

**An Evaluation of  
Federal Land Manager  
Activities that May Impact  
Air Quality Related Values  
in Class I Areas in Colorado**

**Prepared for:**

**Colorado Air Quality Control  
Commission**

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## **I. EXECUTIVE SUMMARY**

In 1994 the Colorado General Assembly and Governor Romer passed and signed into law a requirement that the Colorado Air Pollution Control Division (Division) periodically evaluate the activities of the federal government. The purpose of the evaluation is to better understand the extent to which these activities may directly adversely impact visibility and air quality related values (e.g., flora, fauna, cultural resources, geologic features, terrestrial and aquatic ecosystems) within Class I national parks and wilderness areas in Colorado as well as what measures are being taken to mitigate any such impacts.

### **A. Approach**

The Division's approach to the evaluation was to concentrate on activities of federal land managers -- the USDA Forest Service, USDI National Park Service, USDI Bureau of Land Management and USDI Fish and Wildlife Service. The Division assembled a mailing list and sent a cover letter and questionnaire to over 250 people representing various groups that might have knowledge of federal land manager (FLM) activities. The questionnaires asked them if they were aware of FLM activities that created air pollution and, if so, did they believe these activities created direct adverse impacts to visibility or other air quality related values (AQRVs) in Class I areas. If a respondent indicated that impacts were occurring, the Division followed-up with the respondent and the FLM to attempt to learn more and resolve the issue.

### **B. Response**

The response rate of returned questionnaires was 33% (86 of 263 sent). The Division believes that the responses provide an adequate indicator of the level and types of problems potentially caused by FLM activities. Of these returned questionnaires, 24 (9% of the total sent and 28% of those that were returned) indicate that air pollution generated by FLM activities may have AQRV impacts in Class I areas. Eight of the 24 indicated that the air pollution generated did, in their opinion, create "direct, adverse impacts on AQRVs." These 8 respondents (3% of the total questionnaires sent, 9% of those returned, and 33% of those that indicated FLMs generated air pollution) and the issues they raised received the most follow-up and attention during this evaluation.

### **C. There Are Direct, Adverse Impacts from Prescribed Fire**

There are direct, adverse impacts to visibility occurring in Class I areas as a result of prescribed fire by federal land managers. The visibility impacts are of a temporary nature and occur infrequently. It is the Division's judgment that the federal land managers are taking all reasonable steps to mitigate the impacts from prescribed fire.

The Division believes that prescribed fire is a necessary activity and not performing it would be irresponsible. The question is, how well do the land managers plan and conduct the burns to limit and minimize smoke impacts to Class I lands? Based on the information in the questionnaires regarding smoke and prescribed fire, the relatively small amount of burning that occurs in this State, and the few complaints about smoke received by the Division each year the Division believes these indicate there is not a significant problem with prescribed fire or FLM practices at the current time.

In addition, the current regulatory framework for prescribed fire that requires the land managers to attain permits from the State, the additional expectations detailed in the Smoke Management Memorandum of Understanding (the MOU is included in Appendix C), and the land managers own policies for how these burns are planned and conducted together seem to provide sufficient policies, regulations, and programs to manage and monitor prescribed fire activity. It is not the Division's sense that anything more is obviously needed at this time. During the last revisions to the MOU the Division felt that its outstanding issues were addressed.

The Division recognizes that some burns will put smoke into sensitive areas. Conducting the burns is a complex human activity that also involves predicting nature (e.g., how fuels will respond, what the meteorology will be and how it will disperse smoke). The Division will continue to monitor how well land managers plan and perform the burns and follow-up on problem burns to discern whether additional regulation is required.

#### **D. There Are Activities of FLMs That Indirectly May Impact AQRVs**

Other activities of federal land managers may indirectly create air pollution near some of Colorado's Class I areas, such as the permitting of ski areas on federal lands. Based on the framework within which this evaluation is to be conducted, the Division concludes that the permitting of ski areas and their expansions do not constitute FLM activities that create direct adverse impacts to AQRVs in Colorado's Class I areas. The Division recognizes, however, that growth and its impacts in mountain towns near ski areas in Colorado have caused both air pollution and other problems.

It is the Division's experience that over the years the USDA Forest Service (USFS) has continued to improve the scope and quality of the air quality analyses in the National Environmental Protection Act (NEPA) required Environmental Impact Statements (EIS) for new ski areas or their expansion. Direct, indirect and off-site impacts of proposed developments have been more thoughtfully assessed in more recent EIS'. It is also the Division's belief that the scoping and whole EIS process creates a false expectation regarding the USFS' legal authority and jurisdiction. By asking the public what it is concerned about and conducting analyses to disclose what the likely impacts of development will be, the USFS is often expected to address the problems -- to do something. This is a false expectation. Unless the ski area is in or near a non-attainment area for a National Ambient Air Quality Standard with a plan for an air pollution clean-up, the USFS has little legal ability to require a developer to do much of anything off-site (that is, off federal property). If a non-attainment area is nearby, the Division's recent experience is that the USFS was willing to exercise its legal obligations under the Clean Air Act section 176(c) to ensure that the permitted development/expansion conforms to the State Implementation Plan (SIP).

Ski areas also use fire to burn piles of collected debris from trail maintenance. This evaluation process has highlighted that there is confusion about who has authority over the permitting of such burns and that they have caused local concerns in the past. The Division will clarify with local counties that the State (or the county) has authority to permit the burn. The Division will also encourage the USDA Forest Service to include in each ski area's annual operating

plan a requirement to get a permit from the appropriate entity, State or county, to notify local city and county authorities when the burn will take place, and to coordinate these activities with local governmental agencies.

#### **E. Overall Conclusion**

The overall conclusion from the evaluation is that, in this State, the federal land managers are not directly generating a lot of air pollution problems in or near the areas they manage. Prescribed fire in the form of smoke does impact visibility in Class I areas, however, it appears that the federal land managers are taking all reasonable steps to minimize these impacts. Another activity, the granting of permits for ski areas, indirectly generates air pollution from growth and traffic. It is the Division's experience that the USDA Forest Service is also taking all reasonable steps to minimize these indirect impacts, given the agency's legal authority.

## II. INTRODUCTION

Senate Bill 94-217 passed the 1994 Colorado General Assembly and was signed into law by Governor Romer in the Spring of 1994. The bill contains a number of sections and this report is intended to complete the evaluation called for in § 25-7-212, quoted in its entirety below:

25-7-212. Actions of federal government affecting visibility - evaluation report.

(1) As a part of the State's ongoing development and implementation of a long-term strategy in connection with visibility and air quality related values within Class I areas, the Division shall evaluate the extent to which the activities of the federal government are directly adversely impacting visibility and air quality related values within a Class I area and make a determination whether such entities have taken or are taking all reasonable steps necessary to remedy that impact. At any time, the Division may make, and a federal land manager shall respond to, reasonable requests for information necessary for the Division to perform such regulation.

(2) The joint public hearing required under section 25-7-105(4)(a) and the report to the Governor and the General Assembly required under section 25-7-105(6) shall report on the results of the evaluation required under subsection (1) of this section.

The term "air quality related values" is typically defined as any feature or property of a Class I area that may be affected in some way by air pollution. General categories of values include: visibility, odor, flora, fauna, soils, water, geologic features and cultural/archeological resources. "Class I areas" are large national parks and wilderness areas that were in existence when the 1977 Clean Air Act was adopted. These areas are provided the highest level of protection from air quality impacts. All other areas are designated Class II, including other Congressionally designated wilderness areas that came into existence after August 7, 1977. There are redesignation procedures that a state may undertake to change Class II areas to Class I. At present there are 12 Class I areas in Colorado:

### National Parks

Rocky Mountain  
Mesa Verde

### National Wilderness Areas

Black Canyon of the Gunnison  
Eagle's Nest  
Flat Tops  
Great Sand Dunes  
La Garita  
Maroon Bells/Snowmass

Mount Zirkel  
Rawah  
Weminuche  
West Elk

### **III. EVALUATION APPROACH**

#### **A. General Approach**

The Colorado Department of Public Health and Environment/Air Pollution Control Division (Division) made some choices about how to carry-out this evaluation. The Division's approach is to:

1) Conduct such an evaluation every three years. This is the same schedule as the Division's long-term strategy review for visibility protection (Colorado Air Quality Control Commission Regulation #3 § XI.F.1.c). Because "long term strategy" is mentioned in the new law, this schedule appears to be consistent with what is intended. This schedule will be revisited by the Division after two cycles of evaluations are completed to determine if a more frequent or less frequent evaluation is the most effective and efficient.

2) In order to make best use of available resources and to focus on the part of the "federal government" most often mentioned during debate and construction of this section of law, concentrate on the activities of federal land managers (USDI National Park Service, USDI Bureau of Land Management, USDI Fish and Wildlife Service, and the USDA Forest Service) as a subset of "federal government."

3) Conduct a qualitative assessment of federal land manager (FLM) activities around and in each Class I area by contacting people living and working around each of these areas.

4) Develop a contact list of county commissioners, local federal land managers, local health department officials, local environmental groups, and others in the immediate vicinity of a given Class I area and ask that they fill out a simple questionnaire about federal land manager activities.

5) Compile the information from the questionnaires.

6) Follow-up on any possible adverse impacts to air quality related values from FLM activities. On a case-by-case basis the Division will work with the FLM and local people to better understand the situation and remedy it to the extent feasible. This may be an ongoing process.

7) After the evaluation has been conducted, review the approach and make recommendations for improvements in the study process for the next round of evaluation.

#### **B. Specific Approach**

One purpose of the evaluation mandated by S.B. 94-217 is to assess the impact of Federal Land Manager (FLM) activities, as they relate to AQRV impacts, in Class I areas in Colorado. To fulfill the intention of the legislation, it was necessary to develop an assessment tool that would target air pollution and AQRV concerns yet be easy to distribute and evaluate. The Division created



a questionnaire designed to elicit information about AQRV impacts and to provide information about other people or organizations that should be contacted as a part of the evaluation (see Appendix B). A cover letter with the questionnaire introduced the respondents to the new law, explained the Division's approach, and asked for their assistance (see Appendix A).

Three main groups were believed to have the most information about FLM activities in national parks and wilderness areas: FLMs themselves, communities and entities adjacent to Class I areas, and state and regional environmental groups. In addition, it was expected that these groups would in turn make numerous local referrals which would be developed into new contacts.

FLM recipients included staff from the USDI Bureau of Land Management, the USDI National Park Service, and the USDA Forest Service. Questionnaires were sent to area supervisors initially although subsequent referrals often added the names of specific staff in local offices to the mailing lists.

Communities near Class I areas were contacted through county commissioners, municipal/county planning commissions, and local health departments. The Ute Mountain Tribe and the Southern Ute Tribe were also contacted regarding FLM impacts on Class I areas in the southwestern part of the State.

A list of environmental groups was initially compiled by contacting well known organizations such as the Sierra Club and requesting referrals to local environmental groups. Subsequently two environmental group mailing lists were developed for each Class I area; one for groups with regional or national interests and for groups with specific local interests.

In addition to the three main recipient groups, many referrals were made which broadened the distribution of the questionnaire and provided a wide diversity of local interests. Referrals included outfitters, newspaper reporters, mountain rescue teams, ski area managers, state and county officials, industry associations, as well as private citizens.

The 12 Class I areas in the state were divided into three groups based on proximity:

- Group 1      Great Sand Dunes National Monument  
                 Mesa Verde National Park  
                 La Garita Wilderness  
                 Weminuche Wilderness
  
- Group 2      Black Canyon of the Gunnison National Monument  
                 West Elk Wilderness  
                 Maroon Bells/Snowmass Wilderness  
                 Eagle's Nest Wilderness
  
- Group 3      Flat Tops Wilderness

Rocky Mountain National Park  
Rawah Wilderness  
Mt. Zirkel Wilderness

Group 1 was designated to be the pilot group for the project. The Division was prepared to redesign the questionnaire and/or the distribution methodology based on the comments and response rate from this group. Fortunately, this step proved unnecessary. The comments from this group proved uniformly useful and the response rate was in the expected range.

The number of initial questionnaires sent in each initial mailing varied with the number of city, county, state and federal entities involved in maintaining the Class I area and the jurisdictions bordering or very near it. In addition, some individuals received questionnaires for several Class I areas when appropriate (i.e., county commissioners, environmental groups, industry groups).

If questionnaires were not returned within a reasonable length of time, the Division made efforts to follow-up by telephone or mail.

## IV. RESULTS

### A. Response Rate

Response rates are broken down by groupings of Class I areas below:

*Group 1* - Great Sand Dunes National Monument, Mesa Verde National Park, La Garita Wilderness, and Weminuche Wilderness.

Total Initial Mailing:	75
Total Additional Referrals:	23
Total Questionnaires Sent:	98
Total Returned:	43 (44%)

*Group 2* - Black Canyon of the Gunnison National Monument, West Elk Wilderness, Maroon Bells/Snowmass Wilderness, and Eagle's Nest Wilderness.

Total Initial Mailing:	58
Total Additional Referrals:	31
Total Questionnaires Sent:	89
Total Returned:	16 (18%)

*Group 3* - Flat Tops Wilderness, Rocky Mountain National Park, Rawah Wilderness, and Mt. Zirkel Wilderness.

Total Initial Mailing:	56
Total Additional Referrals:	20
Total Questionnaires Sent:	76
Total Returned:	27 (35%)

In all, 263 questionnaires were sent out of which 86 (33%) were returned. Of these returned questionnaires, 24 (9% of the total sent and 28% of those that were returned) indicate that air pollution generated by FLM activities may have AQRV impacts in Class I areas.

Of the 24 there was a mix of responses to the question, "Do you believe these activities described may have created *direct, adverse impacts* to visibility or other AQRVs...?" The Division decided to conduct follow-up with 8 of the respondents and the issues they raised. However, the choice of 8 was not clear cut. A break-down of responses to the question and the Division's choices regarding follow-up are below (see Table 1 for more detail):

- 7 of the 24 indicated "no" and the Division conducted no follow-up with these respondents;

- 1 indicated "no or for a short duration" and the Division conducted no follow-up since the issue was generic (prescribed fire) and was covered by other respondents that the Division did follow-up with;

- 1 indicated "maybe but temporary" and the Division conducted no follow-up since the issue was generic and covered by other respondents;

- 1 indicated "maybe, unknown" and the Division did conduct a follow-up because the issue raised had not been raised by other respondents (respondent #18);

- 2 indicated "maybe" and the Division did not conduct a follow-up because the issues were covered by other respondents (prescribed fire);

- 1 indicated "temporary" and the Division did not conduct a follow-up because the issue was prescribed fire;

- 2 indicated "unknown" and the Division did not conduct a follow-up because the issues raised were similar to other respondents who asserted there were direct, adverse impacts;

- 1 had no response to the question and the Division did not follow-up;

- 1 indicated "yes if it ever happens" having to do with prescribed natural fire in Rocky Mountain National Park and since no impact has actually occurred the Division did not follow-up directly but is involved in the permitting of prescribed natural fire areas;

- 7 indicated "yes" to at least one issue they raised and the Division followed-up (respondents #1, 2, 7, 12, 17, 21, 22).

The 8 respondents (3% of the total questionnaires sent, 9% of those returned, and 33% of those that indicated FLMs generated air pollution) and the issues they raised received the most follow-up and attention during this evaluation. The remainder of the 24 questionnaires are summarized in Appendix F.

The response rate (33%) is acceptable and in the range of what was expected (25-40%). In a survey such as this, generally people who have something to say will take the time and fill it out.

Several people who did not return questionnaires indicated anecdotally to Division staff that they did not believe there were problems or that the problems were not directly due to FLM activities (e.g., "growth"). The Division believes that the responses provide an adequate indicator of the level and types of problems potentially caused by FLM activities.

## **B. Summary of Problems Identified**

On the next page begins Table 1. It is a summary of the 24 respondents who indicated that FLM activities created air pollution that may have caused direct, adverse impacts to AQRVs in Class I areas.

Some respondents indicated that while air pollution was created by an activity, this did not result in "direct, adverse impacts to visibility or other AQRVs" in various Class I areas in Colorado (e.g., "Yes" to question #1 and "No" to question #2). Other respondents were unsure and answered "Maybe" or "Unknown" in response to question #2.

If the respondent indicated that they believed impacts were occurring, the Division attempted to follow-up with the respondent and the Federal Land Manager to determine more about the particular activity, impact, how FLMs could change what they are doing, and any suggestions regarding how the Division could help remedy the situation.

The follow-up took the form of attempted telephone contact with the respondent in order to learn more about their specific concerns. If the Division was unable to reach the respondent, attempts were made to contact them by mail. The Division was unable to contact one of the respondents and a second indicated they had no additional knowledge of the issue.

Nearly all of the concerns raised by the 8 respondents related directly or indirectly to activities of the USDA Forest Service. The Division further focused the evaluation on the USFS, and did not do any additional follow-up with either the National Park Service or Bureau of Land Management.

Based on the written and oral concerns of the respondents, the Division wrote a letter to the USFS reviewing the concerns of each respondents and asking questions about the issues they raised (Division letter is in Appendix D). The USFS responded to the Division providing information about the Forest Service's policies, the laws under which it operates and specific responses to each concern raised (Forest Service letter is in Appendix E). As each of these letters were prepared, there was a good deal of informal contact between the two agencies as well. The USFS responded to each Division request (either in writing or more informally) in a reasonable manner. Based on the information in the questionnaires, the more informal follow-up with selected respondents, and interaction with the USFS the Division believes it was able to provide a reliable picture of current concerns and agency practices that are sufficient for it to complete this evaluation as required by Colorado law.

**Table 1  
Summary of Respondents' Concerns Who Indicated There May be a Problem**

Respon- dent	Concern	Direct/ Adverse Impact?	APCD follow-up with respondent?	APCD follow-up with USFS?
#1	Prescribed burning conducted by the USFS & BLM in the spring & fall affects visibility in views in & around the Flat Tops & Eagle's Nest Wilderness'	Yes	Yes	Yes
	USFS grants Special Use Permits for the Vail, Beaver Creek, and Arrowhead ski areas that may have indirect effects on visibility in & around the Eagle's Nest Wilderness	Maybe	"	"
#2	USFS has approved a permit for the Lake Catamount Ski Area and is reviewing a request for expansion of the Steamboat Springs Ski resort. The indirect growth in emissions due to the new ski area and ski area expansion in the Yampa Valley might affect visibility in the Mt. Zirkel Wilderness where the USFS has already certified to the State that there are visibility and aquatic ecosystem problems	Yes, maybe	Yes	Yes
#3	Prescribed burning by federal agencies to reintroduce fire into the ecosystem or as a tool to improve habitat may affect visibility	No or for short duration	No	No
#4	Prescribed burning by USFS & private landowners may affect visibility in Mt. Zirkel & the Flat Tops Wilderness' and Rocky Mtn Natl Park	No	No	No
#5	Prescribed burning by USFS may affect visibility in Maroon Bells/Snowmass and West Elk Wilderness'	Maybe but temporary	No	No
#6	Prescribed burning by USFS may affect visibility & AQRVs in Rawah & Eagle's Nest Wilderness' and Rocky Mtn Natl Park	No	No	No
	Unpaved roads may create fugitive dust affecting visibility in Rawah Wilderness	"	"	"
	General recreational use near & in Rawah & Eagle's Nest Wilderness (e.g., camp fires, automobile use) may affect visibility & AQRVs	"	"	"
	Firewood permits by the USFS may affect visibility & AQRVs in the Rawah & Eagle's Nest Wilderness & Rocky Mtn Natl Park	"	"	"

Respondent	Concern	Direct/ Adverse Impact?	APCD follow-up with respondent?	APCD follow-up with USFS?
#7	Slash burning associated with ski area expansions at Copper Mountain, Keystone and Breckenridge in recent years may have affected visibility in the Eagle's Nest Wilderness	Yes	Yes	Yes
	Slash burning by USFS & truck traffic on haul roads in Peak 7 area and Swan River Valley in recent years may have affected visibility in the Eagle's Nest Wilderness	"	"	"
#8	USFS has prescribed natural fire plans for the Flat Tops Wilderness and an actual fire may someday create visibility problems in the Flat Tops Wilderness	Yes, if it ever happened	No	No
#9	Prescribed burns by USFS may affect visibility in the Maroon Bells/Snowmass Wilderness	No	No	No
	Expansion of Snowmass ski area may create indirect emission increases that could affect visibility & AQRVs in the Maroon Bells/Snowmass Wilderness	"	"	"
#10	Prescribed burning to remove slash & debris may affect visibility in the Rawah Wilderness & Rocky Mtn Natl Park	No	No	No
#11	Prescribed burning in Rocky Mtn National Park by the NPS may create visibility problems in the Park	No	No	No
#12	BLM permits leasing of federal lands for coal mining to feed power plants with inadequate pollution controls which may affect AQRVs in the Weminuche Wilderness	No response	No	NA
	USFS permits timber sales to Louisiana-Pacific Waferboard plant in Olathe with inadequate pollution controls which may affect AQRVs	No response	Yes	Yes
	USFS permits the Durango-Silverton Narrow Gauge Railroad which operates coal locomotives and runs between two units of the Weminuche Wilderness & creates fires and visibility & other AQRV problems	Yes	"	"
#13	Heavy visitor traffic to and in Mesa Verde Natl Park creates pollution within the Park boundaries. No individual or agency is directly responsible -- it is a major tourist attraction.	Unknown	No	No
#14	Prescribed burns by the BLM in the Disappointment Valley and Spud Patch areas may cause visibility problems in the Weminuche Wilderness or Mesa Verde National Park	Maybe	No	No

Respondent	Concern	Direct/ Adverse Impact?	APCD follow-up with respondent?	APCD follow-up with USFS?
#15	Federal agencies conducting open burning of forest waste may cause visibility problems in the Weminuche Wilderness or Mesa Verde Natl Park	Unknown	No	No
#16	Prescribed fires conducted in Rocky Mountain National Park by the NPS will cause visibility problems	Temporary	No	No
#17	USFS has approved and may approve in the future ski area expansions which indirectly cause increases in traffic in the Aspen area near the Maroon Bells/Snowmass Wilderness	Yes	Yes	Yes
#18	Marble quarry on Conundrum Creek (currently inactive) and alabaster underground mine on Avalanche Creek within the Maroon Bells/Snowmass Wilderness may both cause AQRV impacts	Maybe, unknown	No, respondent declined	Yes
#19	Use of prescribed fire by USFS outside West Elk Wilderness may cause visibility problems within the Wilderness	No	No	No
#20	Prescribed burning on USFS and BLM lands may cause temporary visibility problems in the Flat Tops or Eagle's Nest Wilderness	No	No	No
#21	Ski area expansions continue to contribute to declining air quality due to growth in mountain communities and increased traffic, heating, lift operations, etcetera. This potentially affects AQRVs in the Maroon Bells/Snowmass and West Elk Wilderness'.	Yes	Yes	Yes
#22	USFS needs to encourage Crested Butte Ski Area to participate in funding local mass transit systems. USFS did not require this in the ski areas Special Use Permit. Also diesel fuel buses idle all night and the USFS needs to amend the Special Use Permit. This air pollution from ski area growth and buses affects AQRVs in West Elk and Maroon Bells/Snowmass Wilderness'.	Yes	Yes	Yes
#23	Prescribed burns near the West Elk Wilderness may have affected visibility.	Maybe	No	No
#24	Prescribed burns near and within Rocky Mountain Natl Park will create visibility impairment in the Park.	No response	No	No



## C. General Discussion About Prescribed Fire and Ski Area Expansions

The vast majority of the 24 responses that indicate there is air pollution from FLM activities that have potential to impact AQRVs in Class I areas focus on two main concerns:

- prescribed burning conducted by federal land management agencies; and
- the granting of special use permits by the USDA Forest Service, especially for ski areas and their expansion.

Below is a discussion of prescribed burning, how it is regulated by the Division, and a general evaluation of federal land manager activities followed by a similar discussion of ski areas, their expansion, and the Division's role in the special use permitting process.

**1. Prescribed burning.** Generally speaking, there are five types of fire that occur in Colorado: 1) planned & unplanned ignition (e.g., lightning) prescribed fire by federal and state land management agencies; 2) general open burning by others; 3) agricultural related burning; 4) human caused wildfire; and 5) naturally caused wildfire. By law, the Division is required to regulate through a permitting program prescribed fire and open burning (#1 and #2 above). Below is a discussion of the Division's program and its agreements with land managers:

a. Prescribed Fire is Regulated by the Division. The use of fire for open burning is regulated by Colorado Air Quality Control Commission Regulation #1 §II.C.1. Anyone planning on conducting an open burn, unless the burn is related to agricultural activities, must apply for and attain a burning permit from the Colorado Air Pollution Control Division (or its designee in some counties) before they can ignite their planned burn. In addition, federal and state agencies using prescribed fire in Colorado and the Division have jointly developed understandings of how to implement the regulations. These are embodied in the Colorado Smoke Management Plan and Memorandum of Understanding (the MOU is in Appendix C).

b. The MOU. The MOU recognizes the importance of the natural role of fire and the use of prescribed burning to reduce wildfire risk, remove logging residue, improve wildlife habitat, and maintain natural ecosystems. At the same time, the signatories are required to minimize the generation and/or impact of the smoke and to find alternatives to using fire where appropriate. The MOU specifically requires a case-by-case identification and implementation of appropriate smoke management techniques and signatories commit to explicitly consider the potential visibility impacts of smoke in smoke sensitive areas (e.g., views in national parks and wilderness areas) and minimizing the impacts through application of smoke management techniques.

c. Permit Approvals. The Division's permit form (part of Appendix C) requires information from the agency about the location, size and type of fire. In addition, a modeling run using the Simple Approach Smoke Estimation Model (SASEM) must demonstrate to the Division's satisfaction that the planned burn will not violate National Ambient Air Quality Standards nor cause

unacceptable visibility impairment in national parks, wilderness and areas where there are other scenic and important views.

d. Views & Visibility Protected. The Division has developed a list of 102 views (part of Appendix C) through interaction with environmental groups, mountain climbing associations, federal land managers, and others. If a planned burn is near one or more of the views the plan must demonstrate it will not unacceptably impact the view. Views may be within Class I areas, between them, looking out of them, looking into them, or entirely over Class II lands.

e. Follow-up on Complaints. The Division follows-up with the appropriate federal land manager regarding any complaints received about a prescribed fire. On the average, the Division typically receives a complaint(s) regarding one fire per year. Revisions to the MOU initiated by the Division have occurred largely in response to problematic fires.

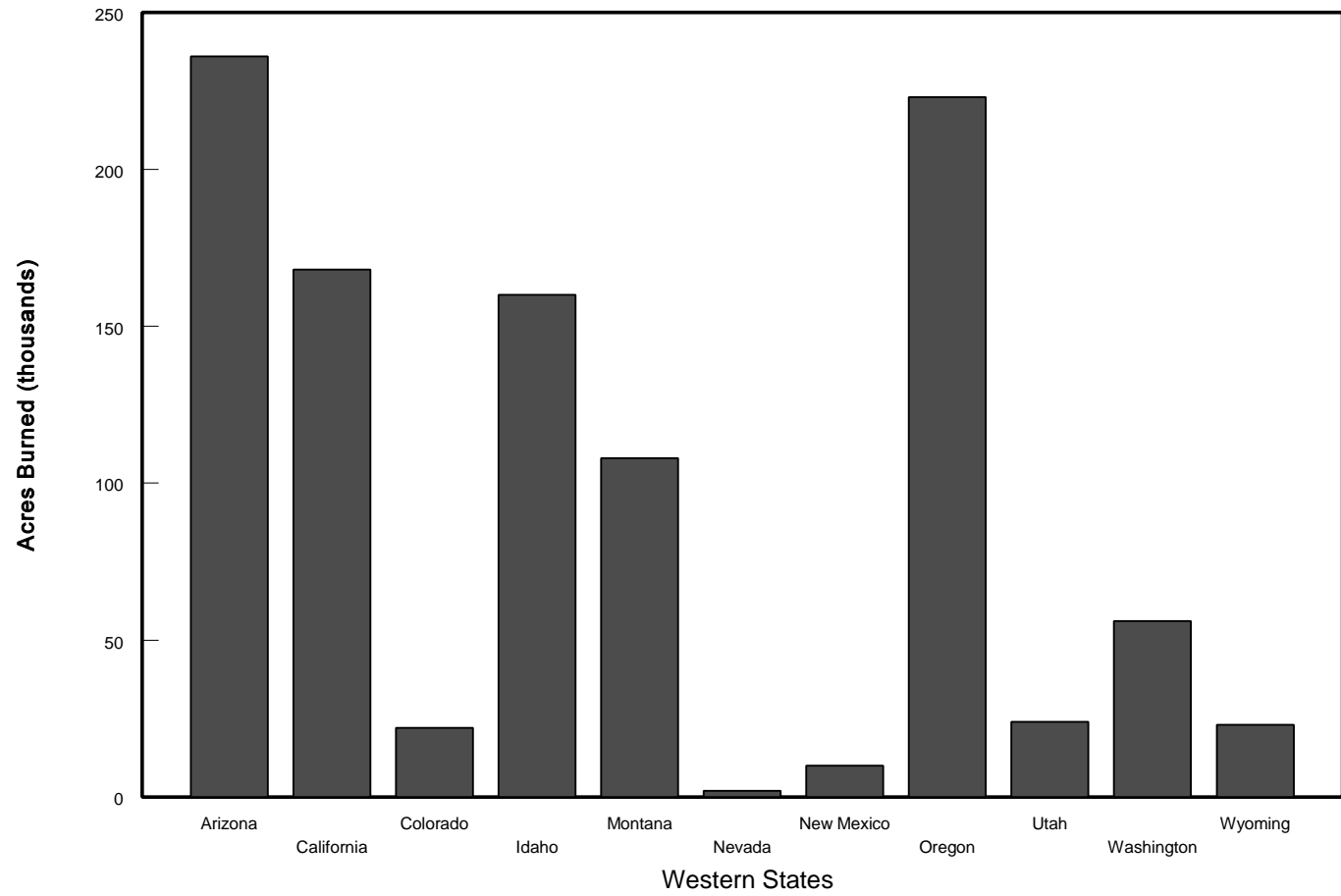
f. Annual Reporting. Each signatory is required to report on actual fire activity and the Division prepares a summary report each year on the level of fire activity and estimation of emissions. These are available upon request to the Division.

g. The Amount of Prescribed Burning in Colorado vs. Rest of West. Figure 1 shows the relative amounts of prescribed fire acres burned in the western states during 1990. Among the 11 western states, Colorado is ranked 9th in number of acres burned. States with relatively more acres being burned each year through the use of prescribed fire, generally have larger regulatory programs.

In summary, it is the Division's belief that Colorado's prescribed fire program represents a reasonable fit between the level of prescribed fire in the State of Colorado and the size of the regulatory program. In addition, the Division believes that the increased use of prescribed fire in Colorado by land managers to more closely mimic the natural return cycle of fire is necessary. To continue the outdated policy of previous decades of total suppression of all fire is irresponsible and will only lead to large-scale wildfire with potentially catastrophic effects to the health, welfare and environment of Colorado. It is inevitable that smoke will be generated by these prescribed fires. The Division and land managers have strived to lay out a set of rules and agreements under which these fires may go forward in order to minimize their impact. The Division will continue its regulation and oversight of FLM burns to ensure the rules are followed and to tighten up regulation when problems appear. Currently the Division is satisfied that there are no outstanding problems with FLM burning practices that require a regulatory response from the Division.

**2. Ski Areas and Ski Area Expansions.** The Division has little direct authority or responsibility over the planning and building of ski areas and their expansions. Nevertheless, the Division is usually involved in the air quality analysis of the potential impacts of these developments. Below is an overview of the concerns about and legal framework within which the Division and USFS are involved in these activities.

Number of Acres of Prescribed Forest & Rangeland Burns  
(1990)



: Prescribed Fire Acres Burned in the West (1990)

a. Indirect Effects. All or a large majority of the trails, runs, and lifts at most ski areas are on federal lands administered by the USFS. The Forest Service grants special use permits for the building/expansion of ski areas. The concern is that while the ski lifts, runs and trails do not themselves create air pollution, the areas attract a lot of people and development. This growth indirectly leads to air pollution emissions mainly from traffic and the use of fireplaces and woodstoves that may impact nearby Class I areas.

b. NEPA. Since the granting of a special use permit for a ski area or its expansion is a major federal action, the decision making process is governed by the National Environmental Protection Act (NEPA). NEPA requires that all significant impacts from a major federal action be disclosed. NEPA does not require that identified potential impacts be avoided or minimized. The Division is typically consulted by the USFS during the development of the Environmental Impact Statement (EIS). Indirect effects, development, traffic, and growth that result in air pollution emissions are examined during this process. The Division acts only as technical commentor on the air quality analysis and has no authority under NEPA. The Division, however, will often work with the USFS, local governments, and/or the developer to minimize and mitigate any air quality impacts that may be projected to occur.

c. Conformity Determination. The 1990 Amendments to the Clean Air Act in section §176(c) require that a federal agency's actions conform to approved State Implementation Plans (SIPs) for bringing areas that violate air quality standards into attainment and maintenance. In an EIS, the "conformity determination" is made if the preferred alternative will not interfere with State and local plans for pollution control.

d. Cooperation. The Division's experience has been that the USFS very much wants the participation and "buy-in" of the Division in the air quality analysis portions of an EIS. Typically the Division is consulted during scoping, planning of the air quality analysis, during the draft EIS phase, and during development of the record of decision. While each ski area expansion has been a case-by-case situation, the Division has generally and increasingly found the USFS planners to be responsive to the Division's concerns.

In summary, it is the Division's experience that in recent years the Forest Service has worked to disclose most of the direct and, to some extent, indirect effects of air pollution generated by ski areas and their expansion. The Division is aware that the USFS' legal authority to condition special use permits to mitigate off-site impacts is limited and has been tested in the nation's court system. Nevertheless, several respondents point out that air pollution growth is perceived as a problem in a number of ski resort towns and there are no good mechanisms to comprehensively address the problem until violations of National Ambient Air Quality Standards occur.

#### **D. Respondents' Comments and USDA Forest Service Response Concerning Impacts to AQRVs**

The Division asked in a letter (Appendix D) to the USFS that it answer specific concerns and questions that are tied to the eight respondents comments. Below is a presentation of each of the

eight respondents' written and oral concerns and the USFS' response (USFS letter is in Appendix E). The Division provides a few additional comments on issues the most directly related to AQRV impacts that have not already been discussed above or by the USFS response. Appendix F contains a review and discussion of the other respondents' concerns who indicated they believed that a FLM caused air pollution but not an AQRV problem. Reproduced below and in Appendix F are the respondents' concerns in their own words. The Division has paraphrased or edited respondent's words for clarity but has kept as close as possible to the original material in the questionnaires and notes taken during verbal follow-up. Issues that had nothing to do with air pollution, federal land managers, and Class I areas are, for the most part, not presented below but are put in Appendix F.

## **1. Respondent #1**

### *Written Concern:*

Issue 1) Prescribed broadcast and pile burns by the USDA Forest Service and Bureau of Land Management in the spring and fall affects visibility in and around the Flat Tops and Eagle's Nest Wilderness'. The burns could have caused temporary impacts to visibility within the areas and interfered with viewing of the Wilderness areas from any outside location. Local wind patterns normally cause dispersion of temporary smoke within and around the Wilderness areas.

Issue 2) The USFS grants special use permits for the Vail, Beaver Creek, and Arrowhead ski areas that may have indirect effects on AQRVs in and around the Eagle's Nest Wilderness. Resulting development, open burning by the ski area, construction, commuting, visitor vehicle traffic and wood burning appliances have probably caused indirect adverse impacts to visibility to the Eagle's Nest Wilderness.

### *Verbal Follow-up with Respondent:*

Issue 1) In response to a question about what could the USDA Forest Service do better in regard to prescribed burning, the respondent stated a) more public education is needed about why burning is necessary (e.g., improve/restore wildlife habitat, reduce wildfire risk); b) need better and more frequent public notification about when burns are going to occur; and c) USDA Forest Service needs to be concerned about what ski areas do with the trees and vegetation on the lands they lease and develop understandings or permit conditions with the ski areas governing whether burning is appropriate.

Issue 3) In response to a question about what the USDA Forest Service could do better in regard to the granting of special use permits for ski areas and their expansion, the respondent stated that if faced with a choice between new ski areas or expansions the USDA Forest Service should encourage expanding already disturbed areas rather than new areas.

Issue 4) The respondent also stated that the USDA Forest Service should not allow the building of new haul roads in relation to timber sales and should use existing roads. In addition, the dust from haul traffic can impact nearby residents and may create AQRV impacts. The USDA Forest Service should get more involved in dust suppression strategies.

*Follow-up with USDA Forest Service:*

Issue 1a and 1b) "The comment is that the Forest Service needs to do a better job of informing the public about the benefits of prescribed burning and to alert local citizens and agencies about individual burns. We need to identify what we are trying to do to educate the public about the benefits of prescribed burning."

"We agree with this comment relative to public education and notification and have recently hired staff including a fire ecologist and fire planner who will work with our public affairs staff to do a better job of presenting this message to the public. We are currently conducting joint interagency planning and analysis with the Colorado State Forest Service for implementing prescribed burn plans.

We currently have direction and plans in place that require Forests and Districts to notify the public and local governmental officials about individual burns. We will work with our field staff to strengthen this direction as necessary.

We also have guidance to Forest and Districts to involve local publics in shared decision making in relation to land management planning including prescribed fire."

Issue 1c) "Ski areas (e.g., Vail, Beaver Creek, and Arrowhead), operating on public lands under special use permits granted to them by the Forest Service, burn slash from trail clearing. Can the Forest Service condition special use permits for these ski areas to require lease holders to evaluate whether or not burning of material from trail development is appropriate? Can the Forest Service condition special use permits to require that permit holders only burn with permission of the local county?"

"Ski Area Special Use Permits, issued pursuant to the National Forest Ski Area Permit Act of 1986, require the holder to annually prepare an operating plan in consultation with the Authorized Forest Officer. These operating plans become part of the special use permit and cover items such as safety, sanitation, erosion control, and vegetation management. These permits also require that trees or shrubbery on the permitted area may be removed or destroyed only after approval of the Authorized Forest Officer. It is Regional Policy that, based on considerations such as protection of the development and visual quality, the Authorized Forest Officer may require vegetation cleared from ski runs to be removed from site, burned, chipped and/or buried on site. As suggested by this Respondent, the appropriateness of the use of fire for slash disposal is determined on a case by case basis.

All Ski Areas Special Use Permits require the holder to comply with state, county, and municipal laws, ordinances, or regulations which are applicable to the area or operations covered by the permit to the extent they are not in conflict with federal law, policy or regulation. Examples of these laws and ordinances include state and local requirements relating to building inspections, liquor licenses, law enforcement, search and rescue, structural fire inspections and protection, and air and water quality issues. The Forest

Service, however, assumes no responsibility for enforcing laws, regulations, ordinances, or the like which are under the jurisdiction of other government units. Accordingly, if local jurisdictions require burning permits holders of Ski Area Special Use Permits, like all other entities within this jurisdiction, would be subject to this requirement. The Forest Service can condition special use permits to require permit holders to obtain an air quality permit from the Colorado Air Pollution Control Division for any burning on public lands. We believe that the State can delegate responsibility for the issuance of air quality to permits to local counties."

Issue 3) "Expansion of existing ski areas should be favored over the creation of new ski areas."

"The Forest Service responds to requests for special use permits on a case by case basis. Ski areas are an appropriate use of National Forest Systems (NFS) lands pursuant to federal statutes. In most locations the Forest Service is not a proponent of downhill skiing and typically does not issue prospectuses to encourage growth and development. Based on guidance from the Regional Guide for the Rocky Mountain Region and the Land and Resources Management Plans (Forest Plans) most National Forests in the Region have identified a desired hierarchy of suitable sites for ski area development. Consistent with the suggestion of this Respondent, these documents have consistently favored the expansion of existing sites over development of new areas as having the lowest social and environmental impacts."

Issue 4) "The dust from haul roads from timber sales can be excessive. The Forest Service should not allow the construction of new haul roads in relation to timber sales and should use existing roads. Can the Forest Service limit road building? Can the Forest Service get more involved in dust suppression on existing haul roads?"

"The Forest Service road management program is directed by Forest Plans which are developed from public input. The need for access to National Forest Lands is determined through that process and includes roads to be constructed, reconstructed, maintained and closed.

The Forest Service constructed less than 25 miles of new permanent roads in Colorado in 1994 and 1995. All of these roads were surfaced to reduce air pollution and protect water quality. In addition, roads used for timber removal are continuously monitored for excessive dust. If the amount of dust coming from the road is considered to exceed guidelines the purchaser is required to apply a dust palliative to control the dust.

Each timber sale area is analyzed and existing roads that meet the needs of the sale are used. However, the surfacing on these roads is often worn completely out which can create more dust than newly constructed roads. The reconstruction and resurfacing of these existing roads have the most potential to abate dust pollution."

*Additional Division Discussion:*

Issue 1c: Because ski areas are often near Class I areas, the Division will work further with the USFS, local counties, and ski areas to clarify who has permitting authority for burns conducted on public lands leased to ski areas. The Division will encourage the USFS to amend each ski area's annual operating plan (to the extent it has not done so already) to require them to contact locals, attain appropriate permitting before conducting burns, and to explore alternatives to burning.

Issue 4: Concerning dust from haul roads, the Division can require additional mitigation in specific circumstances. However, the USFS response to this respondent's concern is reasonable and, as far as the authors of this evaluation are aware, the Division has never received a complaint about excessive dust from a haul road entering a Class I area.

**2. Respondent #2**

*Written Concern:*

Issue 1a) The USDA Forest Service has approved a permit for the Lake Catamount Ski Area and is in the process of reviewing a "Mountain Management Plan" for the area. This new ski area may contribute to future impacts in the Mt. Zirkel Wilderness [a Class I area] due to population growth, traffic growth, etcetera.

Issue 1b) The USDA Forest Service is reviewing the request for an expansion of the Steamboat Springs Ski Resort permit area. An approval may contribute to future impacts in the Mt. Zirkel Wilderness due to population growth, traffic growth, etcetera.

Issue 1c) The USDA Forest Service has certified that there is already visibility and AQRV impairment in the Mt. Zirkel Wilderness.

*Verbal Follow-up with Respondent:*

Issue 1) Respondent indicated that what the written comments were getting at is the overall approach toward dealing with air quality issues is not coordinated. Respondent expressed that this was a problem all governmental entities had. The USDA Forest Service is doing the best they can and applying their regulations. However, the USDA Forest Service in this case ends up appearing to be talking out of both sides of its mouth: They say there are already impacts to the Mt. Zirkel Wilderness caused by stationary sources and at the same time they approve more ski areas and expansions in the same airshed. What is needed is a more coordinated approach to deal with all the sources of air pollution.

*Follow-up with USDA Forest Service:*

Issue 1) "The comment is that the Forest Service, with one hand, certifies visibility and aquatic ecosystem impairment in the Mt. Zirkel Wilderness and suggests it is due to nearby stationary sources and, with the other hand, approves permits for new ski areas and considers permitting expansion of others in the same air shed. What is needed is a more coordinated



approach to dealing with air quality. What can the Forest Service do to address these concerns?"

"The analysis conducted by the State of Colorado and Forest Service prior to certifying impairment of visibility and aquatic ecosystems in the Mt. Zirkel Wilderness indicate that it is reasonable to believe that there is a problem in the Wilderness and that it is reasonable to believe that the problem is caused by or contributed to by the Craig and Hayden coal fired power plants. An analysis of potential visibility impacts that could be caused by the permitting of new or expanding of existing ski areas in the Yampa Valley indicated that these developments should not result in visibility impairment in the Wilderness. The Forest Service would welcome the opportunity to participate in a coordinated approach to address pollutant growth in Northwest Colorado."

### **3. Respondent #7**

#### *Written Concern:*

Issue 1) Large scale land clearing and slash burning activities associated with ski area expansions at Copper Mountain, Keystone and Breckenridge over the last several years.

Issue 2) Clear-cutting and other forest management practices in the Peak 7 area and Swan River Valley over the past several years and associated slash burning.

These have created direct, adverse impacts to AQRVs in the Eagle's Nest Wilderness. Specifically, large scale slash burning and heavy equipment and truck traffic on dirt roads in the areas of forest management activity.

#### *Verbal Follow-up with Respondent:*

Issue 1) Concerned about burns at ski areas. Hard to know what to do about these activities on federal lands leased by a ski area. Very much a gray area. Who has responsibility to see that the burns are only conducted that are really necessary? Who should permit them -- county, State, USFS? People see smoke and no one knows what is going on.

Issue 2) Some time ago there were problems with fires done by the USDA Forest Service. There was little notification of the public and little thought about how the fires would be perceived by the local populace. In recent years the USDA Forest Service has done a lot more with public education, planning, working with local media, and minimizing impacts.

#### *Follow-up with USDA Forest Service:*

Issue 1) "The comment is that large scale land clearing and slash burning associated with annual trail maintenance and ski area expansion at Cooper Mountain, Breckenridge, and Keystone have created local concerns. What can the Forest Service do about this? Can the Forest Service condition special use permits to include how prescribed burns will be permitted?"

"Please see the response to Respondent #1 [Issue 1c] for a discussion of the requirements of the Ski Area Special Use Permit with regard to disposal of vegetation resulting from ski run development and maintenance. As this discussion points out, the Forest Service has both the responsibility and authority to determine the appropriate method for disposing of this material.

Issue 2) "What is the Forest Service's commitment to ensuring local governments and citizens are notified about prescribed burns?"

"The notification of local governments is required by a Memorandum of Understanding (MOU) between the State of Colorado and those agencies, including the Forest Service, that conduct prescribed burning on public lands. It would seem appropriate for ski areas, acting as agents of the Forest Service in providing public recreation opportunities, to notify local governments pursuant to the requirements of this MOU. Including this as a requirement in annual operating plans may be appropriate.

A description of the procedures to be followed for each ski area is contained in the area Operating Plan. The Operating Plan is prepared by the Forest Service and the permit holder for approval by the Forest Supervisor. Copies of the Operating Plan may be submitted to the Forest Supervisor for each operating season, usually by June 1 and November 15."

#### **4. Respondent #12**

##### *Written Concerns:*

Issue 1) Coal leasing on federal lands, primarily Bureau of Land Management, that feed coal to power plants with inadequate pollution controls.

Issue 2) USDA Forest Service timber sales that feed mills such as Louisiana-Pacific with blatant disregard for air pollution controls.

Issue 3) USDA Forest Service permit for the Durango-Silverton Narrow Gauge Railroad which operate black-smoke belching, coal locomotives which run between two units of the Weminuche Wilderness. The trains probably cause the most significant impacts [compared to the other two concerns] because of their proximity to the Wilderness. The trains also start numerous fires each year, including last year's Mitchell Lakes 350-acre fire which contributed substantial visibility impairment.

##### *Verbal Follow-up with Respondent:*

Unable to reach respondent.

##### *Follow-up with the USDA Forest Service:*

Issue 2) "The Forest Service sells timber to the Louisiana-Pacific plant in Olathe which generates air pollution. Can the Forest Service consider the ultimate use of timber it sells and/or can it condition sales in some way to limit air pollution?"

"We are aware of air pollution concerns relative to the Louisiana-Pacific plant in Olathe. However, we do not have a legal mechanism to stipulate who can bid on a timber sale based on its use at a location off of National Forest System lands. The State of Colorado currently has all the legal authority necessary to control emissions at the Olathe mill."

Issue 3) "The Forest Service permits the Durango-Silverton Train which runs between two units of the Weminuche Wilderness. Can the Forest Service condition the permit to limit potential AQRV problems?"

"The Forest Service does not have jurisdiction with respect to the operation of the Durango-Silverton Train. Accordingly, this railroad is not operated under a Forest Service permit. We are aware that some members of the public are concerned about air pollutants resulting from operation of the train. However, we believe that state or local regulations or ordinances would be the most appropriate means to address problems associated with its operation."

*Additional Division Discussion:*

Issue 1) The Division did not contact the BLM in relation to this concern as the purpose of the evaluation is to evaluate situations where direct actions of the FLM is causing AQRV impacts in Class I areas. The "coal leasing" issue would be a very indirect effect.

Issue 2) As a point of information, Louisiana-Pacific Corporation and the State of Colorado recently entered an agreement that will result in additional air pollution controls being installed on the Olathe plant before the end of calendar year 1995.

**5. Respondent #17**

*Written Concerns:*

Issue 1) The USDA Forest Service has approved, and may approve in the future, ski area expansions which will significantly increase traffic in the Aspen non-attainment area. This may decrease visibility in the non-attainment area. This includes the Snowmass, Highland and Buttermilk ski areas. Traffic is responsible for about 83% of the PM<sub>10</sub> on violation days and thus increases in traffic are a serious concern. The Maroon Bells/Snowmass Wilderness area is very close to the non-attainment area and to the high-traffic corridor linking Aspen with many nearby communities.

*Verbal Follow-up with Respondent:*

Issue 1) Respondent indicated that there was little more within the USDA Forest Service's authority that could be done. However, the problem with ski area expansions is the inability to look beyond the specific area under expansions into off-site impacts from development, parking lots and transportation problems. Respondent repeatedly indicated there was no mechanism to get beyond the "micro-view" during permitting of these areas. The message is that all levels of government need to get involved in these permits and take a broader view. Proponents should welcome this involvement since it will mean better acceptance of the proposal and a better overall environmental and economic situation. This is also an issue for

Congress. USDA Forest Service has lost court cases when it has tried to take a broader view -- proponents have battled them in court. However, someone needs to have the ability to look offsite, look beyond the little box and think about how these proposals impact others. People forget that in small towns these proposals and resulting development have relatively large impacts. They are important and affect everyone in the area.

*Follow-up with USDA Forest Service:*

Issue 1) "Ski area expansions in the Aspen area have led to many off-site impacts. Does the Forest Service have the ability to require proponents to mitigate off-site impacts of ski area expansions? How can the Forest Service take a 'broader view'?"

"Section 176(c) of the Federal Clean Air Act requires that no federal agency (including the Forest Service) "...shall engage, support in any way or provide financial assistance, for, license or permit, or approve, any activity which does not conform to an implementation plan after it has been approved..." Therefore, the Forest Service does have the ability and responsibility to require proponents to mitigate off-site air pollution impacts which exceed levels identified in EPA's Conformity Regulations. As required by the disclosure requirements of NEPA the Forest Service does take a broad view of all impacts including off-site air quality impacts during review of special use permit applications.

As a result of the Environmental Impact Analysis of the Snowmass Ski Area expansion the Forest Service recognized potential off-site air quality impacts in the non-attainment area (Aspen). To demonstrate conformity with the State Implementation Plan, the Forest Service required the permittee to implement measures that would assure no net increase in vehicle miles traveled related to the project."

*Additional Division Discussion:*

Issue 1) It is the Division's experience that the USFS has been very willing to look at *and require mitigation* of all impacts, including off-site, related to air pollution from ski area expansions *if* there is a nearby non-attainment area.

**6. Respondent #18**

*Written Concerns:*

Issue 1) The marble quarry on Conundrum Creek -- a situation where mineral rights were not acquired by USDA Forest Service along with surface rights. This is strictly a surface mining operation although inactive at the moment due to the death of the operator. This is in the Maroon Bells/Snowmass Wilderness.

Issue 2) Alabaster underground mine on Avalanche Creek. This is on USDA Forest Service administered land probably within the Wilderness area.

Respondent believes it is unknown as to whether these operations cause direct, adverse impacts. The marble mine is inoperative at the moment and does not have a long history of

operation. The alabaster mine does not have a long history either but may be expanding scale of operation.

*Verbal Follow-up with Respondent:*

Respondent indicated that since he had sketchy knowledge of the specific subject matter it would be inappropriate to seek further information from him.

*Follow-up with USDA Forest Service:*

Issues 1 & 2) "The marble quarry on Conundrum Creek and the alabaster mine on Avalanche Creek may have air quality impacts on the Maroon Bells/Snowmass Wilderness. What has the Forest Service done and what can it do to limit or eliminate these impacts?"

"An analysis conducted by the Forest Service indicates that the operation of the marble quarry will have virtually no air quality impact on the Maroon Bells/Snowmass Wilderness. Inspections of the underground alabaster mine located approximately 5 miles from the Wilderness boundary indicate that the operation produces no visible emissions above ground surface. Therefore, it should have no impacts to air quality related values within the Wilderness."

## **7. Respondent #21**

*Written Concerns:*

Issue 1) Ski area expansions in Vail, Aspen, Snowmass, Crested Butte and surrounding central Colorado has and will continue to contribute to declining air quality in these areas and potentially in any nearby wilderness area due to increased traffic, heating, and lift operations using diesel power. Continued growth of mountain communities fueled by ski area expansions creates direct, adverse impacts to AQRVs in Class I areas.

*Verbal Follow-up with Respondent:*

Issue 1) The FLMs need to hold ski area expansion proponents accountable for changes in the community infrastructure and need to look at a wider range of impacts including off-site impacts. They need to be required to mitigate all impacts even if it is too expensive. They should require ski areas to provide affordable housing for employees, so that employees do not have to travel long distances to work. A light rail line is needed from Gunnison to Crested Butte. Ski area expansions fuel runaway growth in mountain communities which needs to be fully evaluated. The FLMs need to weigh public concerns as heavily as they do the ski area proponents and need to be accountable for citizens' concerns.

Issue 2) FLMs should require that ski areas have adequate electricity so ski lifts do not have to run on diesel generators.

Issue 3) FLMs should limit road building and plans for new roads should be carefully reviewed. The ongoing impacts from roads need to be considered, not just the impacts from constructing the roads.

Issue 4) FLMs should also limit snowmobiling and/or require pollution control devices.

*Follow-up with USDA Forest Service:*

Issue 1) "The Forest Service needs to hold proponents of ski areas and their expansions accountable for all impacts including off-site impacts. The Forest Service needs to weigh public concerns as heavily as ski area proponents. To what extent can the Forest Service condition special use permits to mitigate off-site impacts?"

"Please see the response to Respondent #17 for a discussion of the responsibility of the Forest Service with regard to requiring mitigation of off site impacts to air quality associated with authorizing ski area expansions. When considering authorizing ski area expansions, the Forest Service, through the National Environmental Protection Act (NEPA) scoping process and in participation in the Colorado Joint Review Process (JRP) identifies issues that are raised by the public. Potential impacts associated with these issues occurring both on National Forest System lands and adjacent private land are disclosed and addressed in environmental documents. These documents also identify possible mitigation measures that the Federal, State, and local governmental entities with jurisdiction may wish to require of the ski area proponent."

Issue 2) "The Forest Service should not allow diesel generators to power ski lifts. The Forest Service should require that ski areas have access to enough electricity to power their lifts. Can the Forest Service condition special use permits to limit the use of generators?"

"In general, diesel generators are only permitted for use as an emergency power source. That is, they are used to produce electricity which will allow lift or other facility operation if line power is lost or inadequate. In this respect they are an essential safety feature. Beyond this role, if the use of diesel engines are causing local air quality problems, it would seem that a local ordinance would be the appropriate solution (see response to Respondent #1 [Issue 1c]). In the absence of a local ordinance addressing this circumstance, we feel that it would be inequitable for the Forest Service to cause its ski area permittees to be restricted in the use of diesel engines to a greater degree than the general public. The infrequent use of diesel generators has not been determined to be an air quality concern."

Issue 3) "The Forest Service should limit road building and consider ongoing impacts from roads instead of just road construction. What is the Forest Service doing in this regard?"

"The Forest Service road management program is directed by Forest Land and Resource Management Plans which are developed from public input. The need for access to National Forest Lands is determined through a process and includes roads to be constructed, reconstructed, maintained and closed.

The Forest Service's road maintenance program does consider ongoing impacts from roads. Competition for funds limits the Forest Service's ability to fully maintain roads. The Report

of the Forest Service for 1994 shows that in Colorado only 27% of passenger car roads were maintained to full standard and 40% of high clearance roads were maintained to full standard. Priority for maintenance and dust control is on the roads with the highest use."

Issue 4) "The Forest Service should limit snowmobile access and require pollution controls on snowmobiles. What can the Forest Service do in this regard?"

"The State, rather than the Forest Service, has the authority to require air pollution controls on snowmobiles. If air pollution from snowmobiles were determined to create adverse impacts on National Forest System lands the Forest Service could limit use and access."

*Additional Division Discussion:*

Issue 4: Congress asked EPA in the 1990 Amendments to the Clean Air Act to focus on quantifying emissions from unregulated nonroad sources. The CAAA further directs EPA to regulate emissions from nonroad engines and vehicles after completion of a study if EPA determines these sources are significant contributors to air pollution which may endanger public health or welfare (e.g., visibility). Congress' direction to EPA is that these sources be regulated if they contribute "significantly" to pollution in one or more nonattainment areas. The Division does not believe that individual state's may regulate emissions from non-road vehicles such as snowmobiles. At this point in time the Division is not aware of any EPA proposals to limit emissions from such sources.

**8. Respondent #22**

*Written Concerns:*

Issue 1) The USDA Forest Service, in their Environmental Analysis for the Crested Butte Ski Area, mentioned the need for the ski company to participate in the capital structure and operations of a local mass transit system. They did not follow through by requiring it in their special use permit.

Issue 2) The USDA Forest Service also needs to put some restrictions on tour buses that idle their diesel fuel buses all night for fear they won't start in the cold mornings. Again, they could do this through conditions on their special use permit. The air pollution precipitates out into the snow which also has negative impacts on water quality when it melts.

This air pollution from ski area growth and buses affects AQRVs in the West Elk and Maroon Bells/Snowmass Wilderness'.

*Verbal Follow-up with Respondent:*

Issue 1a) The USDA Forest Service needs to conduct an EIS for ski area expansions. The USDA Forest Service is not requiring sufficient mitigation of impacts from expansions. Expansions need new EIS' and new permits. The USDA Forest Service should use this as an opportunity to require mitigation of new pollution impacts.

Issue 1b) "Regulators are more responsive to the regulated community than they are to the public; in particular, the USDA Forest Service has expressed reluctance to mitigate off-site impacts", i.e. from ski area expansions.

Issue 1c) The USDA Forest Service needs to require ski areas to provide affordable housing at ski areas.

Issue 1d) The USDA Forest Service should make developers pay the costs of mitigating impacts--if it is too costly "the product shouldn't be built." Need to look at all impacts.

Issue 2) The USDA Forest Service needs to require no bus idling in permits. The town of Crested Butte has woodburning restrictions and an anti-idling ordinance, but the ski area does not. The USDA Forest Service needs to support and provide consistency with local regulations.

Issue 3) The USDA Forest Service is too lenient on use permits in wilderness areas in general-- for logging, ski areas and mineral extraction.

*Follow-up with USDA Forest Service:*

Issue 1a) "The Forest Service should use ski area expansions as an opportunity to address previous impacts. All pollution should be mitigated. Can the Forest Service require mitigation of all impacts from a proposed expansion and mitigation of impacts from previous ski area developments?"

"Please see response to Respondent #17 for a discussion of Forest Service responsibilities, with regard to mitigation of off-site air quality impacts, pursuant to Section 176(c) of the Federal Clean Air Act. In this regard, it is conceivable that mitigation for existing sources of air pollution, associated with a ski area, would be necessary in order to allow a ski area expansion and also be in conformance with this statute."

Issue 2) "The Forest Service needs to limit diesel bus idling near the Crested Butte ski area. The Forest Service needs to provide consistency with local ordinances. Can the Forest Service take action to limit diesel bus idling?"

"The base area at the Crested Butte Ski Area is located on private land within the Town of Mount Crested Butte. Accordingly, the appropriate means to limit bus idling at the base area would be a local ordinance. Please see response to Respondent #1 [Issue 1c], for a discussion of requirements in Ski Area Special Use Permits that holders of such permits comply with local ordinances. With regard to any NFS land involved, if a local ordinance were in place and applicable to the area covered by the permit, the holder of the permit would be obligated to comply with it. However, as stated earlier, it is the responsibility of the local jurisdiction, not the Forest Service, to enforce local ordinances."



Issue 1, 1b, 1c, 1d) "The Forest Service needs to examine all costs of a ski area project and make the developers pay for all mitigation. Can the Forest Service require a ski area proponent to determine all costs of a development including off-site impacts and to mitigate them?"

"Please see response to Respondent #17. It is the responsibility of the Forest Service, in complying with the requirements of NEPA, to disclose the direct, indirect and cumulative impacts associated with a decision to authorize ski area development on NFS land. If air pollution emissions from the proposed development fall under EPA's Conformity Regulations, the Forest Service must assure that mitigation measures will be in place to mitigate impacts or the permit can not be issued."

Issue 3) "The Forest Service is too lenient in granting use permit in wilderness and roadless areas in general for logging, ski areas, and mineral extraction. What can the Forest Service do about this?"

"Logging and ski area development are not permitted in wilderness and inventories roadless areas. Mineral extraction is guided by the General Mining Law of 1872 and the standard and guidelines contained in the applicable Land and Resource Management Plan."

## V. SUMMARY AND RECOMMENDATIONS

The purpose of this evaluation is to determine the extent to which activities of federal land managers are impacting AQRVs in Class I areas in Colorado and whether or not the land managers are doing all they reasonably can to mitigate impacts.

Below are several summary points based on the questionnaires, the USDA Forest Service's response, and the Division's experience:

- Of 263 questionnaires sent and 86 returned, 8 indicated that federal land manager activities not only generated air pollution but caused direct, adverse impacts to AQRVs in Class I areas in Colorado. In the Division's judgment this relatively low amount of response is an indicator that, in this State, the federal land managers are not generating a lot of air pollution problems in or near the areas they manage.

- The Division is comfortable with the mailing list and response rate to the questionnaire. Two recommendations for next time (in three years) will help make this a somewhat better evaluation:

- The mailing list and response was "light" on industry associations, chambers of commerce and other similar groups. Efforts will be made to increase the mailing (and response) so the views of these groups are better represented.

- Thought will be given to rewriting the questionnaire and cover letter to better focus responses on "direct adverse" impacts of FLM activities. The risk is that constructive information about more indirect or unintended impacts may be cut out. The Division may separate the two issues in the questionnaire -- direct and indirect impacts -- and ask questions about both.

- In the Division's judgment, there are direct, adverse impacts to visibility occurring in Class I areas as a result of prescribed fire by federal land managers. The visibility impacts are of a temporary nature and occur infrequently.

- It is also the Division's judgment that the federal land managers are taking all reasonable steps to mitigate the impacts from prescribed fire.

- The Division believes that prescribed fire is a necessary activity and not performing it would be irresponsible.

- The question is, how well do the land managers plan and conduct the burns to limit and minimize smoke impacts to Class I lands? Based on the information in the questionnaires regarding smoke and prescribed fire, the relatively small amount of burning that occurs in this State, and the few complaints about smoke received by the

Division each year the Division believes these indicate there is not a significant problem with prescribed fire or FLM practices at the current time.

○In addition, the current regulatory framework for prescribed fire that requires the land managers to attain permits from the State, the expectations detailed in the Smoke Management Memorandum of Understanding (Appendix C), and the land managers own policies for how these burns are planned and conducted together seem to provide sufficient policies, regulations, and programs to manage and monitor prescribed fire activity. It is not the Division's sense that anything more is obviously needed at this time. During the last revisions to the MOU the Division felt that its outstanding issues were addressed.

○The Division recognizes that some burns will put smoke into sensitive areas. Conducting the burns is a complex human activity that also involves predicting nature (e.g., how fuels will respond, what the meteorology will be and how it will disperse smoke). The Division will continue to monitor how well land managers plan and perform the burns and follow-up on problem burns to discern whether additional regulation is required.

●Other activities of federal land managers may indirectly create air pollution near some of Colorado's Class I areas, such as the permitting of ski areas on federal lands.

●Based on the framework within which this evaluation is to be conducted, the Division concludes that the permitting of ski areas and their expansions do not constitute FLM activities that create direct adverse impacts to AQRVs in Colorado's Class I areas.

○It is recognized that growth and its impacts in "ski towns" in Colorado have caused both air pollution and other problems.

○It is the Division's experience that over the years the USFS has continued to improve the scope and quality of the air quality analyses in the NEPA required Environmental Impact Statements for new ski areas or their expansion. Direct, indirect and off-site impacts of proposed developments have been more thoughtfully assessed in more recent EIS'.

○It is also the Division's belief that the scoping and whole EIS process creates a false expectation regarding the USFS' legal authority and jurisdiction. By asking the public what it is concerned about and conducting analyses to disclose what the likely impacts of development will be, the USFS is often expected to address the problems -- to do something. This is a false expectation. Unless the ski area is in or near a non-attainment area that has a plan for an air pollution clean-up, the USFS has little legal ability to require a developer to do much of anything off-site (that is, off federal property).

○If a non-attainment area is nearby, the Division's recent experience (e.g., Burnt Mountain expansion of the Snowmass Ski Area) is that the USFS was willing to exercise its legal obligations under the Clean Air Act section 176(c) to ensure that the permitted development/expansion conforms to the SIP. In the case of Burnt Mountain, the USFS is requiring that there be no increase in vehicle traffic as a result of the expansion.

○This is not to say more coordination and clearer expectations are not needed. The USFS points out that local entities (e.g., counties, town, the State) have legal authority to do something about growth related impacts from a ski area, not the USFS. While the Division will work closer with the USFS to make sure impacts are fully disclosed, we will also be seeking mechanisms to work with local citizens groups and governments to address off-site air pollution impacts as new ski areas and expansions are proposed. The Division will be looking at the recommendations from the western slope regional groups of the Governor's Smart Growth initiative as a possible starting point.

●Another indirect aspect of FLM activities concerns burns conducted by ski areas.

○The Division will clarify via a letter to local counties that any open burning that is conducted on public lands leased to ski areas must be permitted by the State or county.

○The Division will also request that the USFS clarify in annual operating plans with ski areas that coordination with a local county and permitting of burns is required before a burn can be conducted.

This questionnaire and evaluation process has been a positive experience for the Division and the USFS. It has clarified and sharpened issues. Dealing with growth in mountain towns with ski areas and with the impacts from prescribed burning are obviously complex and multifaceted. The recommendations and conclusions presented above are not endpoints but part of an ongoing process for the various entities involved to continually examine and improve how they do their jobs.

**APPENDIX A**  
**EXAMPLE COVER LETTER**

Date, 1995

Name

Organization

Address

Town, CO ZIP

Dear Name:

A recently passed Colorado law requires the Colorado Department of Public Health and Environment/Air Pollution Control Division ("Division") to perform an evaluation of federal land manager activities as they might affect Class I areas - national parks and wilderness that were in existence as of August 7, 1977 (see attached map). There are twelve such areas in Colorado, including the La Garita Wilderness and the Weminuche Wilderness. This letter is to solicit your assistance in conducting this evaluation of activities that may be affecting these areas.

The pertinent section of Colorado law is quoted below:

25-7-212. Actions of federal government affecting visibility - evaluation report.

(1) As a part of the State's ongoing development and implementation of a long-term strategy in connection with visibility and air quality related values within Class I areas, the Division shall evaluate the extent to which the activities of the federal government are directly adversely impacting visibility and air quality related values within a Class I area and make a determination whether such entities have taken or are taking all reasonable steps necessary to remedy that impact. At any time, the Division may make, and a federal land manager shall respond to, reasonable requests for information necessary for the Division to perform such regulation.

(2) The joint public hearing required under section 25-7-105(4)(a) and the report to the Governor and the General Assembly required under section 25-7-105(6) shall report on the results of the evaluation required under subsection (1) of this section.

The term "air quality related values" is typically defined as any feature or property of a Class I area that may be affected in some way by air pollution. General categories of values include: visibility, odor, flora, fauna, soils, water, geologic features and cultural/archeological resources.

The Air Division has had to make some choices in how to carry-out this evaluation. The Air Division's approach is:

1) Conduct such an evaluation every three years. This is the same schedule as the Division's long-term strategy review (referenced in the new law) for visibility protection and thus this schedule appears to be consistent with what is intended by the law;

2) In order to make best use of available resources and to focus on the part of the "federal government" most often mentioned during debate and construction of this section of law, the Air Division will concentrate on the activities of federal land managers (e.g., National Park Service, Bureau of Land Management, and the U.S. Forest Service) as a subset of "federal government";

3) Conduct a qualitative assessment of land manager activities around and in each Class I area by contacting people living and working around each of these areas;

4) Develop a contact list of county commissioners, local federal land managers, local county health department officials, city officials, local environmental groups, and others in the immediate vicinity of a given Class I area and ask that they fill out a simple questionnaire;

5) Compile the information from the questionnaires; and

6) Follow-up on any possible adverse impacts to air quality related values from land manager activities. On a case-by-case basis the Air Division will work with the federal land manager and local people to better understand the situation and remedy it to the extent feasible.

Enclosed is a brief questionnaire with a pre-paid, addressed envelope. The evaluation report that is produced will not attribute any statements to individuals. Your name or organization is written on the survey and envelope so we can contact you later should questions arise. If you have any questions about the survey or its purpose, please contact Terry Furuli at 692-3231 or Dan Ely at 692-3228. We ask that you complete the short survey and send it back to us by March 24, 1995, even if you are not aware of any land manager activities that may impact air quality related values in Class I areas.

Thank you for your time and effort in completing this survey. We are interested in conducting a fair and honest evaluation and your input is needed to make sure we hear from a variety of different people.

Sincerely,

Terry Furuli  
Air Pollution Control Division

wp 4.2.6.5

attachments

**APPENDIX B**  
**EXAMPLE QUESTIONNAIRE**



**Colorado Department of Public Health and Environment**  
**Air Pollution Control Division**  
**Federal Land Manager Activities**  
**and Possible Impacts on AQRVs**  
**Questionnaire**

Name:

Organization:

Instructions: The focus of the questionnaire is on any activity of a federal land manager in the vicinity of nearby Class I area(s) including: **Great Sand Dunes National Monument** that may create air pollution which in turn may affect visibility or any other air quality related value of the Class I area (e.g., flora, fauna, soils, water, geologic features and cultural resources). You may have concerns about other land manager activities but please limit your responses *to activities that would affect visibility and other air quality related values in a Class I area.* The evaluation report that is produced will not attribute any statements to individuals. Your name and organization is written on this questionnaire so we can contact you later should questions arise.

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1. Are you aware of any activities of a federal land manager in or near the **Great Sand Dunes National Monument** that create air pollution that may affect visibility or other air quality related values of the Class I area?

No \_\_\_\_\_

Yes \_\_\_\_\_

*If "No" please skip to question 6. If "Yes" please continue with question 2.*

2. If "Yes" to question 1, please describe *specifically* what activities, and to the extent possible, where they occurred, why they occurred, and who or what agency was responsible (please use additional space on the back if needed). If you have *general* concerns about certain activities please feel free to mention those as well. In addition, if you have examples of emission reductions (e.g., switching cabins to gas fireplaces) or actions that limited/eliminated impacts be sure to include them below. Please use as much space as you need and feel free to use the back or attach additional sheets.

3. Do you believe these activities described may have created *direct, adverse impacts* to visibility or other AQRVs *in the Great Sand Dunes National Monument*?

No \_\_\_\_\_

Yes \_\_\_\_\_

If "Yes", which of the activities described in #2 do you believe caused the impacts? As much specificity as possible will help the Air Division in any follow-up.

4. May we contact you as part of our follow-up?

No \_\_\_\_\_

Yes \_\_\_\_\_

5. Who else would you suggest we contact to follow-up on these specific activities you described in questions 2, 3 & 4?

6. Finally, who else would you suggest we contact in the area as part of our evaluation of possible federal land manager impacts on Class I areas in Colorado?

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Thank you for your time and effort in completing the questionnaire. Upon completion please insert it into the pre-addressed, postage paid envelope. If you have any questions, please call Terry Furuli (303 692-3231) or Dan Ely (303 692-3228).

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**APPENDIX C**  
**COLORADO SMOKE MANAGEMENT**  
**PLAN AND MEMORANDUM OF**  
**UNDERSTANDING**

**APPENDIX D**  
**LETTER FROM THE COLORADO**  
**AIR POLLUTION CONTROL DIVISION**  
**TO THE USDA FOREST SERVICE**

August 25, 1995

Dennis Haddow  
Rocky Mountain Region  
USDA Forest Service  
PO Box 25127  
Lakewood, CO 80225

Dear Mr. Haddow:

The Colorado Air Pollution Control Division is required by State law to perform an evaluation of actions of the federal government affecting air quality related values in Class I areas in Colorado. The Division has send over 250 questionnaires to local governments, federal land managers, environmental groups, and others throughout Colorado to help us determine if there are any activities occurring of concern.

Attached is a draft of the evaluation report. There are 8 respondents to the questionnaire that have raised questions about land manager activities that I would like to discuss with you. Below are specific concerns and questions that are tied to the respondents comments in the draft report:

Respondent #1

1. The comment is that the US Forest Service needs to do a better job informing the public about the benefits of prescribed burning and to alert local citizens and agencies about a particular burn. What is the US Forest Service doing to educate the public about prescribed burning?
2. Ski areas (e.g., Vail, Beaver Creek, and Arrowhead) operating on lands leased to them by the US Forest Service burn slash from trails. Can the US Forest Service condition the special use permit to require the lease holders to evaluate whether burning is appropriate? Can the US Forest Service condition the special use permit to require the lease holders to burn only with permission of the local county?
3. The comment is that expansions of ski areas should be favored over the creation of new ski areas. What is your response to this suggestion?
4. The comment is that the US Forest Service should not allow the building of new haul roads in relation to timber sales and should use existing roads. In addition, the dust from these roads can be intense. Can the US Forest Service limit road building? Can the US Forest Service get more involved in dust suppression on existing haul roads?

Respondent #2

1. The comment is that the US Forest Service, with one hand, certifies visibility and aquatic ecosystem impairment in the Mt. Zirkel Wilderness Area and suggests it is due to nearby stationary

sources and, with the other hand, approves permits for new ski areas and considers permitting expansion of others in the same air shed. What is needed is a more coordinated approach to dealing with air quality. What can the US Forest Service do to address these concerns?

#### Respondent #7

1. The comment is that large scale land clearing and slash burning activities associated with annual trail maintenance and ski area expansion at Cooper Mountain, Breckenridge and Keystone have created local concerns. Respondent felt it was a gray area as to who had permitting authority when a ski area conducted a burn on leased federal land. What is the US Forest Service's response? Can the US Forest Service condition special use permits to include how prescribed burns will be permitted?
2. The comment is about a past problem of little or no notification of when burns were taking place. Respondent indicated that in recent years the US Forest Service has done better in this regard. What is the US Forest Service's commitment to ensuring local governments and citizens are notified about prescribed burns?

#### Respondent #12

1. Comment is that the US Forest Service sells timber to the Louisiana-Pacific plant in Olathe which generates air pollution. Can or does the US Forest Service consider the ultimate use of timber it sells and/or can it condition the sales in some way to limit air pollution?
2. Comment is that the US Forest Service permits the Durango-Silverton train which runs between two units of the Weminuche Wilderness. Does the US Forest Service permit the train in some way? Can the US Forest Service condition the permit to limit potential AQRV problems?

#### Respondent #17

1. Comment is that ski area expansions in the Aspen area have led to many offsite impacts. Does the US Forest Service have the ability to require proponents to mitigate off-site impacts of expansions? How can the US Forest Service take a "broader view?"

#### Respondent #18

1. Comment is that the marble quarry on Conundrum Creek in the Maroon Bells/Snowmass Wilderness may have impacts on the Wilderness. What has the US Forest Service done and what can it do to limit or eliminate these alleged impacts?
2. Similar comment and question regarding an underground alabaster mine on Avalanche Creek.

#### Respondent #21

1. Comment is that US Forest Service needs to hold proponents of ski areas and their expansions accountable for all impacts, including off-site impacts and issues involving affordability of employee housing. US Forest Service needs to weigh public concerns as heavily as ski area proponents. To what extent can the US Forest Service condition special use permits to mitigate off-site impacts?
2. Comment is that US Forest Service should not allow diesel generators to power ski lifts. US Forest Service should require that ski areas have access to enough electricity. To what extent does the US Forest Service consider this in permitting and can it limit the use of generators?

3. Comment is that the US Forest Service should limit road building and consider ongoing impacts from roads not just from construction. What is the US Forest Service doing in this regard?
4. Comment is that the US Forest Service should limit snowmobile access and require pollution controls on snowmobiles. What is your response?

Respondent #22

1. Comment is that the US Forest Service should use ski area expansions as an opportunity to address previous impacts. All pollution should be mitigated. Can the US Forest Service require mitigation of all impacts from a proposed expansion and mitigation of impacts from previous ski area development?
2. Comment is that the US Forest Service is more responsive to the "regulated community" than to the public especially in its reluctance to mitigate off-site impacts of ski areas. What is your response?
3. The US Forest Service needs to require ski areas to provide affordable housing at ski areas. Can the US Forest Service require ski area proponents to provide housing?
4. Comment is that the US Forest Service needs to limit diesel bus idling near the Crested Butte ski area. The US Forest Service needs to provide consistency with local ordinances. Can the US Forest Service take action to limit diesel bus idling?
5. The US Forest Service needs to examine all the costs of a ski area project and make the developers pay for all mitigation. If it is too expensive then it should not be built. Can the US Forest Service require a proponent to determine all costs of a development, including off-site impacts, and to mitigate them?
6. Comment is that the US Forest Service is too lenient in the granting of use permits in wilderness and roadless areas in general -- for logging, ski areas and mineral extraction. What is your response?

I appreciate your willingness to begin discussing the issues the questionnaires have raised. I believe we both see this as an opportunity to do a better job. In terms of the timing of a response, I ask that you provide a written response by mid-September. The report must be presented in October. I realize that on some issues we may not have fully reached resolution by then. That's okay -- this effort should be seen as part of long-term efforts to limit AQRV impacts and air pollution.

Sincerely,

Dan Ely  
Air Pollution Control Division

wp 4.2.6.3

attachment



**APPENDIX E**  
**LETTER FROM THE**  
**USDA FOREST SERVICE TO THE**  
**AIR POLLUTION CONTROL DIVISION**

**APPENDIX F  
REVIEW OF CONCERNS  
FROM RESPONDENTS WHO BELIEVE  
FLMS CAUSED AIR POLLUTION  
BUT  
THAT IT DID NOT CAUSE AQRV  
IMPACTS**

Below is a respondent-by-respondent review of the concerns from 16 questionnaires that indicated that while air pollution was created by FLM activities, the respondent did not believe that direct, adverse impacts to AQRVs in Class I areas resulted.

### **Respondent #3**

#### *Written Concern:*

Issue 1) Federal agencies do prescribed burns to reintroduce fire into the ecosystem or to use fire as a tool to improve the habitat. Burns are only done on good smoke dispersion days. There could be smoke in and around Class I areas but only for a short duration. Respondent does not believe these actions have created direct, adverse impacts to visibility or other AQRVs at any Class I area in the State.

#### *Follow-up:*

No follow-up since the respondent did not indicate they believed there were any direct, adverse impacts to AQRVs in Class I areas from the activities.

### **Respondent #4**

#### *Written Concern:*

Issue 1) Prescribed burning by the USDA Forest Service in predetermined locations scheduled on an annual basis for reductions in logging slash, site preparation for tree reestablishment, wildlife habitat improvement, forage enhancement, vegetative community modification, visuals, biodiversity may cause impacts. However, respondent does not believe these cause direct, adverse affects to visibility or other AQRVs in Flat Tops or the Mt. Zirkel Wilderness' or Rocky Mountain National Park.

Issue 2) Additional burning occurs on private lands in spring and fall. These are small landowners, large ranches, and coal companies who may not have applied for burning permits. Without a tracking mechanism in place it is impossible to determine the affect upon visibility without including all landowners.

#### *Follow-up:*

No follow-up since the respondent did not indicate they believed there were any direct, adverse impacts to AQRVs in Class I areas from the activities.

#### *Division Discussion:*

Issue 2) Respondent mentions that there is no tracking of burns on private lands. This not entirely the case, however, it is true that the Division does not track *all* burns so it is unable to determine how much overall State-wide smoke emissions are due to land managers, private land owners, agricultural operations, etcetera.

### **Respondent #5**

#### *Written Concern:*

Issue 1) Controlled burning activities in various areas by the USDA Forest Service may temporarily impact AQRVs in the Maroon Bells/Snowmass and the West Elk Wilderness'.

#### *Follow-up:*

No contact attempted because the respondent believes there "may" be only "temporary" impacts from prescribed fire and the issue is very similar to those raised by other respondents who were contacted.

*Division Discussion:*

The Division requires that each prescribed burn be permitted and that modeling demonstrate that visibility problems will not be unacceptable. The Division acknowledges that, being complex human endeavors, prescribed burns will occasionally send smoke into Class I areas. Based on the low number of complaints received by the Division over the years and the types of comments by this respondent as well as others, the Division does not believe that this is a significant problem requiring additional response from the Division.

**Respondent #6**

*Written Concern:*

A number of activities performed by the USDA Forest Service create air pollution that may affect AQRVs in the Rawah or Eagles Nest Wilderness':

Issue 1) Prescribed burning. No specific fires have likely created AQRV problems in these Class I areas and prescribed burning reduces fuel loading available during wildfires, thus decreasing overall potential emissions.

Issue 2) Unpaved roads may create fugitive dust. This may occur on the east side of Rawah and much of it is private land. Respondent does not believe there are any AQRV impacts from this.

Issue 3) General recreational use (e.g., campfires, auto emissions) of forest lands near wilderness. There is limited open campfire activities in and around the Rawah Wilderness and Rocky Mountain National Park. In the future there will be fewer areas open to campfires, thus decreasing the potential for impacts. Respondent does not believe there have been any direct impacts from this.

Issue 4) Firewood permits on forest lands. Overall amount of firewood available has decreased in area. Where the products from the use of the firewood end up is not easily identified. Respondent does not believe this has led to direct adverse impacts.

*Follow-up:*

No follow-up since the respondent did not indicate they believed there were any direct, adverse impacts to AQRVs in Class I areas from FLM activities.

**Respondent #8**

*Written Concern:*

Issue 1) The USDA Forest Service has prepared a prescribed natural fire plan for the Flat Tops Wilderness. Decisions to manage fires that begin with lightning strikes as "natural" rather than with full suppression may create large amounts of smoke. However, in the long-term the smoke would probably be created in larger amounts in a wildfire situation in spite

of suppression efforts as fuel loads increase over time. Some visibility impacts could occur in the future.

*Follow-up:*

No follow-up either with the respondent or the Forest Service. The respondent talks about possible future impacts -- not current or past ones. An explanation of the Division's perspective on "prescribed natural fire" follows.

*Division Discussion:*

Issue 1) The use of "prescribed natural fire" by FLMs is another attempt to mimic the natural return cycle of fire in wildlands. The Division has permitted several prescribed natural fire plans and generally agrees that the careful use of such fires is better than total suppression. The Division recognizes that the full suppression of fire in these areas is not realistic nor responsible. As fuels build-up over time, the potential for catastrophic wildfire increases. The issue is how well fires are monitored in relation to the various aspects of the prescription and the response of the FLM when a particular fire goes out of prescription -- that is, becomes a wildfire. The Division's main concern about this practice is that during very active fire seasons when FLMs are overwhelmed by the number and scale of fires, not all wildfires can be suppressed at the same time -- there are simply not enough resources to fight all fires at once and some fires are not containable in the short run. Prescribed natural fires that are allowed to burn, then exceed prescriptions, and become wildfire may be allowed to burn for some time until resources are available to fight it or it begins to threaten human health, life, welfare and/or other natural resources and becomes a high priority fire. The Division has discussed its concerns with the USDA Forest Service. During a recent prescribed natural fire in the Flat Tops Wilderness, the Division was impressed by the amount of monitoring and attention the fire received by the USDA Forest Service. The Division's point is that all parties need to recognize that the time when problems occur is most often when a system is stressed and that will be during an intense fire season. The Division is not aware of any actual significant problems with prescribed natural fires to this point in time -- should they occur in the future the Division may respond with increased regulation.

**Respondent #9**

*Written Concern:*

Two federal land manager activities may affect AQRVS in the Flat Tops, Eagle's Nest or Maroon Bells/Snowmass Wilderness' but are not believed to do so:

Issue 1) Prescribed burns sometimes occur near Class I areas. Their purpose as a management tool include removal of logging residue, wildlife habitat improvement, maintenance of natural ecosystems and fuel reduction for minimizing wildfire impacts. While fire and the resultant smoke are part of the natural ecosystem, efforts are made during a prescribed fire to reduce its smoke impacts using best available control mechanisms (BACM). These include burning during favorable climatic and meteorological conditions, reducing the fuel loading (i.e., encouraging public collection of fuel wood or lop and scatter of logging slash) and reducing the amount of fuel burned at one time.

All prescribed burns by an FLM must be permitted by the Colorado Department of Public Health and Environment, who keeps a record of such fires. As part of the submittal for permitting, each burn must be analyzed using the Simple Smoke Estimation Model (SASEM). The output of this model must indicate no violation of the National Ambient Air Quality Standards. Its output also includes an estimation of the visibility impact of the project to sensitive receptors including important or scenic views identified by the public as well as state and federal land management agencies. Thus, through the Colorado State permit system, the use of SASEM and the implementation of BACM, prescribed burns are planned beforehand and conducted to avoid adverse air quality impacts to sensitive areas, including Class I Wilderness areas, from smoke.

Issue 2) Air quality impacts from ski area developments and expansions must be disclosed in an environmental analysis of the proposed project. Air pollutants of concern related to ski area developments include visibility, PM<sub>10</sub>, nitrogen oxide and sulfur dioxide. To date, no expansion has been approved where an analysis indicated implementation would result in adverse air quality impacts to nearby Class I wilderness areas.

*Follow-up:*

No follow-up since the respondent did not indicate they believed there were any direct, adverse impacts to AQRVs in Class I areas from FLM activities.

**Respondent #10**

*Written Concerns:*

Issue 1) Limited amounts of prescribed burning in the area to remove slash and debris from the forest creates air pollution but does not create adverse impacts to AQRVs in Rocky Mountain National Park or the Rawah Wilderness.

*Follow-up:*

No follow-up since the respondent did not indicate they believed there were any direct, adverse impacts to AQRVs in Class I areas from FLM activities.

**Respondent #11**

*Written Concerns:*

Issue 1) Rocky Mountain National Park conducts prescribed burning projects to restore and maintain the ecosystem. The Park receives burning permits from the State and recently has begun using a smoke estimation model to ensure that no smoke violations occur. The respondent believes that smoke from prescribed burning is necessary and acceptable if dangerous fuel loadings along the front range are to be reduced. These burns are of short duration and using smoke estimation modeling are performed when conditions disperse and minimize smoke. The respondent does not believe there have been any direct adverse impacts to AQRVs in the Rocky Mountain National Park or to the Rawah Wilderness.

*Follow-up:*

No follow-up since the respondent did not indicate they believed there were any direct, adverse impacts to AQRVs in Class I areas from FLM activities.

### **Respondent #13**

#### *Written Concerns:*

Issue 1) Heavy visitor traffic to Mesa Verde National Park certainly creates dust and emissions pollution within the Park boundaries. No individual or agency is directly responsible -- just a fact that goes with being a major tourist attraction. Respondent indicated it was "unknown" as to whether these emissions would result in direct, adverse impacts.

#### *Follow-up:*

No follow-up since respondent did not believe the emissions were due to federal land manager activities nor did they believe there were direct, adverse impacts to AQRVs in Class I areas from the activities.

### **Respondent #14**

#### *Written Concerns:*

Issue 1) Controlled/prescribed burns that the Bureau of Land Management does in the Disappointment Valley and Spud Patch areas could lead to AQRV impacts in the Weminuche Wilderness or Mesa Verde National Park. Burn areas are generally west of Mesa Verde and the Weminuche and prevailing winds likely push smoke toward them. This may result in impacts.

#### *Follow-up:*

No follow-up with either the respondent or the Federal Land Manager.

#### *Division Discussion:*

Issue 1) Additional permitting requirements imposed recently by the Division should help any problems created by smoke from burns in that area.

### **Respondent #15**

#### *Written Concerns:*

Issue 1) Open burning of forest waste. It is unknown whether this creates direct, adverse impacts in Rocky Mountain National Park or the Rawah Wilderness.

#### *Follow-up:*

No follow-up. Respondent did not indicate they believed there were direct, adverse impacts nor did they identify a specific situation the Division could follow-up on.

### **Respondent #16**

#### *Written Concerns:*

Issue 1) Rocky Mountain National Park plans on conducting and has conducted burns in the Park. Burns of this type are intended to reintroduce natural "disturbances" into the ecosystem for vegetative and habitat management purposes. Another factor that is policy driven vs. schedule driven are naturally caused fires ("Prescribed Natural Fires") that, if within the policy prescriptions set by the Park, are allowed to burn while being monitored and, if needed, managed by Park personnel. Arapaho-Roosevelt National Forest may have a similar two-tier plan. There will be temporary and intermittent AQRV impacts. In the respondent's

view the objectives of these programs are very important to the health and vitality of the ecosystem. These fire management plans also help reduce the potential for catastrophic life and property-threatening wildfires, particularly within the National Forest where there is an awkward commingling of public and private lands. Respondent believes that the benefits of prescribed fire management far outweigh the temporary impacts.

Issue 2) Respondent indicates that a large reservoir is to be built or is in the planning stages on Muddy Creek in the Kremmling area in Grand County. This drainage is upwind of Rocky Mountain National Park. Land disturbance and clearing of vegetation could leave large areas of bare ground susceptible to wind and subsequent air pollution for the life of the construction phase. Not sure which agencies involved or if there would be any direct, adverse AQRV impacts to the Park.

Issue 3) The Northern Colorado Water Conservancy District has been conducting silver iodide cloud seeding operations from 15 propane-fueled generators above Willow Creek Reservoir west of the Park. The hope is to increase snowpack moisture content by as much as 15%.

*Follow-up:*

No follow-up because it concerns prescribed fire (an issue addressed by other respondents) and two issues outside the scope of this evaluation.

**Respondent #19**

*Written Concerns:*

Issue 1) Use of prescribed fire outside the Maroon Bells/Snowmass and West Elk Wilderness' in the spring and fall when human activity within the Wilderness' is low. Respondent indicated they did not believe there were direct, adverse impacts to Class I areas.

*Follow-up:*

No follow-up since the respondent did not indicate they believed there were any direct, adverse impacts to AQRVs in Class I areas from FLM activities.

**Respondent #20**

*Written Concerns:*

Issue 1) Prescribed burning on both USDA Forest Service and Bureau of Land Management lands near the Flat Tops Wilderness create temporary air pollution but respondent does not believe the burning creates AQRV problems.

*Follow-up:*

No follow-up since the respondent did not indicate they believed there were any direct, adverse impacts to AQRVs in Class I areas from FLM activities.

**Respondent #23**

*Written Concerns:*



Issue 1) Prescribed burning near the Maroon Bells/Snowmass and West Elk Wilderness' creates air pollution. Since 1977, the respondent is not aware of any prescribed burns that affected the Maroon Bells/Snowmass Wilderness.

Issue 2) As far as the West Elk Wilderness Area, the USDA Forest Service has done prescribed burning on the southwest, south and east sides of the Wilderness area.

a) The prescribed burning on the south and east sides have been burning slash/debris piles in late November 1990-1993 and had little if any impact on visibility or air quality within the Wilderness. Burn duration was short with little smoke evident by the next morning in each case. Prevailing winds are generally southwest to west so some smoke headed for the Wilderness but for a short duration and when few, if any, people were in the Wilderness.

b) Since 1980 the USDA Forest Service has burned approximately 2000-2500 acres in the Soap Creek drainage on the southwest border of the West Elk Wilderness. The type of burning is a broadcast technique that underburns the ponderosa pine and Douglas fir trees to reduce fuel loadings and prepare the ground for new trees. Each day of burning requires good to excellent smoke dispersion as part of the burn plan; however, smoke plumes did enter the Wilderness on occasion. Burning has taken place in the spring when few people were in the Wilderness. About 20% of the burning has occurred in the fall prior to or after big game season to minimize visitor impacts. Mechanical treatment has been done some in lieu of burning to prepare sites for new trees and reduce fuel loadings. This treatment works well in flatter grounds but is ineffective on steep ground or rocky areas. Respondent is not aware of any informal or formal complaints with regard to visibility or air quality in the West Elk Wilderness.

*Follow-up:*

No follow-up because the issues raised were addressed by other respondents.

*Division Discussion:*

The respondent did indicate that smoke from burns on the southwest side of the West Elk Wilderness did likely enter the Wilderness. There have been no complaints about smoke impacts in the Wilderness and the burns have been conducted during times of low visitor use. More intensive permitting requirements recently imposed by the Division will hopefully prevent any future impacts.

**Respondent #24**

*Written Concerns:*

Issue 1) Both within Rocky Mountain National Park and in surrounding National Forest areas there have been prescribed burns and more are being planned when conditions warrant.

Issue 2) The Northern Colorado Water Conservancy District, a quasi-public agency working with the Bureau of Reclamation, has conducted cloud seeking activities west of Rocky Mountain National Park in the Willow Creek drainage. Silver iodide is injected into a burn mix to form iodide crystals which attract moisture.

Issue 3) The Northern Colorado Water Conservancy District contracted with the Dept. of Energy to construct a raw water pipeline from Carter Lake to Broomfield. Other municipalities have bought-into the project and it will create additional urban density along the Front Range along with air pollution products of growth. Easterly winds will push that air pollution into Rocky Mountain National Park.

Issue 4) There is a proposal to extensively gravel mine the northern buffer of the Rocky Flats area. Fugitive dust as well as disturbance of plutonium particles could result and once again and easterly wind could push pollutants into the high country.

*Follow-up:*

No follow-up was determined to be necessary as prescribed fire has already been addressed by other respondents and the Forest Service and the other issues were outside the scope of this evaluation.