upwind sources release pollutants that travel in their direction. Regionally, tribal and state governments, businesses, citizens, and EPA and other federal agencies need to work together to help overcome this problem. In fact, it may be less expensive and more fair to control emissions throughout a region rather than just in the nonattainment areas.

Sophisticated computer modeling of a region including your reservation - and possibly multiple surrounding states - can be used to evaluate the impacts upwind sources have on your reservation, and the impacts sources on your reservation have on downwind areas. Atmospheric transformation and dispersion models that are used regularly for these investigations include the Regulatory Emission Modeling System for Aerosols and Deposition (REMSAD) and the Urban Airshed Model-V (UAM-V).[19] REMSAD calculates concentrations of particulate matter

and UAM-V calculates concentrations of ground-level ozone. Dispersion models are helpful when developing emission control strategies because they relate changes in emissions to changes in air pollutant concentrations.

Two options your tribe has for addressing regional air quality are: participating in regional planning to develop a regional haze plan; and petitioning EPA for intervention if your tribe believes upwind sources are contributing to nonattainment on your reservation.

What is haze?

Regional haze affects public welfare such as the quality of life in the places where we live, work, and play. Haze obscures the clarity, color, texture, and form of what we see. Regional haze plans can be included as elements of TIPs.

A clear day...

... and a hazy day at Glacier National Park, MT.

Haze is caused when light encounters tiny pollution particles (sulfates, nitrates, organic carbon, soot, and soil dust) and some gases (nitrogen dioxide) in the air. Some light is absorbed by the particles and gases and other light is scattered away before it reaches an observer. More pollutants mean more absorption and scattering of light, resulting in more haze. Humidity (especially prevalent in the east) magnifies the haze problem because some particles, such as sulfates, attract water and grow in size, scattering more light.

Some of the same pollutants for which NAAQS have been established because of their serious health and environmental effects also contribute to regional haze. Some haze-causing pollutants (mostly fine particles) are directly emitted to the atmosphere by a number of activities, such as electric power generation, various industrial and manufacturing processes, truck and auto emissions, burning related to forestry and agriculture, and construction activities. Others are formed when gases are emitted to the air and form particles as they are carried downwind (such as sulfate, formed from sulfur dioxide, and nitrates, formed from NO_X). Natural sources, such as forest fires, windblown dust, and organic emissions from biogenic sources also contribute to haze.[20] Particles in the air can travel hundreds or thousands of miles, contributing

to the haze that causes visibility impairment over broad regions of the United States. This distribution makes regional efforts for addressing haze a necessity.

What has the EPA done to improve and protect visibility?

The EPA issued regional haze regulations in 1999 (the "Regional Haze Rule") that call for states and tribes, in partnership, to establish goals for improving visibility and to develop long-term strategies to return visibility to natural conditions in federal Class I areas (primarily national parks and wilderness areas). The EPA's Regional Haze Program applies to all states and to tribes that are eligible to implement CAA programs. They are to address their contributions to visibility problems in national parks and wilderness areas both within and outside their borders. Most initial plans for implementing the regional haze program are due in 2008. However, nine states and the tribes located in the western portion of the country have the option of submitting plans in 2003 to improve visibility in 16 Class I areas on the Colorado Plateau. Progress reviews are due every five years, and comprehensive plan revisions are due in 2018 and every ten years thereafter. The regional haze regulations also call for coordinated efforts between the states and eligible tribes to meet particulate matter health standards.

How can your tribe improve and protect visibility?

This dirt is from a recently developed sub-division in Lame Deer, MT. It will eventually be washed down to a busy street and, when it dries and gets blown by traffic and wind, will contribute to a PM problem.

Your tribe can improve and protect visibility by developing a regional haze plan. These regional haze plans, part of the EPA's Regional Haze Program, are discussed below. Because these plans are regional is scope, The EPA is encouraging states and tribes to work in regional groups to develop and implement their air quality plans. Five regional planning organizations (RPOs) covering the 48 contiguous states have been established to analyze the nature and causes of regional haze in each federal Class I area (see Appendix E, *A Guide to Regional Air Quality Planning Organizations*). These organizations will also work together to evaluate potential emission reduction strategies for meeting the goals of EPA's Regional Haze Program.[21] The RPOs will explore ideas for meeting regional haze program goals, perform technical analyses, and generally facilitate the exchange of information among all participating governments. The EPA is encouraging the RPO's to develop recommended strategies and agree on

acceptable methodologies for apportioning emission reduction responsibilities to state and tribal governments. States and tribes then implement these strategies through individual state or tribal regulations. The regional haze rule provides flexibility for states and tribes to develop a range of strategies addressing stationary, mobile, and area sources.

" ***Regional Planning Organizations***

A tribe that wishes to include a regional haze plan as part of their TIP, or that is interested in regional air quality issues in general, should participate in the regional planning organization for its area. The RPOs are primarily partnerships between state and tribal governments as air quality regulators in various geographic areas of the country, although these organizations want participation from all interested parties.

There are a number of benefits for tribes in participating in the RPOs: (1) participation helps build a tribe's capability to manage it's air quality; (2) participation helps build working relationships with other air quality professionals; (3) participation can help a tribe leverage monitoring, modelling and other technical resources; (4) in the future, the RPOs may address other long-range transport issues such as transport of ozone, fine particulate matter and toxic air pollutants; and (5) tribes can contribute to the RPOs by providing fresh ideas, monitoring visibility on their reservations, and filling gaps in emission regulations (even small quantities of emissions can affect regional haze).

When participating in a regional planning effort, your tribe may wish to advocate for the tribe's interests in air quality on its reservation. You may wish to articulate the tribe's positions on issues, and ensure that studies of the potential impacts of new regulations assess the air quality benefits and economic costs for your tribe, as well as other implications, such as effects on the quality of life on your tribe's reservation.

When identifying problems and developing solutions, it is important that every participant in the regional planning effort use consistent methods for counting sources, developing emissions inventories, and considering other

factors, such as environmental costs and benefits. With this information, the group should develop a plan for implementing the recommendations it develops.

" ***Regional Haze Plans***

Regional planning organizations are working together to develop regional haze plans. Regional haze plans include goals for improving visibility in national parks and wilderness areas and to develop long-term strategies for reducing emissions of air pollutants that cause visibility impairment. These goals should show reasonable progress goals based on improving visibility in the Class I affected area on the haziest day, as well as not allowing degradation of visibility on clear days. The long-term strategies should include enforceable measures allowing your tribe to meet the goal. It will be helpful to identify all manmade emissions contributing to impaired visibility in the Class I areas, and then identify the emission reduction measures your tribe will require. It may be the case that visibility will improve with the implementation of programs designed to meet the national ambient air quality standards for particulate matter.

An example of collaboration to address regional haze

One regional planning group that developed a regional haze strategy is the Grand Canyon Visibility Transport Commission (GCVTC). The GCVTC was established by Congress through the 1990 CAA Amendments to address visual air quality in the national parks and wilderness areas on the Colorado Plateau. The GCVTC was comprised of tribal, state, and federal representatives. Many of the GCVTC recommendations were incorporated into section 51.309 of the regional haze rule. Section 51.309 outlines an optional approach for the states and tribes in a nine-State western region to submit regional haze plans in 2003. Examples of some of the emission reduction strategies included in section 51.309 are:

» Regional sulfur dioxide emissions milestones for each year in the 2003-2018 period, and a backstop market trading program to be implemented if any milestone is exceeded.
» Mobile source emissions caps for areas contributing significantly to visibility impairment.

Grand Canyon National Park, Arizona

The Grand Canyon National Park has a long history of tribal culture, namely with the Pueblo tribes. About 2,000 ancestral Puebloan sites have been found within the park boundaries. The Grand Canyon also houses the homelands of the Cerbat, Navajo, and Apache tribes. (Photo courtesy of the American Park Network)

» Smoke management plans and annual fire emissions goals for prescribed fire programs
» Comprehensive emissions tracking strategies for clean air corridors to ensure that visibility does not degrade on the cleanest "least impaired" days.
» Programs to expand energy conservation and to provide incentives for early emissions reductions.

Once the GCVTC made its recommendations, the Western Regional Air Partnership (WRAP) was formed to implement GCVTC's recommendations. The WRAP's goals are to "promote and monitor the implementation of the recommendations from the GCVTC and, with the concurrence of its members, engage in other common regional air quality issues."

The members of WRAP include governors from western states, western tribal leaders, and representatives of the Departments of Agriculture and Interior, and EPA. Tribal representation includes the Pueblo of Acoma, the Campo Band of Kumeyaay Indians, the Cortina Indian Rancheria, the Hopi Tribe, the Hualapai Nation of the Grand Canyon, the Northern Cheyenne Tribe, the Salish and Kootenai Confederated Tribes, the Pueblo of San Felipe, the Nez Perce Tribe, and the Shoshone-Bannock Tribes of Fort Hall. Tribal air professionals are in many of the workgroups and committees. For more information on the WRAP, visit their web site at www.wrapair.org, or contact the National Tribal Environmental Council at (505) 242-2175.

Can EPA intervene in regional air quality problems?

Section 126 of the CAA requires certain new major sources and major modifications to provide written notice to all nearby states and eligible tribes that may be affected by their emissions before they can be built. Sources that must comply with this requirement are those either subject to a PSD program, or that may significantly contribute to levels of air pollution above the NAAQS in another region.

This section of the CAA also authorizes a downwind jurisdiction to petition EPA to impose emission limits directly on upwind sources if emissions from those sources are found to adversely affect that jurisdiction.[22] (A tribe

making an appeal must be eligible for treatment in the same manner as a state.) In 1997, eight northeastern states filed petitions requesting EPA to make a finding that nitrogen oxide (NO_X) emissions from certain major stationary sources significantly contribute to ozone nonattainment problems in the petitioning states. The eight petitioning states were Connecticut, Maine, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont. The petitions identified 30 states and the District of Columbia as containing sources that significantly contribute to regional transportation of ozone to the northeast.

In December 1999, after a technical review and public comment period, EPA granted the section 126 petitions from four northeast states (Connecticut, Massachusetts, New York, and Pennsylvania), finding that certain large electric utilities, industrial boilers, and turbines violated the CAA prohibition against significantly contributing to air pollution in other states. The petitions of the other four states were denied because by that time, all areas in those states met the 1-hour NAAQS for ozone. As a result of these findings, EPA is directly regulating the offending sources by applying the necessary emissions limits, and requiring each affected facility to participate in a federal NO_X "cap-and-trade" emissions trading program. A total of 392 facilities affected by these petitions will have to reduce annual emissions of NO_X by a total of nearly 510,000 tons.

Conclusion

There are several potential TIP elements that your tribe can adopt to help it reach its air quality goals: maintenance strategies, attainment strategies, source preconstruction permits, and regional haze plans. Once your tribe has decided which TIP elements, if any, to adopt, it can begin developing its TIP. Chapter 5 addresses two important aspects of TIP development: source compliance and enforcement of regulations.

Endnotes

1. "Reasonably severable" means that the TIP elements selected are not integrally related to the elements that are not included in the TIP and are consistent with applicable CAA and

regulatory requirements. 40 CFR Part 49.7(c)

2. The CAA Section dealing with maintenance plans is Section 110(a)(1). Maintenance strategies for areas previously in nonattainment are established in the CAA section 175A.

3. Sections 171 through 193 of the CAA establish the requirements for attainment plans.

4. The EPA's Guidelines on Air Quality Models can be found at 40 CFR Part 51, Appendix W and on-line at www.epa.gov/ttn/scram

5. Information on the data analysis requirements can be found in 40 CFR 50 and at the NAAQS policy and guidance memos site (www.epa.gov/ttn/oarpg/t1pgm.html).

6. Resources provided in this section for developing control measures include:
   - The Clean Air Technology Center (CATC) is a resource on emerging and existing air pollution prevention and control technologies, and provides public access to information on their use, effectiveness, and cost (www.epa.gov/ttn/catc/).
   - The RACT/BACT/LAER Clearinghouse (www.epa.gov/ttn/catc/).
   - *Improving Air Quality with Economic Incentive Programs*, EPA-452/R-01-001, January 2001, available at www.epa.gov/ttn/oarpg/t1main.html and through EPA's Air and Radiation Docket and Information Center (Docket Number A-97-27) by calling (202) 260-7548.

7. RACT is defined as the "devices, systems, process modifications, or other apparatus or techniques that are reasonably available taking into account: (1) The necessity of imposing such controls in order to attain and maintain a national ambient air quality standard; (2) The social, environmental, and economic impact of such controls; and (3) Alternative means of providing for attainment and maintenance of such standard." RACT connotes a device or technological method such as a scrubber or baghouse or reformulation of coatings to reduce VOC content whereas RACM connotes a pollution prevention or other practice or measure —although the difference is not absolute. In general, the existing sources in nonattainment areas must meet emissions limits achievable by RACT. For more information, see the RACT/BACT/LAER Clearinghouse (www.epa.gov/ttn/catc/), and *Procedures for Identifying Reasonably Available Control Technology for Stationary Sources of* PM_{10} (EPA 452/R-93-001), September 1992, available through the Clear Air Technology Center products page (www.epa.gov/ttn/catc/).

8. BACT refers to the "best available control technology," an emission limitation based on the maximum degree of emission reduction (considering energy, environmental, and economic impacts) achievable through application of production processes and available methods, systems, and techniques. Use of the BACT concept is allowable on a case by case basis for major new or modified emission sources in attainment areas (used under the Prevention of Significant Deterioration program) and applies to each pollutant

regulated by PSD. LAER refers to the "lowest achievable emission rate," which is the rate of emissions that reflects (a) the most stringent emission limitation in the implementation plan of any state for such source unless the owner or operator demonstrates such limitations are not achievable; or (b) the most stringent emissions limitation achieved in practice, whichever is more stringent. LAER is usually required in the New Source Review program.

9. Regulations for economic incentive programs are in 40 CFR 51.490 through 51.494. Guidance on developing an economic incentive program can be found in *Improving Air Quality with Economic Incentive Programs*, EPA-452/R-01-001, January 2001, available at www.epa.gov/ttn/oarpg/t1main.html and through EPA's Air and Radiation Docket and Information Center (Docket Number A-97-27) by calling (202) 260-7548.

10. The requirement for contingency measures is established in the CAA section 172(c)(9) and codified in 40 CFR 51.152.

11. For more information on NSR, see www.epa.gov/ttn/nsr/.

12. For attainment and unclassified areas, the definitions of major source and major modification are given in 40 CFR 51.166(b)(1) and (2), respectively. For nonattainment areas, the definition of major source is given in 40 CFR 51.165(a)(1)(iv). For serious PM nonattainment areas, the definition of a major source is in the CAA section 188. For moderate, serious, severe, and extreme ozone nonattainment areas, the definition of major source is in the CAA section 182(b), (c), (d), and (e), respectively. Definitions for major modifications in the NSR and PSD programs can be found in 40 CFR 51.165(a)(1)(v) and 51.166(b)(2)(i). The term "significant" is defined for these programs in 40 CFR 51.165(a)(1)(x) and 51.166(b)(23).

13. New major sources of hazardous air pollutants (HAPs, defined in the section 112 of the CAA) are not subject to the nonattainment or attainment major New Source Review programs discussed here.

14. A source's "potential to emit" is its emission estimate based on the maximum capacity of that source, taking into consideration enforceable permit conditions, such as the type of materials combusted, the type of materials processed, and the annual hours of operation.

15. "Offsets" are emissions reductions obtained from existing source(s) by a prospective major new stationary source, or a source planning major modifications, in order to offset the increase in pollutant emissions caused by the new or modified source (thereby creating no net increase in emissions). Offsets must always be greater than the amount of the new emissions, depending on the area's air quality designation. Offsets are generally secured from other sources in the vicinity of the new source or modification. However, in the case of modifications, offsets can also be obtained, with limitations, from within the source itself.

16. PSD increments for NO_2, PM, and SO_2 Class I, II, and III areas are specified in the CAA section 163 and in 40 CFR 51.166(c). Currently there are no increments for CO, O_3, or Pb.

17. For more information on area redesignation under the PSD program, see the CAA section 164 and Appendix H, *Procedures for Area Redesignation to Class I*.

18. If your tribe adopts federal PSD regulations by reference in an approved TIP, when reading 40 CFR 52.21, substitute the appropriate tribal authority for references to the EPA "Administrator."

19. Information on air quality models is available at EPA's Support Center for Regulatory Air Models (www.epa.gov/ttn/scram/).

20. Biogenic sources are non-manmade or natural emitters of air pollutants. For example, conifer trees emit terpenes which are volatile organic compounds, a precursor to ozone.

21. See the Visibility Program website of the Office of Air and Radiation for more information on regional haze (www.epa.gov/oar/vis/index.html).

22. For more information on petitioning EPA for a finding that upwind sources are contributing significantly to NAAQS violations on your reservation, see the CAA section 126 and www.epa.gov/ttn/rto/126/.