

Meeting Notes, Wildland Fire/ Air Quality Policy Workgroup

Orlando, Florida

May 20-22, 1997

BACKGROUND

A national effort is underway to return fire to the landscape through a new Federal policy for wildland fire. The *Federal Wildland Fire Management Policy and Program Review Report*, published in December 1995, affirms that “wildland fire, as a critical natural process, must be reintroduced into the ecosystem.” The report recognizes that fire is an integral component of forest/ecosystem health and that it can yield long-term benefits, including forest renewal and forest health, while protecting public health and maintaining air quality through smoke-management and other techniques. The principles, policies, and recommendations of the report were endorsed by all Federal Land Management agencies and the Environmental Protection Agency (EPA.)

EPA, Department of the Interior (DOI), the U.S. Forest Service, States, Tribes, industry, environmental groups, and other stakeholders are working in partnership to develop a national policy that integrates two public policy goals: (1) to allow wildland fire to function, as much as possible, in its natural role in maintaining healthy ecosystems, and (2) to avoid the adverse impacts of air pollution from fire on air quality and on public health and welfare.

A new national policy is being developed by the Wildland Fire and Air Quality Workgroup, which includes representation from the aforementioned stakeholders. The workgroup comprises a Steering Committee and three subgroups: the Communications and Outreach Workgroup, the Policy and Issues Discussion Workgroup, and the Science and Technology Workgroup.

The Wildland Fire & Air Quality Policy will outline how land managers and air quality regulators can work cooperatively to increase prescribed burning for ecosystem management while meeting environmental and public health goals.

These notes are from the second workgroup meeting in Orlando, Florida.

Tuesday, May 20, 1997

Opening and Welcome

The session was opened by Don Arkell at 8:30. He reviewed background information regarding the reasons for the committee and a follow up from San Diego. He went through the goals for this meeting.

Orientation

Jim Douglas - Planning for Federal Lands

Jim presented an overview on land management processes, concentrating on similarities throughout the agencies. Planning sets priorities, goals for managing the lands. Land management plans focus on a specific piece of land. Land management plans are based on Federal laws, regional strategies and individual agency goals (works on a time scale of 10- 15 years). The next level of planning are activity and implementation plans, which are also subject to NEPA, and which involve stakeholder and public involvement. The next levels of planning are operational plans which don't involve public comment, but do involve other affected agencies such as local fire districts in the case of fire planning. (external communication limited in this phase).

Issues: Adequate FLM planning guidance to address AQ issues Air agencies knowledge of process/level of participation.

This tiered approach applies only to federally managed areas. Private ownership can be quite different. Jim provided handout material which illustrated overall structure.

Bill Leenhouts - Reasons for fires

Bill started out by saying wildfire has always been a part of the ecosystem. Currently about 6 million hectares per year are burned over with wildfire. During pre settlement times about 60 million hectares burned each year. Of this 60 million, 60% of the lands are still wildland areas. Fire changes structure, recycles nutrients, and affects global atmospheric conditions due to emissions of smoke and gases. For example, soot captures solar radiation. By contrast, modern biomass utilization only changes the structure.

Ecosystem stability - Nutrients Calcium, Magnesium and Potassium are captured in the crowns of immature trees. As trees mature more and more nutrients are stored in the tree depleting soil moisture and nutrients. Low intensity fires not high enough to volatilize the nutrients (600K needed to volatilize).

Janice Peterson - Emissions Factors

Janice said that in general, emission levels from wildland fires are based on biomass consumed, not area consumed. Estimating emission potential starts out with assessment of fuel loading which can be determined through remote sensing or field estimates. Fuel consumption estimates are most commonly based on models which depend on knowledge of fuel moisture and burning practices. Emissions factors are also based on what pollutant one is interested in (ie, CO, CH₄, PM₁₀, etc.). These factors have a high degree of uncertainty (+/- 30% to +/- 80%). Emissions factors are also segmented by flaming and smoldering phases of the burn. Burning to reduce one pollutant in most cases means a reduction to all pollutants based on efficiency concerns. Most

uncertainties in the process are created by fuels loading estimates as compared to emissions factors and consumption estimates.

On regional emissions inventories, the work done for GCVTC is quite coarse. In Colorado, a smoke management MOU provides a simple tracking system. PNF and wildfire, post burning assessment of acres burned provide useful information from specific fires. Washington has a very accurate method, based on fuel consumed (auditing needed). Other factors are also tracked. In other words, there are many levels of sophistication-from States that don't track emissions at all, through those which do intermediate tracking (CO), to some which do advanced and expensive tracking (WA).

Ken Woodward responded to questions about where this process is going, and timeframes.

Ken laid out the basic policy framework. We, the workgroup, are writing recommendations to EPA, which in turn will eventually adopt EPA guidance for air regulatory agencies on how to work with prescribed fire activity. Hopefully, this work will lead to development of smoke management plans that will help states deal with the particulate matter standards.

Each of the issues brought up at this meeting need to be addressed here by June and then a preliminary policy statement will be drawn up by mid-July. A second draft will be completed by the 1st week in August in time for the next steering committee meeting in September. This would be a Phase II product on the standards, basically a refinement of the new standards.

Jim Douglas - Information and data issues.

There is a lot of variation in the efforts made in inventory developments. PFERS (CA) probably is the most advanced at the moment. Jim showed examples of how emissions might be derived, using DOI and FS forms to track fire information. He asked, Why would we want to track emissions?

- 1)tracking of trends
- 2)communications - Public and interagency communication and regional concerns
- 3)consistency and comprehensiveness -

There was general discussion on what would be necessary to track for a national type of a database. What makes sense from a resource side and a customer side. Where is the balance? Need a uniform tracking and reporting system.

Joe Paisie - Air Quality Management.

Joe began with a basic review of the NAAQS and why the new standards for PM2.5, ozone and regional haze are now being considered. Focus is based mainly on the annual standards, which may be the limiting standard in many areas.

Air Quality management relates emissions and meteorology to air quality. Air quality is the basis of determining what reductions are necessary, to achieve NAAQS, comply with PSD, Conformity, etc. Finally, improvement in air quality is the means to test adequacy of implementation and evaluation of the results. A discussion then followed regarding appropriate background air quality for use in determining PSD compliance. General conformity only relates to nonattainment and maintenance, and only applies to federal actions. In regional haze, requires a balance between Rx and visibility concerns.

Brian Finneran - OR state perspective on the SIP process

Brian conducted a basic review of what a SIP is, using Oregon's SIP as an example of how emissions from wildland fires are handled. OR and WA have SMPs as a part of their SIPs. If increased burning occurs, over that which is in the SIP, a SIP revision might be necessary based on potential increased impacts.

Joe Paisie - Background on the FACA process

Joe indicated that the FACA process was basically a way for EPA to get advice on the implementation of the new standards. Phase I will address development of the air quality management framework. Phase II will focus on emission reduction strategies, attainment dates, sanctions, etc. Phase I concepts deal with AOV/AOI's, and the concept that regional transport might be an issue. A major area of concern is dealing with regional haze. The concept of forming multistate RAMPs (regional air management partnerships) to share responsibility for dealing with air quality and transport issues RAMPs would have no regulatory powers. Phase II would deal with boundaries for AOI's, incentives, classifications and general integrated implementation strategies and other issues.

Lunch

Brian Mitchell -Guiding Principles

Brian went through the revised Guiding Principles document to highlight changes developed in the most recent steering committee meeting. Stressed that this is a process we are establishing here and not the actual policy.

Group questions

1.) What is our message concerning equitable treatment of PM emission sources wildland fires vs. Industrial sources?

Jerry Gause led the discussion

The message should be tailored to the reasons why burning is to occur. He stress that there would be different emphases in communication with the public, versus that with industry. For example, forest health might appeal to industry, for reasons of increase

commodity potential; Application of BACM/RACM might be more appealing to concerned public, as one way of providing public health protection.

2.) What should be included in a smoke management plan?

Coleen Campbell led the discussion

Coleen went through RACM document and smoke management plans from states to try and come up with a base recommendation for a SMP.

SMP's may not need to be mandatory, but to get credit for emission reductions, EPA has traditionally required that measures need to be enforceable. This would also help in the equity issue where you can demonstrate that prescribed fire also enforceable.

3.) What data on recently completed and future planned wildland fires are required for SIPs and to implement SMPs? How can data be acquired? How accurate and current? System to obtain and maintain data? National emissions tracking recommendations of GCVTC?

Gary Blais led the discussion

Data needs -

- a) SMPs - Meteorological measurements, winds, stability, etc.
Tonnes of fuel burned
- b) SIPs - Emissions Inventory data....

Breakout session preview

The group was briefed on breakout sessions the next day.

Continue to work on the group questions, each workgroup communicate needs to others. Workgroup goals are to finish recommendations on the group questions asked, as well as followup issues.

Adjourn for the Day

Wednesday, Thursday, May 21,22

POLICY ISSUES WORK GROUP

Breakout Sessions Discussions

Options for addressing PSD Requirements

Brian Finneran presented three options for determining whether wildland fire emissions consume PSD increment. The following issues were discussed:

- PSD applies to new, non-temporary sources of air pollution. We must define when wildland fires should be considered to be temporary, intermittent (e. g. seasonal) or continuous sources. A large increased wildland fire program affecting an airshed may no longer be a temporary source of pollution in that airshed. Can an increased fire program to “catch up” to natural conditions be considered temporary? Is a catch-up program over 5 years long temporary? Is a minimum level of fire to maintain a healthy ecosystem a continuous source? Perhaps fires during specific seasons should only consume increment during that season.
- Can the air quality baseline for PSD be adjusted to include impacts from wildland fires under “presuppression” conditions? We asked the Science and Technology Work Group (S&T) to identify “procedures for establishing a level of natural emissions/impacts from wildland fires.”
- The PSD baseline is established for an area with air quality monitoring data or by modeling.
- The PSD increment is not changed as the baseline air quality is raised, until the increment bumps up against the National Ambient Air Quality Standard (NAAQS). In other words, if the difference between the baseline and the NAAQS is less than a full PSD increment, the allowable degradation in air quality is only up to the NAAQS.
- Under option 1, wildfire (or unwanted fire) emissions would not consume increment because it is a temporary, natural source of emissions. Under Option 2, a link between wildfire (unwanted fire) and prescribed (managed) fire is recognized. Option 2 is based on the premise that total emissions will decrease if the acres burned with managed fire is significantly increased, replacing acres burned by wildfires. A cap on total emissions from unwanted and managed fires would be set. The cap would have to include a long-term (maybe 5-year) average of wildfire emissions. Managed fires could be increased in the years that have less wildfires. Under Option 3, wildland fire for the purpose of ecosystem management, conducted under a smoke management program, would be exempt from consuming increment.

Options for Addressing Visibility Requirements

Brian Mitchell discussed options for addressing wildland fire impacts on visibility. The goal of the visibility program is to reduce impairment due to manmade air pollution. A question was raised again regarding methods for determining the natural amount of fire (and smoke) that should occur in the wildlands. This question was referred to the S&T Group.

What is a natural fire? What are the types of, or purposes for wildland fire that should be considered “natural?” There are unwanted, or wildfires. We grouped managed (prescribed) fires under four general purposes:

- Public Safety: fires to reduce fuel loadings in Uba interface areas and prevent unwanted fires.
- Ecosystem Management: fires to (1) “catch up” and restore balanced ecosystems by reducing fuel loadings; and (2) mimic nature and maintain balanced ecosystems (including fires to kill shrubs and maintaining grass stands on private grazing lands).
- Commercial benefit: fires to (1) improve the carrying capacity of cattle grazing lands; (2) dispose of land clearing debris, logging slash and other wastes.
- Domestic benefit: fires to dispose of waste materials.

States must make “reasonable progress” toward reducing visibility impairment of regional haze. How this is done does not have to be addressed in this policy statement, but will be addressed in EPA’s proposed Regional Haze Program.

Options for Addressing Conformity Requirements

Claire Hong and Kathy Ellis presented three options for how Federal agencies could show conformity with State implementation plans (SIPs). Federal projects in nonattainment areas with emissions above de minimus levels must be shown to conform with State SIPs. The de minimus levels of emissions are tied to the air pollutant and the classification of the nonattainment area.

The options presented emphasized two main ways of showing conformity to a State’s SIP: (a) FLMs and State regulators would include estimates of future managed fire emissions in the SIP emissions inventory, or (b) create a rebuttable presumption that burning under a **very stringent** smoke management plan would be sufficient to demonstrate conformity.

Two of the options discussed address new issues raised by the proposed Fine Particulate matter NAAQS. They would require changes to the current conformity guidance.

How Can Wildland Fires on Indian Lands be Regulated?

Indian Tribes are treated under EPA policy as sovereign governments. If the Tribe establishes its

own air quality program, that program would regulate burning on the Tribe's lands. Otherwise, EPA is responsible for managing air quality on Tribal lands in consultation and agreement with the Tribal government.

The policy statement developed by this Work Group will be submitted to EPA's American Indian Environmental Office for review.

How should SIP, land use and smoke management planning be coordinated?

Federal land management plans and project plans must meet or exceed SIP requirements. This is ensured through National Environmental Policy Act (NEPA) review and conformity requirements.

Activities of private land managers and the Dept. of Defense have been included in SIPs. These groups are not projecting any large increases in future emissions.

Within a smoke management plan, organize a burner's coordination group to schedule burns and share the available air quality information. See the California Prescribed Fire Incident Reporting System (CAL PFIRS) as an example coordination tool.

What air quality factors are considered in land use planning, fire planning, burn/newborn decisions?

The Northwest Forest Plan is a good example of air quality factors.

Factors considered in burn/no burn decisions are the same as those in smoke management planning: amount of smoke, meteorological forecasts, location of sensitive areas, etc., plus reported smoke intrusions.

What are appropriate short-term responses to air quality impacts from wildland fires?

Conduct real-time ambient monitoring in sensitive areas to forecast developing problems.

Implement an emergency action plan. See the example plan developed by WESTAR.

Adverse impacts can be investigated to determine if a prescription designed to minimize impacts was followed. Did conditions change? Was the prescription based on adequate information? Did something go wrong? (malfunction)?

Air regulators could review escaped fire incident (i.e. malfunction) reports.

What are appropriate long-term responses to NAAQS exceedances?

Review the smoke management plan to see if it should be up-graded to avoid or minimize potential future adverse impacts.

How should adverse impacts in nonattainment areas be treated?

When wildland fire emissions could impact areas that are already nonattainment, investigate the following:

- Will wildland fires occur during the same season that NAAQS exceedances typically occur?
- Are wildland fire emissions likely to significantly impact annual average pollutant concentrations?
- Were alternatives to the use of fire to achieve land management objectives considered in the NEPA analysis? Will alternatives be followed where appropriate?
- Is an annual cap on emissions from all types of wildland fires feasible? (See Columbia River Basin Environmental Impact Statement) Can it be demonstrated that small impacts from managed fires will offset potentially massive impacts from unwanted fires?

Remaining concerns of the Work Group:

- Kathy Ellis: Can DOD meet conformity requirements and liability concerns arising from 3rd party lawsuits?
- Peter Black: Will fire policy conflict with other Federal requirements such as EIS, ESA, etc.?
- Lyle Carlile: How will fire policy integrate with Tribal activities?
- Jim Douglas: Not comfortable with building purpose of fire into the policy in great detail. We need to handle the distinctions between fires on public and private lands appropriately in the policy.
- Claire Hong: We need to be more systematic in handling application of policy to Ozone, NO_x and other pollutants besides PM.
- John Gillen: How is EPA planning to use this policy? How will the State know when it has met the provisions of this policy, or what must be done to adjust the State's program? (What's the Problem, John?)
- Dennis Thompson: The policy should identify simple requirements for States with no current SMP and not a lot of wildland fire.
- Ken Snell: Don't want to see private land managers further burdened with requirements because Federal land managers need to increase the use of fire. Federal agencies should be expected to meet higher standards.
- Carolyn Salmon: The public does not see a distinction between smoke from fires on public vs private lands.
- Don Motanic: We need to be able to explain this policy and wildland fires in personal and ecological terms the public will understand. The public must understand the consequences of not reducing current fuel loads.
- Gary Rothwell: Policy should promote regional thinking and not intrude on State/Tribal sovereignty.

Roger Erb: Policy needs to keep State in control. Why does EPA need a big new policy? What's the problem, FLM's have been meeting SIP requirements.

Brian

Mitchell: Concerned about allowing an increase in the "natural" level of visibility impairment. Need to provide for visitor enjoyment in Class I areas. Also, concerned about equitable treatment of fire with industrial-type emission sources.

Nick Nikkila: The policy must pass the "breathers" laugh test and treat all users of fire and other regulated source equitably. Do not create loopholes for any one group (FLM's, Tribes or private).

Margie

Perkins: The policy needs to fit with State regulators' programs for adopting regulations and policy, implementing control programs (permits, etc.), monitoring compliance with regulations, and taking enforcement actions and monitoring air quality.

SCIENCE & TECHNOLOGY WORKGROUP

Breakout Sessions

Question: What data on wildland fire are needed for SIP development? Where does information exist now? Update frequency? What systems are in place to obtain and maintain data? Will this encompass the national emissions tracking recommendations of the GCVTC?

The S & T group had asked for some specific direction from the Policy Issues group on The previous day. The PI group reported back to the S&I group with the following determinations:

Purpose for the data is to add to the emissions budget for air quality planning in non-attainment areas, PSD increment use, visibility improvement progress and as the basis for conformity determinations. Data could be used locally to evaluate smoke management programs and as a basis for future planning. It is also needed to establish a case that increasing prescribed burning now should decrease emissions overall, due to reduced wildfire;

There is no national data set (not a data base). These data will be managed at the state level;

For SIP purposes, the data is to be projected into the future, using past information for the projections. The time period of the projections is to be 10 years, starting now, or some near-term future year;

As for accuracy, the emission estimates should be realistic, and in terms of tons per year, assuming good practices (not RACM/BACM?) to minimize emissions. Pollutants included are PM10, PM2.5, Ozone precursors;

The geographic areas covered will be by administrative unit, such as forest, park, district, military installation, etc.

Federal agencies (which have adopted the policy of increasing use of Rx burning as a management tool) will develop data sets. Air regulators could ask for additional information from other entities not increasing burning, if they wish to have more comprehensive emission inventories;

All current and projected fire activity, including wildfire should be included in the data sets.

Discussion Points made, Conclusions, Further Action

Generally data needed for SIP's would include #acres burned, fuel type, pounds/ton emission factors, meteorology.

Information is normally GIS based, by vegetative type.

Emissions are usually easier to calculate for prescribed burning, less easy for prescribed natural fires.

States now use best available information for SIPs. Accuracy varies.

Data needs for non-attainment SIPs are based on a time period (year) where AQ violations found. Regional Haze requirements start 3 years after promulgation.

Existing data for wildfires includes: historical records (point of ignition), acres burned. Accuracy in estimating fuel burned varies, uses ignition point fuel model. Better techniques could be used.

Existing data for prescribed fire includes acres burned, fuel loading. Publications include: Peterson & Ward Emission Factors, MAR targets, Hardy/Snell national map of potential fire regimes, several states, FL, WA, AZ have good records. In other areas data is not extensive. Data gathering should get better in the future.

The S & T group would suggest changes to the PI group (for technical reasons)-

- That emissions information be compiled by burn-program implementers, not just federal land managers, particularly since the unplanned wildfire component can occur anywhere;
- That "increased" (Rx burning) be replaced with "constrained," or "controversial."

The data should be in a format to demonstrate conformity and to be useable for future AOI analysis.

Baseline year should be 1999, calculated from the previous 3 years' average, to allow use of information available now, augmented by data collection over the next three years.

Require one consistent minimal level of data collection for all burners in all states.

Augment as necessary to reflect added data requirements where the current or projected level(s) are of special concern. The level of additional information is determined through agreement between the air regulator and the burner.

Data sets could be presented thus:

For Prescribed Fire

Lowest----->Highest

Date: Year Season Month Day/Hour

Location: District/Subunit

Elevation: Meters/Feet>MSL

Lat-Long:

Area Burned: BlackAcres/Hectares

Cover Type/Profile: Tree/Brush/Grass

Purpose: Economic/Fire Safety/Ecosystem

Consumption: Inferred Severity

Modeled/Measured Class of weather

For Wildfire

Date:, etc.

A national emission tracking system might be feasible, but we should avoid duplication. Determine success of other national programs. The data used for air quality should also be used for emissions tracking.

Future record keeping should be required for evaluation purposes, and to document whatever the trade-off is between wildfire and prescribed burning. A better fuel consumption model for unplanned fires should be developed.

ACTION ITEM: Sam Sandberg will develop this issue further, and will send out for comment in two weeks.

Question: Should Special Purpose Monitors be deployed during the wildland fire season? If so, where? Type of monitor? Sampling times? Analyzes?

Discussion Points Made, Conclusions, Further Action

There are a number of reasons SPM's should be deployed, to measure impact. These include:

- Characterization of Smoke Impact
- Evaluate Impact on Public
- Evaluate Compliance with NAAQS
- Determine Smoke Dispersion Pattern
- Validate Air Quality Modeling
- Determine Fire Fighter Smoke Exposure
- Provide Information for Burn Bosses

Monitoring protocol should be developed in partnership with air regulators and FLM's

Samplers could be owned by either air agencies, FLM's (Private & Indian land holders?)

Where to monitor is undecided

Types of monitors range from Federal Reference Method (FRM) or other. Real time information is important for some applications.

ACTION ITEM: Gerry Guay and John Kennedy to write up issue paper for review and comment in two weeks.

Question: What approaches have previously been taken to estimate a "natural" emission background (pre-suppression)? What is appropriate methodology? How are background levels converted to PSD increments and Air Quality values for use in PSD analyses? How should "natural" emissions be used in this policy?

Discussion Points Made, Conclusions, Further Action

Definitions of "Background," "Base year," do not apply well here. What is meant is what are basically starting point emissions, assuming some level of fire frequency, unaltered by suppression. The term, "STARTING POINT," or "STARTING CONDITION" will be used here.

There was much discussion on the question from the Policy Issues group "How do you convert background conditions to ug/m³? (For estimating PSD increments or NAAQS exceedances)

There are several starting point options--Today, Yesterday (historical past) and some future date.

Starting Conditions for each option include:

- Land use patterns
- Fuel loading
- Fire activity

Reasonable combinations might include:

- Future Land Use, Current Fuel Loading and Future Fire Activity;
- Historic Land Use, Current Fuel Loading and Current Fire Activity;
- Historic Land Use, Historic Fire Activity
- Current Land Use, Historic Fire Activity (Potential to Burn)
- Future Land Use, with high level of fire management
- Current Land Use, Current Fuel Loading and Future Fire Activity
- Current Vegetation Types, Historic Fuel Loading and Historic Fire Frequency

With this many, and more combinations, some further analysis is needed, perhaps presented as a three-dimensional matrix. Pros and Cons should be presented.

EXAMPLE:

The system used for the Grand Canyon visibility study included present land use pattern, historic fuel loading from ecological assumptions and historic fire activity level (a range) from tree ring analysis. It also compared the estimated 2040 level of prescribed fire activity to the historic fire activity level. Emissions per year were computed from the three components.

Pros: Emissions can be computed using these combinations

Cons: Very large emission levels are produced, which may not be acceptable as starting conditions for political and social reasons. The computed 2040 prescribed fire levels from the Grand Canyon Study did not include the wildfire component, and may have been constrained by assumptions concerning availability of funding. Prescribed fire acreages were what level of prescribed burning fire managers thought could be done. Averaging times for wildfire component needs to be as long as possible.

ACTION ITEMS: Sue Husari to work with Janice Peterson and Pete Lahm to better describe the methodology used to compute past emissions for the Grand Canyon study. Sue to complete draft write-up in two weeks

Question: How many hazy days would there be under Starting Conditions?

Discussion Points Made, Conclusions, Further Action

Can't go directly from annual emissions value to number of hazy days. Could go from an estimated number of days wildfires are burning to number of hazy days.

Question: What are basic elements of Smoke Management Plans? When should modeling be part of smoke management planning? What models should be used and under what circumstances? How should model input be obtained?

Discussion Points raised, Conclusions and Further Action

This discussion was presented after the Smoke Management subgroup had met. It appeared as a matrix, which covered Smoke Management Elements, Air Quality/Authorizing Agency Responsibilities, Land Management Agency (or other Burner) responsibilities.

Modeling requirements, types of models, information needs, methodologies did not get much discussion.

Elements included: Evaluation, Burn Planning & Authorization, Public Education & Notification, Emission Inventory, Enforcement, Evaluation. These elements and responsibilities appear as follows:

**SMOKE MANAGEMENT PROGRAM
BASIC LEVEL**

SMOKE MANAGEMENT ELEMENTS	AIR QUALITY/ AUTHORIZATION AGENCY (varies by state) RESPONSIBILITIES	LAND MANAGEMENT AGENCY RESPONSIBILITIES
Evaluate Smoke Dispersal	Assessment of airshed's potential to disperse smoke	ID burns to be conducted Burn Prescription Incorporation of Smoke Management
Burn Planning & Authorization	Process for making burn authorization	Training of burn personnel
Public Education & Notification	Health Advisories	Notification of potentially affected parties
Emission Inventory	Summarize Inventory and Evaluate trends	Notification of potentially affected parties
Enforcement	Evaluation of smoke management on a complaint basis	
Evaluation (Feedback)	Evaluation of smoke management on a complaint basis	Evaluation of each burn

ACTION ITEM: S&T Workgroup will provide comments to Coleen Campbell on this approach

Question: What wildland fire conditions minimize emissions and hazardous air pollutants? Which land management goals can be met under these conditions and which cannot?

Discussion Points Made, Conclusions, Further Action

Janice showed her emissions graph from her presentation. Two factors are principal in reducing emissions: Fuel loading, and combustion efficiency. Reduce fuel loading, reduce fuel consumption or emphasize flaming phase of a burn will reduce emissions. Alternatives to burning will reduce emissions. Reduced acres (assuming same fuel loading per acre) will reduce emissions.

Generally, (Peterson)the same factors that reduce one pollutant, reduce all pollutants, including HAPs.

Generally, (Peterson) emission factors are fairly well known, and fairly constant, in terms of pounds of pollutant per ton of material burned.

It is also probable that some land management or fire hazard reduction goals cannot be met, unless enough fuel is consumed, such as certain wilderness values (Class I air).

ACTION ITEMS:

Janice will provide draft write-up on conditions under which emissions are minimized from previous papers within two weeks.

Bill Leenhouts will prepare write-up of which land management goals and fire hazard reduction goals require high fuel consumption within two weeks.

AIR QUALITY COMMUNICATIONS & OUTREACH WORKGROUP

Breakout Sessions

The objective of the Communications and Outreach workgroup is to develop communications materials and a strategy to explain the relationship between two major public policy goals: (1) sound ecosystem management including the increased use of fire and (2) clean air and public health protection.

**Communications Planning - Wildland Fire/Air Quality Workgroup Meeting, Orlando FL:
May 21-22, 1997**

During the Wildland Fire/Air Quality Policy Workgroup meeting in Orlando, the Communications and Outreach Workgroup began developing a communications plan and identified key communications materials. Once completed, the Communications and Outreach (C&O) Workgroup will make these educational/informational materials available to target audiences. The

C&O Workgroup will either develop these materials or tailor existing materials for use by target audiences.

Target audiences will be encouraged to use the educational materials to develop their own specific information/outreach plans to localize the wildland fire story. Field offices will be encouraged to develop their plans in cooperation with State and local air quality management offices, forests ranger units, and other groups, as appropriate.

Development and dissemination of educational materials will be integrated with the work of the Education Working Team of the National Wildfire Coordinating Group (NWCG). This group is developing a far-reaching communications strategy based on the recommendations of the *Federal Wildland Fire Management Policy and Program Review Report*.

The educational/informational materials will support the overall mission of the Wildland Fire & Air Quality Workgroup and will be based on the following key messages:

1. There is a national movement to return fire to the landscape.
2. Fire is important and must be used.
3. Fire is an effective tool of ecosystem management.
4. There are different types of wildland fires.
5. Increased prescribed burning will result in long-term benefits for forest renewal and health.
6. Both mechanical treatment and wildland fire can accomplish land- and resource-management objectives.
7. National Ambient Air Quality Standards will be maintained.
8. Visibility in Class I areas will be protected.
9. Public health will be protected.
10. Federal agencies are committed to firefighter and public safety .
11. Increased used of planned fire will reduce the risk of catastrophic (unwanted, uncontrolled) fire.

Communications Materials Under Development

Fact Sheet- describing the mission and objective of the Wildland Fire & Air Quality Policy Workgroup

Briefing Papers- on a wide range of wildland fire and air quality issues, including the benefits of prescribed burning and the relationship between prescribed burning and EPA's national ambient air quality standards

Frequently Asked Questions & Answers- on a wide range of wildland fire and air quality issues

Communications Strategy - outlining communications materials under development, target audiences, and mechanisms for delivering key messages

Schedule and Next Steps

Most of the communications materials developed thus far are under review by the Policy Workgroup and the Science & Technology Workgroup. The Wildland Fire/Air Quality Policy Fact Sheet will be forwarded to the Steering Committee for review by July 14. Briefing Papers will be forwarded to the Steering Committee by July 30. Frequently Asked Questions & Answers are under development.