

**Wildland Fire - Air Quality
Workgroup Meeting
Jan 27-29, 1997
San Diego, California**

NOTE: The Wildland Fire-Air Quality Workgroup Meeting was organized into three workgroups. These notes cover each of the workgroup discussions in turn. The closing plenary sessions are reporting sessions for each workgroup to the group as a whole. The content of those reports are summarized at the end of each set of workgroup notes. Also at the end of each set of notes is a recap of status and action items as of the end of January.

Opening Plenary Session

John Core, WESTAR Director, welcomed the group, provided an overview of the wildland fire - air quality dilemma and commented about the Council's long history of involvement in the issue. A video jointly produced by WESTAR and the USDA Forest Service on Forest Health - Air Quality issues was shown to orient the group to the issues.

Ken Woodard, EPA OAQPS, then briefed the group on organizational structure of the workgroups and their relationship to the interagency Steering Committee as well as the FACA process. The Science & Technology workgroup is charged with providing support to policy development, identifying ongoing technical information projects, the technical basis for prescribed fire and providing the tools needed to implement policy. The Communications and Outreach workgroup will develop a communications plan and public message while coordinating with ongoing activities in the Fire Policy Education Task Force. The Policy Issues Workgroup is charged with the responsibility of developing recommendations for wildland fire policy relative to implementation of the PM/ozone NAAQS and regional haze programs.

Members of the Steering Committee and chairs of each of the workgroups then addressed the group to outline issues they planned to discuss. Jim Douglas, Department of Interior presented the Department's expectations for the workgroups and emphasized the importance of keeping the discussions of the group within the boundaries of the Steering Committee Guiding Principles.

Joe Neicheril, moderator, then discussed communication principles and his role in the process, emphasizing the importance of prioritizing issues, developing organizational structure, milestones and deliverables prior to closure on Wednesday afternoon.

Policy Issues Workgroup Discussion

Monday afternoon, following the plenary session:

Policy Issues Workgroup members in attendance:

Ken Woodard, Chair	Claire Hong	Bob Palzer
Jim Douglas	Alan Kesterke	Gary Rothwell
Kathy Ellis	Don Matlick	Carolyn Salmon
Brian Finneran	Brian Mitchell	Ken Snell
Rich Fisher	Don Motanic	Dennis Thompson
John Gillen	Nick Nikkila	Don Arkell

Ken Woodard led off the discussion by suggesting that there were at least four principle areas the policy should address: NAAQS, Conformity, PSD, Visibility

He then asked the group to begin listing specific questions under each of these areas. The discussion led to a series of questions, some of which fit into more than one of the areas, some of which were questions for the Science and Technology Workgroup. The workgroup decided to focus its initial efforts on getting all questions out, then to identify those which should be addressed by the S&T workgroup.

Policy Questions

- . Should the policy apply to public and private lands?
- 2. What is the definition of "Wildland Fire?"
- . Is the policy going to apply to rangeland, which could be considered agricultural land, as well as forest land? Is timberland considered agricultural land? TO BIN.
- . What is the scope of the policy?
- . How is smoke from prescribed burning distinguished from other smoke for regulatory purposes? Could the distinguishing criteria include whether there was profit?
- . What should the role of the tribes be? How should existing agreements with tribes be handled?
- . What, if any burning can be excluded from the policy? Possible categories include wildfire, agricultural prescribed burning.
- . Should EPA's Natural Event Policy interface with the wildland burning policy?
- . Should SIP's be revised to account for policy?
- . Should (the impact from) any prescribed fire emissions be excluded from being counted as NAAQS exceedences or violations?

11. What does policy accomplish, once it is adopted? Will it become guidance to states that if followed would provide some shielding from federal sanctions if NAAQS are violated anyway? Will it become regulation? Will it affect state smoke management plans? Will it become the basis for cooperative operations between states and FLM's to manage smoke?
12. How will ignition sources be handled?
 - . If it is assumed that prescribed burning under this policy will produce NAAQS exceedences or violations, how will public health be protected?
 - . What does the public get in return?
 - . What are the elements of a minimum smoke management plan?
 - . How do we pay for adequate monitoring?
 - . What level of monitoring should be required? Individual burns?
 - . What is short-term vs. long-term? How long?
 - . What is a significant contribution to air quality levels in populated areas?
 - . How much mechanical work can be used to accomplish desired objectives?
 - . What sort of regional planning process can work for FLM's, state and local air managers? What do they need to discuss?
 - . How do we recognize all the different types of fires and reason for them? Which types does the policy apply to?
 - . What is the definition of "Ambient Air?" Can NAAQS exceedences occur on federal land?
 - . Should nuisances be considered in smoke management planning?
 - . How big an area should be covered by (smoke management) plans?
 - . How should state line, public/private issues be handled in the (smoke management) plans?
 - . How much flexibility will the definition of NAAQS violation provide to accommodate smoke impact in populated areas?
 - . How does AOI/AOV concept fit in, when areas are designated for SIP purposes?
 - . Should burning be prioritized according to benefit? Ecological health vs. property protection vs. Safety? Should safety and health be treated differently?
 - . How is cost/benefit handled? Would land managers deal with C/B?
 - . Should "naturally occurring" smoke emissions be considered as "pre-european" background?
 - . How long before the "payoff" (improved air quality from reduced wildfire, and other benefits)?

Questions for the Science and Technology Workgroup

1. Where is burning needed for ecological health reasons?
2. Can we overlay maps of such areas with non-attainment areas and more accurately gauge the extent of the potential problem? .
3. Do we know the spatial relationship between fuel densities relative to 3. nonattainment areas? How fine a scale is needed?

4. How do we speciate between sources? By receptor modeling? What is adequate is an adequate monitoring system design?
 - . What are the reasons for prescribed burning? We need to better understand why burning is proposed.
 - . Is there a "bright line" that defines an unsafe forest fuel density? Based on forest fuel densities, can safety concerns be prioritized such as "intermediate, near-term or long-term"?
 - . What is the status of available technologies for alternatives to prescribed burning?
 - . What is the background, natural level of smoke given historical wildfire activity?
 - . On a per acre basis, does a prescribed burn produce more or less fine particulate emission than a naturally ignited wildfire?
 - . What are the short term vs long term impacts and benefits of an increased fire program?
 - . Will increased prescribed fire activity likely exceed airshed capacities?
 - . How much mechanical treatment of fuels can be justified?
 - . Will prescribed burning have a major impact on violations of NAAQS?
 - . What meteorological conditions will accommodate/allow burning? Does favorable meteorology occur seasonally?

The Policy Issues Workgroup received the following questions from the S&T Workgroup, which was a consolidated list of issues they believed should be of common interest to both groups: **(note: answers from Policy Issues Workgroup are in boldface)**

Questions from the Science and Technology Workgroup

- . What is the spatial scale of impacts that should be addressed? Are we to address impacts of each burn or conduct regional scale analysis ? **Both**
- . Is there a desire to have impacts evaluated by monitoring? **Yes**
- . Is there a desire to have state smoke management plans critiqued to identify the best elements of each? **Yes**
- . Are we interested in emission reductions or impact reductions? **Both**
- . Should this group try to respond to the technical recommendations of the Grand Canyon Visibility Transport Commission? **Task not yet assigned, but some coordination with GCTC should occur**
- . Is there a need for regional smoke management plans? **Yes**
- . The group can develop an assessment of modeling, monitoring, emission inventory systems and address their limitations if it would be helpful. What does the Policy Issues group want? **Assessment of modeling capabilities, whether real-time monitoring and emission inventory tracking is feasible**
- . Should different policies developed for the eastern states vs the western states. Can this be done under a single national policy ? **Policy should be broad enough to meet needs of both eastern and western states**

. Does the Policy Issues group want to know if the increase in prescribed burning really reduces wildfire emissions? **Yes**

Tuesday Morning

As a straw proposal for grouping the policy questions from the previous afternoon, including those from the Science and Technology Workgroup. Ken suggested the questions be grouped in the following categories:

- Scope/Applicability (of policy)
- Planning, including land use and smoke management
- Response to Impacts/how Impacts are treated
- Follow-up actions/Monitoring Impacts

The group decided to deal with questions from the Science and Technology Workgroup first, since some policy direction was desirable for them to proceed. The S&T questions were also grouped, along with the policy questions into each of the four categories above. Questions were consolidated where there was overlap. The whole day was devoted to responding to the most critical issues where there was consensus, and refining the groupings of the rest of them.

The decision was made to accomplish at least two elements of the policy document by April 7, 1997: Completion of a draft Scope of Policy section, and development of an outline for the document itself.

Once the issues were grouped, those which appeared to fit in the Scope/Applicability section were addressed in turn.

Wednesday Morning

The Workgroup resumed addressing each issue identified under the Scope/Applicability section. Assignments were made to task groups to finish the Scoping/Applicability section, and to draft an outline of the policy document. In addition several research questions were given to assigned individuals and small task groups. The tasks and assignments are listed after the question and answer parts of this summary.

The following are summaries of the discussions of the issues identified under the Scope/Applicability section. Where there was consensus on resolution, it is indicated by **Conclusion:**

Scope/Applicability questions and answers:

- . Are we interested in reducing emissions or impact?
Conclusion: Yes. Impacts are of primary interest, but the sense is that areas of impact can be very large, particularly for visibility, and the aim of the smoke management plans should include components for minimizing emissions as well as using meteorology for decisions on scheduling burns or in the case of wildfire, suppressing them.

. Should the policy address the issues on a national, regional scale, or attempt to deal with them, burn-by -burn?
Some comments favored a ‘tiering’ approach. It was generally recognized that if this was to be a ‘National’ policy, it would have to be very flexible to accommodate regional, and local scale situations.

3. What lands should be affected-public/private, federal/tribal/state?

Conclusion: All of the above. Affected lands should be those lands where fire is being used as a resource management tool.

. Does the definition of “Wildland” include rangeland as well as forests or woodlands? What is “agricultural land,” and “Commercial operation?”

This is a research question.

. Which pollutants are covered?

Conclusion: PM (NAAQS), Nox (NAAQS and conformity), VOC (NAAQS for O3 and conformity) should be addressed.

. Should any kind of burning be excluded from the policy?

Conclusion: There would not be “exclusions” per se, but there could be special cases, such as de minimus thresholds (tons, acres, etc.) or purposes, which could be handled differently.

7. Should the policy interface with the Natural Events Policy? Does the source of ignition matter? That is natural lightning-ignited wildfires, vs. prescribed fires.

Conclusion: All wildland fires should be covered by the policy. Source of ignition may be a factor in how the policy is implemented. It was suggested that Escaped/Fire Suppression Activity (E/FSA) policy be used as a means of evaluating options. It was generally thought that the purpose (of the burn) would be the key. It was recognized that terms may be different between federal and non-federal agencies.

. Does the definition of “Ambient Air” come into play-Could the concept of posting a notice of health risk constitute a “fence line” within which the definition of “Ambient Air” would not apply? Could the public’s proximity to fire be used as a criterion? Does the definition apply to tribal lands?

This is a research question.

. How is nuisance to be handled?

Conclusion: Nuisance impact mitigation should be handled at the state level. There should be a tie-in with the communication/education activities, and should be addressed by the Communication Workgroup.

10. Do prescribed fire impacts consume PSD increments?

This is a large issue that will be addressed by the policy. It could depend on the purpose of the burning activity.

On Tuesday, the Policy Issues Workgroup posed a number of issues which fell into the areas of Planning, Response to Impacts and Follow-up and Monitoring. The following list are the issues by category. This list can be used by the task group working on Policy document Outline.

Questions/Answers regarding Planning

- . How should regional planning be coordinated, integrated? Should there be a single regional plan for land management/smoke management? How will the land management/smoke management planning be integrated with SIPs, and their air quality, visibility issues?
- . How will Tribal Implementation Plans (TIPs) fit in?
- . What are the trade-offs for degraded air quality? Are they to be social and economic trades? How will Rate of Progress/milestone tracking needs of the SIPs be met in land management/smoke management planning? Can short term degradation be traded for long term improvement within the context of the Clean Air Act? What is given in return?
- . What are the minimum components of smoke management plans?
- . Are airshed capacities exceeded?
- . What analysis is there of alternative tools? Should planning include risk assessments, cost-benefits, etc.
- . If prescribed fire consumes PSD increments, how is it to be done?
- . How should FLM demonstrate conformity?
- . How will prescribed fire emissions be treated, in relation to regional haze?
- . What are acceptable visibility/regional haze goals?

Questions and Answers regarding Response to Impacts

- . We need better guidance on smoke management techniques, RACM/BACM.
- . Should smoke management plans contain provisions for responding to NAAQS exceedences, vs. NAAQS violations? What is the scope of such responses? This is an item before the FACA.
- . How does the Natural Events Policy interface? (Other areas have this question also)
- . What should be the SIP/TIP response (to exceedences or violations)?

Questions and Answers regarding Follow-up and Monitoring

- . What happens if there is an exceedence?
- . What do you get in return (if an exceedence results from a burn)?
- . How much can be afforded? Who pays? How is payment made?
- . Who is responsible for monitoring?
- . What is an appropriate level of monitoring? Fire-by-Fire, or regional?

6. What are the consequences of failure to follow the smoke management plan, and policy? How and who enforces the plan and policy?
 - . There should be provision to re-visit the policy and plans to ensure they are working and effective. Such review should have all stakeholders involved.

Questions and comments that went to the “Bin”

- . What changes are there in the NWCG Smoke Management Guidelines, either in the scope, or tools/technical areas?
- . Does increased prescribed fire result in less “wildfire” emissions, overall? If so, over what period? One approach is to use case studies, such as the recent Grand Ronde case study, and expand. This is a possible area for the Communication Workgroup to consider.
- 3. What is the proper vehicle for implementing the policy? Should it be a “Policy,” or a “Regulation,” recognizing that there are enforcement implications.
 - . Guiding Principle 18 of the Steering Committee to be revised to include review of other planning besides fire management plans.
 - . “Bailey’s Ecoregions” is a possible information source, providing a broad map of areas with short fire-return-interval fuels.
 - . We need a fire and air pollution glossary, so that we use and understand common terminology, such as “agricultural land.” There may be a suitable glossary in the draft NWCG.
 - . What is known about Hazardous Air Pollutants (HAP) emissions from wildland fires? Should HAP’s be addressed in planning or policy?
 - . Cost of control is an issue in looking at alternatives to prescribed burning.

It was consensus that we need expertise that is not at this meeting. We should also have some grounding from experts in fire ecology, land management planning, fire policy, air policy procedures.

It was suggested that the Policy Issues Workgroup might consider a matrix approach to organize the presentation of a policy:

Purpose of fire/Requirements	NAAQS	PSD	Visibility	Conformity	Etc.	Etc.
Safety/Property Protection	X		X		X	
Ecological Health	X	X	X	X		X
Range Restoration	X	X	X	X	X	
Wildfire	X					

Where “X” means there are some CAA requirements which should be addressed as part of the land management/smoke management planning.

Research Questions Assignments

1. How are tribes, tribal lands covered by existing statute/regulation/policy?
Ken Woodard, Don Motanic
- . Definition of Agricultural Lands, and what exclusions might be made from this policy? Dennis Thompson, John Gillen, Kathy Ellis
- . What is known about HAPs under different burning regimes? No assignment.
- . Could there be proxies/surrogates used for all pollutants, such as PM for NOx and VOC, CO for HAPs, etc.? No assignment.
- . Develop category designations for wild land fire purposes. Ken Snell, Alan Kesterke, Brian Finneran, Brian Mitchell
- . Are there situations where an area impacted by wildland fire smoke should not be considered to be ambient air? Claire Hong

Task group Assignments

1. A draft of the scope of the policy will be completed by February 24, using as a basis the early conclusions reached during the meeting.

Task group members are Rich Fisher, Ken Snell, Don Matlick, Dennis Thompson, Carolyn Salmon, Ken Woodard.

***A conference call of the Scoping task group is scheduled for February 10 at 1:00 PM EST. Ken Woodard is setting this up.**

2. A draft outline of the policy document will be completed by February 24, using the question areas of Scope/Applicability, Planning, Response to Impacts, Follow-up/Monitoring. Alternate presentation could include the matrix form of an outline.

Task group members are Brian Mitchell, Don Motanic, Don Arkell.

***A conference call will be set up for the second week in February.**

Status Report to the Participants (recap of progress)

Ken gave an overview of the status of the workgroup discussions. He said the goal is to have a draft “Scope” section finished, and an outline of the policy document ready for review by April 7. He reviewed the Conclusions reached.

First drafts of the Scope section and outline are targeted for February 24, ready for discussion at a conference call of the Policy Issues work group scheduled for March 4.

Initial conference calls of each of the task groups are scheduled for Feb. 10 and later on that week.

There were several research questions which were assigned to work group members. These included:

- Whether areas could be excluded from ambient air definition
- Develop categories of wildland fires
- Develop a means to distinguish agricultural lands from wildlands
- Clarify how tribal lands are handled now, under statutes and regulations

Policy Issues Workgroup
Process Status and Near-Term Activities
1/31/97

A set of issues of interest to the PI workgroup are listed in “policy” and “technical” categories.

Technical issues forwarded by PI to S&T workgroup were consolidated there. A consolidated set of policy issues were forwarded to PI from S&T. PI responded to those questions as follows (**bold**):

- . Spacial scale of assessment of smoke impacts? **Both regional and local**
- . Monitoring of impacts? **Yes**
- . Find best elements of existing smoke management plans? **Yes**
- . Interested in emissions reductions, or impact reductions? **Both**
- . Respond to technical recommendations of GCVTC? **Haven't addressed specifically, but there should be some coordination**
- . Need for regional smoke management planning? **Yes**
- . Assess modeling capabilities, monitoring and emission tracking limitations? **Yes, including whether real-time monitoring and emission tracking is possible**
- . Different policies for eastern and western states? **Policy should be broad enough to enable different needs in east and west to be addressed.**
- . Need to know if wildfire emissions will eventually be reduced, if Rx fire is increased? **Yes**

S&T's consolidated list was consolidated further with the additional issues developed by the PI workgroup. They were divided into four discussion areas:

- . Scope/Applicability
- . Planning (land management and smoke management)
- . Responses to Impacts
- . Follow-up/Monitoring

Initial determinations were made among some of the issues placed in the scope/applicability category. These determinations were provided to the S&T workgroup, and are summarized as follows:

- Both impact and emission reductions should be addressed.
- All wildlands, where Rx fire is used for management would be covered.
- PM, NOx, VOC would be addressed.
- No exemptions for categories of burning, but special cases or deminimus might apply.

- All wildland fire would be considered using consistent procedures.
- Nuisance conditions would be handled at the state level.

Two task groups were formed:

1. Draft a Scope/Applicability section, using the initial issue determinations made by the PI workgroup. Workgroup members assigned to this task group are:

Rich Fisher	Ken Snell
Don Matlick	Dennis Thompson
Carolyn Salmon	Ken Woodard

A conference call is set for this task group for February 10, at 1:00 PM EST, set up by Ken Woodard.

2. Draft an outline of the policy document, using the issues grouped in the Planning, Response to Impacts and Follow-up/Monitoring categories to start. Workgroup members assigned to this task group are:

Brian Mitchell	Don Arkell
Don Motanic	

A conference call will be set for the second week in February, set up by Don Arkell.

Four research questions were assigned to other members:

1. Propose a scheme to classify fires by type, purpose, ignition, suppression activity, etc. Members assigned to this task group are:

Ken Snell	Alan Kesterke
Brian Finneran	Brian Mitchell

2. Determine if there may be situations where an area impacted by wildland fire smoke could be excluded from the definition of “ambient air.” Members assigned to this task are:

Claire Hong

3. Determine how tribal lands are considered under federal policies, and what are the existing agreements. Members assigned to this task group are:

Don Motanic	Ken Woodard
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4. Determine criteria for agricultural land, which is to be handled through a different process at this time. Members assigned to this task group are:

Dennis Thompson	John Gillen
Kathy Ellis	

The entire PI workgroup is scheduled for a conference call on March 4, at 1:00 EST. The call will be set up by Ken Woodard

Science & Technology Workgroup Discussions

Monday Afternoon

The following participants were in attendance

Dwight Atkinson, Chair	Larry George	David (Sam) Sandberg
Bill Donaghu	John Core	George Flanigan
Gary Blais	Mark Fitch	Donna Lamb
Rob Wilson	Bill Leenhouts	Ed Glick
Roger Stocker	Pete Lahm	John Kennedy

Chair Dwight Atkinson requested that each member of the workgroup outline the science and technical issues that they felt would be essential to the Policy Issues Group. The issues below were general discussion issues:

1. How much burning will occur, when and where into the future? Are the Grand Canyon Visibility Transport Commission (GCVTC) emission projections still appropriate? To what degree? What needs to be done to update the information? This knowledge is essential to understanding the scope of the issue..
2. With increased funding for BIA, it's burning program will increase but it is difficult to know what the tribes will do, how their burning programs will be coordinated on the state level.
3. What is the airshed's capacity to accommodate increases in prescribed burning in light of new PM standards?
4. At what scale should a modeling analysis of increased prescribed burning be conducted? Are the modeling tool adequate? What aspects of the various, existing smoke management programs are innovative or work especially well? What kind of coordinated air monitoring program is needed to assess impacts/regional haze?.
5. Are the policy people interested in air impacts of smoke or smoke emissions? Both?
6. Should the Science & Technology Workgroup address the recommendations for wildland fire adopted by the GCVTC and, if so, which elements should be nationwide? Are the GCVTC recommendations appropriate for considerations in this forum? Where does the Commission's work fit into this process?
7. What regional-scale models are available? How well do they perform? Will the land managers be burning on more days per year if they get increased funding or will they be doing more acreage on the same number of days?
8. Should the issue of wildland burning be viewed more widely than just smoke - air quality? Shouldn't other values, including firefighter safety be brought into these considerations? Need to be realistic about our expectations. Guidance is needed.

- . Does the policy group have an adequate feel for what is needed from Science & Technology? What technical information is needed to evaluate smoke management program effectiveness? Emission inventories will be needed in the future to implement future strategies.
- 10. Fire science should play an important role in this process in developing the tools needed to increase the public value of solutions. Should we be looking at the broader benefits of wildland fire and large scope issues?

(Recalling that the recommendations from this group are to be forwarded to the FACA Subcommittee on PM/ozone and regional haze, it was felt that the group's activities should be rather narrow).

- . 11. The workgroup should try to identify what can be done quickly vs. what will take years to complete and consider these factors as priorities are identified.
- 12. Costs of biomass removal are important as are the long-term impacts on soil compaction. State-by-state flexibility is important because of differences in ecosystems.
- 13. What are the most effective elements of a smoke management program? How do you evaluate what is really RACM or BACM? State air agencies need to be able to evaluate the effectiveness of their state programs or specific aspects of burning decisions?

The Policy Issues Workgroup prepared and referred a list of questions for the Science & Technology Workgroup as follows:

Initial Questions for the Science and Technology Workgroup from Policy Issues Workgroup

- 1. Where is burning needed for ecological health reasons?
- 2. Can we overlay maps of such areas with non-attainment areas and more accurately gauge the extent of the potential problem? .
- 3. Do we know the spatial relationship between fuel densities relative to nonattainment areas? How fine a scale is needed?
- 4. How do we speciate between sources? By receptor modeling? What is adequate is an adequate monitoring system design?
- . What are the reasons for prescribed burning? We need to better understand why burning is proposed.
- . Is there a "bright line" that defines an unsafe forest fuel density? Based on forest fuel densities, can safety concerns be prioritized such as "intermediate, near-term or long-term"?
- . What is the status of available technologies for alternatives to prescribed burning?
- . What is the background, natural level of smoke given historical wildfire activity?

- . On a per acre basis, does a prescribed burn produce more or less fine particulate emission than a naturally ignited wildfire?
- 10. What are the short term vs long term impacts and benefits of an increased fire program?
 - . Will increased prescribed fire activity likely exceed airshed capacities?
 - . How much mechanical treatment of fuels can be justified?
 - . Will prescribed burning have a major impact on violations of NAAQS?
 - . What meteorological conditions will accommodate/allow burning? Does favorable meteorology occur seasonally?

The Science & Technology workgroup identified some of the same issues, and an attempt was made to consolidate the questions from the Policy Issues Workgroup with the issues raised earlier in this group. The result was a consolidated list of questions, referred to the Policy Issues Workgroup as follows: **(note: the responses from the Policy Issues workgroup to each of the questions are included here in bold type)**

Questions from the Science and Technology Workgroup

- . What is the spatial scale of impacts that should be addressed? Are we to address impacts of each burn or conduct regional scale analysis ?

A: **Both**
- . Is there a desire to have impacts evaluated by monitoring?

A: **Yes**
- . Is there a desire to have state smoke management plans critiqued to identify the best elements of each?

A: **Yes**
- . Are we interested in emission reductions or impact reductions?

A: **Both**
- . Should this group try to respond to the technical recommendations of the Grand Canyon Visibility Transport Commission?

A: **The group is not yet assigned this task. There should be coordination between EPA and the successor agency to GCVTC.**
- . Is there a need for regional smoke management plans?

A: **Yes**
- . The group can develop an assessment of modeling, monitoring, emission inventory systems and address their limitations if it would be helpful. What does the Policy Issues group want?

A: **Assessment of modeling, real-time monitoring and real-time emission tracking capabilities**
- . Should different policies developed for the eastern states vs the western states. Can this be done under a single national policy ?

A: **The policy should be general enough to allow the needs of both East and West to be addressed.**

9. Does the Policy Issues group want to know if the increase in prescribed burning really reduces wildfire emissions?

A: **Yes**

Tuesday Morning, following the morning Plenary Session

Chairman Atkinson noted that the group needs to adopt three actions by the end of the day:

1. Priority Issues
2. Form subgroups for each issue
3. Set milestones for work products

To help focus the discussion, Donna Lamb of the Steering Committee reviewed each of the Guiding Principles. Regarding applications to private/state lands, it was felt that elements of the Federal Wildland Fire Policy and Program Review should apply to non-federal lands to the extent possible. Should this group think about means of measuring regional haze progress? How can this workgroup help meet these principles rather than question the value of them?

Dwight then suggested that each of the following issues be reviewed and tasks placed into a matrix of air quality modeling, air quality monitoring, emission inventories, ecosystem health, smoke management programs, public safety issues and alternatives to prescribed fire. It was suggested that each group address costs and feasibility of implementing recommendations. Each group should then address information quality and data gaps, inventory and current work.

Science & Technology Areas of Common Interest

From discussions thus far, It was agreed that there were several technical topics that everyone agreed would likely benefit the Policy Issues Workgroup:

1. How much will be burned in the future? When? Where? What is the reliability of existing studies, emission factors (wildfire, PNF and Rx fire). Is there a need for a real-time inventories?
2. What models should be used for local and regional scale analysis? What constitutes acceptable model performance?
3. What are the technical issues involved in reviewing a smoke management plan? What are the technical aspects of an enhanced smoke management plan and how are they evaluated?
4. What are the roles and limitations of air monitoring to evaluate the impacts on local and regional scales of wildland fire? What are the limitations of existing monitoring? What monitors are under development and when will they be available?

5. What are the elements of a national wildland fire emission inventory data base that reports actual, historical emissions? What is required to implement such a program? Emission factors used to build the inventory need to be reviewed.

6. What is the technical basis for increasing prescribed burning? Will wildfire activity decrease if prescribed burning is increased? What implications does this have to public safety, fire fighter safety ?

7. How do you evaluate the ecosystem impact of each of three possibilities: no burning, the occurrence of a wildfire within the area or a prescribed burn / PNF
Regarding mechanical treatment, how much can be permitted without damaging long term productivity of the land?

8. What technical information does the Communications Workgroup need?

9. How much burning can be accommodated within the proposed PM/ozoneregional haze programs? What technical tools can be used to evaluate impacts on an annual and 24-hour basis?

The above nine issues were then used to construct a matrix of issues vs areas of technical expertise as shown below. It appeared that there were three principle issue groups among the nine consolidated issues. It was then agreed that three issue groups should be formed to address the areas as shown in the matrix below. The purpose of using a matrix format was to organize the effort into manageable segments, and to help identify each of the areas of knowledge that would be needed by each task group to complete their tasks.

Science & Technology Issues Groups

<i>Issue Group</i>	<i>Air Quality Factors Dave Sandberg, Lead</i>			<i>Ecosystem Health & Safety Bill Leenhouts, Lead</i>	<i>Smoke Mgt. & Alternatives Colleen Campbell, Lead</i>		
	Air Modeling	Air Monitoring	Emissions Tracking	Ecosystem Health	Wildfire Safety	Smoke Mgt Programs	Alternatives to Rx Fire
<i>1. How Much Burning, When & Where</i>				X	X		X
<i>1b. Reality of Existing Studies & Emission Factors;</i>			X				
<i>1c. Are Real-time Inventories Needed?</i>	X		X			X	
<i>2a. What Models for Local & Regional Use</i>	X		X				
<i>2b. Model Performance</i>	X	X	X				
<i>3. Smoke Management Plan RACM/BACM</i>	X	X				X	
<i>4. Role of Monitoring & Limitations</i>	X	X				X	
<i>5. Elements of a National Rx & Wildfire Emissions Tracking Programs</i>	X		X			X	
<i>6. Data to Support Rx Fire Program Expansion*</i>	X		X	X	X	X	
<i>7. Evaluation of Ecosystem Impacts</i>				X			X
<i>8. Public Communication Tools</i>	X	X	X	X	X	X	X
<i>9. How much burning can be accommodated within air quality limits?***</i>	X	X	X			X	

* Includes the issue of emission offset benefits of prescribed fire vs wildfire smoke.

** Requires policy determinations of how much smoke impact is acceptable in terms of PM air quality and regional haze.

Cross-Cutting Issues

It was also apparent that there were some cross-cutting issues, which were set out as guiding principles for each of the task groups to keep in mind as they worked through their assigned issues:

Cost and Other Practical Limitations	Information Quality and other Data gaps
Inventory and critique of current work	What can be done by December
What must be done past December, 1997	Look for unintended consequences
Be mindful of one-size-fits-all implications	

Science & Technology Task Group Members:

Air Quality Factors

Sam Sandberg, Lead	Roger Stocker
Rob Wilson	Gary Blais
John Kennedy	

Ecosystem Health & Safety

Bill Leenhouts, Temporary Lead	Ed Glick
Bill Donaghu	

Smoke Management & Alternatives

Colleen Campbell, Lead	Pete Lahm
Mark Fitch	Terry McGuire
George Flanigan	

Finally, the Science and Technology Workgroup developed an additional set of questions for the Policy Issues Workgroup:

Issues to be forwarded to the Policy from Science & Technology

1. Where will the PM NAAQS determinations of attainment/nonattainment be made.. In the near vicinity of prescribed fires? Within wilderness areas where prescribed natural fires are active? Or only in urban areas?
2. Is there a need for near real-time emission inventory derived from satellite imagery?
3. Should smoke management plans be incorporated into SIPs as an element of control strategies? (Note: in many states, such plans are adopted as enforceable statutes and are important elements of PM and visibility protection SIPs which are federally enforceable)
4. Do we need a national wildfire and prescribed fire emissions inventory?
5. What special graphics, maps, videos, etc are needed by the Communications Workgroup?

6. Should legislators be targeted as an important audience, especially with respect to developing and implementing program costs?

7. Science & Technology needs to recruit a lead for the Ecosystem Effects Issues Group. Members are also needed. This matter needs to be brought before the Steering Committee.

**Science and Technology Workgroup
Status and Near-Term Activities
1/31/97**

Technical issues are listed which the S&T Workgroup consider essential for the PI Workgroup. These are consolidated with issues raised by the PI Workgroup into the following issue groups:

Modeling, Monitoring, Emission Inventories
Ecosystem Health, Safety
Smoke Management Programs, Alternatives (to Rx Fire)

Specific questions are grouped within the above issue groups:

How much burning is needed for ecosystem health, and where
What regional models are useable and acceptable
What are the elements of a smoke management plan
What is the role (s) of monitoring and modeling
What are the elements of an emissions inventory data base
What are the technical reasons for increased Rx burning
How will the effects on ecosystem health be evaluated
What are the communications needs
How much burning can realistically be accomplished

Three task groups are formed, to deal with each of these issues as appropriate (The S&T workgroup developed a matrix to show which of the issues above would be taken up by each task group. Some issues will be addressed by more than one task group.)

1. Air Quality Factors, including monitoring, modeling emission inventories. S&T Workgroup members assigned are:

David (Sam) Sandberg, Chair	Roger Stocker
Rob Wilson	Gary Blais
John Kennedy	

2. Ecosystem Health and Safety, including fire suppression safety. S&T Workgroup member assigned are:

Bill Leenhouts (Temporary Chair)	Ed Glick
Bill Donaghu	

3. Smoke Management and Alternatives. S&T Workgroup members are:

Coleen Campbell, Chair	Pete Lahm
Mark Fitch	Terry McGuire
George Flanigan	

The S&T Workgroup feels strongly that additional expertise is needed to complete their tasks, and is asking for supplemental membership. Particular emphasis should be given to non-federal representation, such as state forestry officials.

The S&T Workgroup forwarded a second set of discussion topics to the PI Workgroup and the C&O Workgroup, These were primarily requests for what kinds of technical data is needed for policy decisions, relationship of SMP's to SIP's, how non-attainment areas would be designated and whether state legislators should be an audience to deal with.

Communication and Outreach Workgroup Discussion

Monday Afternoon

The participants in attendance were:

Jerry Gause, Chair
Joe Carriero

Sandra Silva

Following the plenary session the Workgroup developed a Scope-of-Work statement as follows:

The Communications & Outreach Workgroup will develop a plan to address issues in the following categories:

1. Contents of Messages
 - a. Address the “double standard” of increasing smoke emissions (from increased prescribed burning, while trying to achieve cleaner air; public vs. prescribed burners.
 - b. Description of differences between wildfire and prescribed fire effects.
 - c. Overcome lack of credibility and trust (of the public) after 80 years of communicating suppression effort.
 - d. Other messages developed by the other workgroups
2. Identify the Audiences and focus the messages accordingly.
3. Identify the methods of communication
 - a. Don't duplicate existing efforts and coordinate with existing projects and products
 - b. Improve definitions for the public; simplify, clarify.
 - c. Describe how to develop and implement a communication plan.

The workgroup began to develop its plan with the following elements:

1. The mission of the plan is to disseminate information; to bring awareness and understanding on prescribed fire and its effects on forest health and air quality; to get support for prescribed burning as a management tool.
2. The message content should contain the following, though the message may vary as the audience varies:
 - Explanation of the “double standard”
 - Description of wildfire and Prescribed burning effects
 - Other messages developed by other workgroups

3. The audiences include:

- Government agencies and their associations. These include federal, tribal, state and local governments. Their associations include NESCAUM, STAPPA/ALAPCO, WESTAR, ECOS, WGA, NGA, etc.
- Environmental organizations, such as Sierra Club, NRDC.
- Industry and their associations, such as NMA, NFA, AMC, etc.
- General public
- Congress

4. There are a number of delivery methods:

- Kits, which include briefing papers, press releases, EPA statements (background), directions for use, video, poster/brochures and websites.
- Articles for existing newsletters
- Town Hall meetings
- Workshops, training sessions
- Tours for support groups, and other concerned groups and organizations
- Public service spots for TV and radio
- Use of existing forums, as appropriate

It was established that the plan must provide continuous communication. It must provide for consistent dissemination of information to various stakeholders, though the language may depend on the various audiences. Language should be simple and clear enough to reach the proper level of audience.

5. There was a concern about funding the communications plan. Funding would have to be identified for development and production of material, for delivery, for travel to various meetings to make presentations.

6. The plan should contain an implementation element including

- Management and direction component which identifies who manages the program, sets priorities, assigns tasks, etc.
- Who will actually implement the plan
- who 'kicks it off,' with an initiative of some kind

7. The plan should have a time line, which schedules communication events, and schedules other efforts

8. The plan should establish where communication occurs, such as in 'hot spots,' general nation wide effort, or both.

9. There should be a feedback loop, to monitor effectiveness of communication efforts, and a means to make adjustments to the plan as indicated.

Tuesday and Wednesday

The workgroup continued to look at identifying the audience. The audience was classified into two types:

There were supportive audiences, who could help in educating/training/information dissemination. These might include NASF, NWCG, AFA, SAF. These audiences could also help by following up and checking results of communication and outreach efforts.

The second group are the concerned audiences

- Air pollution control associations, state and local air agencies
- environmental organizations, such as LDF, Sierra Club NWF, EDF, etc.
- Industry and associations, including cattlemen associations, timber and forestry associations. These audiences usually have newsletters and other existing information delivery systems which could be used.
- Affected citizens, including students in different age groups
- Federal agencies, including USDA, DOI, EPA, DOD, DOE
- Neighboring countries-Canada and Mexico
- Congress, including committees and staff

Other outreach efforts were identified:

- Fire Policy Education Team (FPET)
- State outreach efforts, such as Florida's
- Federal outreach efforts, such as posters by FWS, Boise, Prescribed fire in wilderness (multi-agency), CFFP (Forest Service, et al.)
- Grand Canyon Commission
- American Forest Products Association (high gloss publications)
- Fish& Wildlife Foundation publications
- National Wildlife Federation
- Others

The workgroup felt it went about as far as it could, until it gets additional information from the other workgroups. There were some specific information needs identified:

- What other messages, than the ones identified already, do the other workgroups believe need to be communicated?
- What sort of resources will be available to work with (This is a question about getting more participants)
- Who will do the work of implementing the plan?
- What other outreach efforts are needed?
- Who is in charge? (Who gives direction to the planning process?)
- What are the expectations for each time frame-what are the critical dates?

Report to Participants

Jerry Gause said that the C&O work group had adjusted the plan from Tuesday. The work group needs to establish time frames for the work of the other two work groups, so that C&O can sit in on those discussions, and better coordinate the communications planning with the other work.

Communications and Outreach Workgroup Status and Near-Term Activities

The C&O Workgroup has developed a rough outline of a communication plan. The outline has three basic elements at this time:

Contents of the Message(s)

- Explain the “Double Standard,” that is why are we allowing more smoke from Rx fires, while requiring additional controls on others.

- Explain the effects of Rx burning vs wildfires

- Other messages, brought up by the other two workgroups

- Need to overcome lost credibility from long period of promoting total suppression

Audience Identification

- Government Agencies, and their associations

- Industry and industry associations

- Environmental groups

- General Public, Students

- Congress

Methods of Delivery

- Information Kits, to be used by others

- TV, Radio spots

- Existing newsletters

- Workshops, seminars

- Build on existing efforts, don't duplicate them

The C&O Workgroup expressed concern about more participation on the workgroup, as there were only 3 participants. There is also the concern about adequately funding the outreach program, how the communications effort be managed

There is a need for tighter communication among the workgroups. C&O needs to know who gives the workgroup direction, the critical dates in development of the policy, to be aware of, and have input to the issues as they are being discussed. The C&O Workgroup feels it went as far as it could, needing now to focus on the determinations of the PI and S&T workgroups.