

## General Management Responsibilities

The core mandate of the Wilderness Act requires preserving wilderness character. Preserving wilderness character is implemented by recognizing and preserving five qualities of wilderness character as described in the Section 2(c) of the Wilderness Act, Definition of Wilderness. The qualities are: Untrammeled; Natural; Undeveloped; Outstanding Opportunities for Solitude and a Primitive and Unconfined type of Recreation; and, Other Features of Value. Degraded air quality can impact several of these qualities, and so preserving the qualities of wilderness character requires some level of protection of air quality in wilderness. Programs established under the Clean Air Act (CAA, as amended) are the regulatory tools through which Wilderness Act goals related to air quality can be achieved. Under the CAA, Wilderness areas are identified as Class I or II. The Federal Land Manager (FLM) has “an affirmative responsibility to protect the air quality related values” of Class I areas. Furthermore, FLMS are “concerned with the protection of resources in federally managed Class II areas because of other statutory mandates to protect these areas”

Carrying out the responsibilities of the Wilderness Act and Clean Air Act require identifying Air Quality Related Values within wilderness areas, monitoring air quality, reporting air pollution levels which exceed national standards, analyzing potential impacts to air quality from new development and responding to those proposals, assuring agency actions are in compliance with air quality standards, and improving visibility. This is achieved through a number of CAA programs including the attainment and maintenance of National Ambient Air Quality Standards (NAAQS), the Prevention of Significant Deterioration (PSD) provisions for areas currently exceeding the NAAQS, and a national directive to remedy existing and prevent future visibility impairment in Class I areas.

### Describing Air Quality Related Values (AQRV)

In order to evaluate the effects of air quality to wilderness, the Federal Land Manager (FLM) must have previously identified AQRV's for the wilderness. Recommended AQRVs relate to scenery, soils, vegetation, fish and wildlife, and water quality, which must be protected in order to preserve wilderness character. These must be identified through data collection and analysis overseen by appropriate scientists and utilizing recognized methods.

FLMs should identify if scenic values are a part of the Other Feature of Value quality of an area's wilderness character. For Class I wilderness areas, visibility is a mandatory AQRV and so scenic values of geologic and ecological features can generally be considered an Other Feature of Value for those wilderness areas. If features with scenic value are a part of the wilderness character, the viewshed and its characteristics (what is viewed, distance, and the public interest and sensitivity) should be clearly described so as to support management goals. Many air quality issues impact the natural quality of wilderness character, that is, wilderness ecological systems maintained substantially free from the effects of modern civilization. Deposition of pollutants on soils can change the pH, and impact sensitive plants. Likewise, some plants are more sensitive to ozone. Consequently, air pollution can impact plant composition, a degradation to the natural quality of wilderness character. Identify the plant communities that may be susceptible to air pollution. Water quality pH can be changed by polluted precipitation, and this can impact aquatic organisms, including fish. Document the aquatic life that may be susceptible to water quality changes caused by air pollution. Collaboration between air quality specialists, natural resource scientists, and the wilderness specialist are required to determine the

AQRV's relevant to wilderness preservation. This information should be included in a Wilderness Management Plan (or other appropriate document for the wilderness) as a description of the wilderness area's wilderness character and the basis of the AQRVs. Without documentation, there will be no way to express wilderness values to the permitting authority or a permit applicant/holder so that protective measures be taken.

It is vital for the wilderness manager to identify base-line air quality at the time of wilderness designation, and identify thresholds that would constitute significant deterioration, and any needs to improve air quality.

### **Federal Agency Conformance with the CAA**

Wilderness areas located in areas that are currently not in, or, in the past have not been in attainment with the National Ambient Air Quality Standards (NAAQS) may require mitigating management activity. Called nonattainment areas or maintenance areas, respectively, Federal agencies planning activities within these areas must demonstrate their activities conform to the State Implementation Plans (SIP) and will not impede a state's progress toward achieving the NAAQS. States must develop EPA-approved SIPs to reduce emissions, bring the area into attainment, and maintain attainment with the NAAQS. For a wilderness area, fire management is the most likely federal action which would be of consideration. There are stringent emission control requirements for air pollution sources located in nonattainment areas. In making management decisions within a designated nonattainment area, managers should discuss their plans with the appropriate state air pollution control agency as mitigation measures would likely be required.

The most common types of nonattainment are for ozone and particulate matter. FLMs can comment to EPA on establishing the boundaries of nonattainment areas. Established nonattainment areas are identified here:

- [Interactive map](#) of air quality monitors that displays nonattainment areas for ozone and particulate matter standards.
- [EPA Green Book](#) provides detailed information about area designations, classifications and nonattainment status.

### **Monitoring**

Protection of AQRV's in wilderness requires monitoring. Without monitoring data, there is no way to identify conditions requiring corrective action. To be defensible and useable in protecting the air quality in a wilderness, data collection must be overseen by scientists knowledgeable of air quality monitoring and utilize recognized methods of data collection at or near the wilderness. If the CAA is to achieve its goal, a long-term commitment to fund air quality monitoring must be made by wilderness managing agencies. A broad discussion of monitoring procedures is provided separately in the Air Quality Toolbox.

### **Implementing the CAA to Preserve Wilderness Character**

Generally, it is societal activity occurring outside of wilderness that impacts AQRVs inside of wilderness. Consequently, the wilderness manager will be engaging in management actions and decisions which occur at some distance from the wilderness, and for which another entity has jurisdiction. The FLM should be engaged in planning processes of the permitting authority (the EPA, or in most cases the State

after EPA has delegated authority to that State) to minimize the effects to air quality and AQRVs within wilderness. [These guidance documents](#) provide information for FLMs, air quality permitting authorities, and air quality permit applicants to guide analysis.

The CAA designates a FLM role in reviewing the permitting of new sources of air pollution. The proposed new source is required to submit a preconstruction permit application to the permitting authority. When a Class I area may be affected by a new source, the permitting authority must consult with the FLM agency. The applicant and permitting authority must provide an AQRV impact analyses to the FLM. In order to evaluate the impact on the Class I area, the federal land manager must have previously identified AQRV's for the wilderness. If the FLM determines that the source would have an adverse impact on AQRVs in a Class I area, the permitting authority must notify the public of this finding and describe how they intend to address it.

When a Class II wilderness may be affected, the permitting authority is not required to consult with the FLMs but may choose to do so at the FLM's request. The FLM may recommend that an AQRV analysis be completed for a Class II wilderness under the "additional impacts analysis" requirements of the CAA. The provisions of this section are not as stringent as those for Class I areas.

The National Environmental Policy Act (NEPA) requires federal agencies to assess the impact of federal proposals on the quality of the human environment. The NEPA process identifies alternatives and impacts and documents the effects of proposals to wilderness character.

The wilderness manager must actively engage with the permitting authority to preserve wilderness character. Measures needed to remedy existing and prevent future air pollutant impacts on Class I and Class II wilderness areas can be pursued through FLM participation in the development of federal, state, and local air pollution control plans and regulations. The Clean Air Act provides many opportunities for agencies to participate in the development of pollution control programs to preserve, protect, and enhance the air quality in all wilderness areas. These opportunities include (but are not limited to):

#### *Regional Haze Planning*

The CAA establishes a national goal of preventing any future and remedying any existing human caused visibility impairment in Class I areas. The FLMs can support that goal by engaging in regional haze management and planning through the state's SIP to advocate for wilderness goals. Because airsheds often contain a mix of Class I and II areas, advancements made to protect Class I areas will also benefit Class II wilderness areas. Consequently, FLMs of wilderness areas of both classes should coordinate input to these processes.

#### *PSD Permitting*

FLMs should review PSD permit applications where major new sources of air pollution may result (more than 100 tons of a regulated pollutant per year). The CAA created a process to prevent the "significant deterioration" of air quality where it exceeds the NAAQS. Thresholds have been established within the Code of Federal Regulations (40 CFR 51.166 (56)) for the maximum allowable deterioration of air quality for both Class I and Class II areas.

In addition to not exceeding the maximum allowable amounts of air quality degradation, when reviewing the PSD application, the FLM must address three questions:

1. What are the AQRVs within the wilderness that need protection?
2. What are the thresholds for these values?
3. Will the proposed facility cause or contribute to pollutant concentrations or atmospheric deposition within the wilderness that will cause the thresholds to be exceeded?

Answering these questions includes modeling that combines proposed emissions, background levels of pollutants and the sensitivity of visibility and resources to the pollutants. See [FLAG guidance](#) for review and analysis procedures.

If it is determined that any new source might cause or contribute to an adverse impact on AQRVs in a Class I area, FLMs recommends the permitting authority deny the permit or require modifications to eliminate adverse Class I impacts.

In addition, FLMs may request an analysis for Class II wilderness areas under the “additional impacts analysis” provisions found in 40 CFR 51.166 (o) and 40 CFR 52.21 (o). New permit applications may not be denied for diminishing air quality in Class II areas, but the new source may be required to implement Best Available Control Technology (BACT) air pollution controls on the source to mitigate significant deterioration.

#### *State Implementation Plans (SIP)*

SIPs are required for nonattainment areas, but the EPA may also delegate air quality management to states through approved SIPs for areas in attainment with the NAAQS. When EPA approves a state’s SIP, the federal government delegates the authority for implementing the CAA provisions addressed in the SIP to the state. FLMs can comment on the boundaries of nonattainment areas, and the FLMs should be involved in comment during the development of the SIP in order to assure that wilderness AQRVs are appropriately protected.

#### *Best Available Control Technology (BACT)*

Greenhouse gas emissions impact wilderness, but their impact is of a global nature which limits the practicality of comment through the wilderness program. However, there is opportunity for the FLM to comment regarding Class I areas through the BACT process. This is a five-step analytical process which ranks the methods to reduce emissions and allows for the consideration of economic, energy, or environmental considerations.

#### *Other Air Regulatory Planning*

FLMs can participate in the development of federal, state, and local air pollution control plans and regulations such as nonattainment area designations and planning processes or state rules to reduce emissions from oil and gas operations.

CAA regulatory actions (i.e., National Ambient Air Quality Standards, control technology requirements, state implementation measures, and individual source permits) can significantly affect wilderness area air quality protection. All of the CAA’s regulatory actions involve notice to the public of proposed actions and opportunity for comment. Many provisions require consultation with affected FLMs, and certain provisions elevate the influence of the FLM’s opinion. Scientific information provided by the FLMs on air pollutant emissions, transport and impacts in federal areas can inform and influence proposed regulatory actions. FLMs must actively engage in the regulatory process to ensure that the EPA and applicable state agencies consider regulatory decisions with respect to wilderness areas.