

Changes made in 2004 Operating Guide

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|-----|-----------------------------------------------------------|----------------------------|
| 1. | New Idaho Complaint Process and form | Sec. 10-1 and Append.6 |
| 2. | Added direction on “lumping” of burns into a single STAG. | Append.3 |
| 3. | Corrected SMU phone number and links to website. | Append.3 |
| 4. | Updated STAG numbering assignment “blocks”. | Append.3 |
| 5. | Removed Program Asst. form Composition of MU | Sec.6-2 |
| 6. | Added comment about contracted Wx position | Sec.6-2 |
| 7. | Added draft document Proposed Boundary Change A.S.15 | Append.1 |
| 8. | New Airshed/Impact Zone map | Append.1 |
| 9. | Updated “Reporting Procedures” | Sec.8 |
| 10. | Fees explained | Append.7, Art. VII, Sec.II |
| 11. | Added descriptions for most Idaho Airsheds | |

MONTANA/IDAHO AIRSHED GROUP



Operating Guide
Operating Guide

March 2004

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SECTION I - INTRODUCTION

The Montana/Idaho Airshed Group (the Airshed Group) is composed of members that conduct a “major” amount of prescribed burning and regulatory and health agencies that regulate this burning. The intent of the Airshed Group is to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction. This Operating Guide is meant to provide accurate, reliable guidance and direction to the individuals doing the burning. It is also meant to be a quick, easy reference for anyone who is involved in the Airshed Group or needs information about it. It contains pertinent agreements, guidelines, deadlines, plans and procedures inherent to successful operation of the program.

The Airshed Group is composed of three units: Montana, North Idaho and South Idaho. The Montana Unit (formerly called the Montana State Airshed Group) was formed in 1978. The North Idaho Unit (formerly called the North Idaho State Airshed Group) was formed in 1990. The South Idaho Unit was formed in September 1998 and formally joined the operations of Montana and North Idaho in the fall of 1999. Each unit has a Memorandum of Agreement (*See Section IV*), which describes its Smoke Management Program (SMP) and commits its signatories to abide by that plan. The three Units have a joint operating plan which details policy and procedures that all members agree to abide by. Adherence to the joint operating plan is critical to the Airshed Group program’s operations.

The Monitoring Unit (MU) in Missoula, MT is the administrative unit that coordinates prescribed burning activities of the three Airshed Units. Airshed Group members abide by the operating procedures of the Monitoring Unit in order to prevent or reduce smoke impacts. Therefore members must understand their role and that of the Monitoring Unit.

This Operating Guide is divided into four sections and seven appendices:

- Introduction
- Definitions
- Montana/Idaho Airshed Group Smoke Management Program
- Memorandums of Agreement (MOAs)
- Appendices

Purpose of Document and Primary Audience

This document has two primary purposes:

- It is a one-stop reference for members.
- It serves as Montana and Idaho’s SMP for forest and range prescribed burning.

This document describes the Montana/Idaho SMP for forest (silvicultural) and rangeland prescribed burning. Section II defines all program elements pertinent to the SMP. Section III includes the purpose, goals and scope of the SMP. Section III also outlines the operating procedures for the SMP, including organization, roles and responsibilities of members, reporting procedures, operating procedures of the MU and complaint response procedures. Section IV includes all Memorandums of Agreement for the Montana/Idaho SMP.

This is a “dynamic” document that will be reviewed annually and revised as necessary. This exceeds the three to five year program evaluation schedule recommended by the U.S. Environmental Protection Agency in their May 1998 Interim Air Quality Policy on Wildland and Prescribed Fires.

SECTION II - ABBREVIATIONS AND DEFINITIONS

Abbreviations

“Airshed Group” Montana/Idaho Airshed Group

“AQI” Air Quality Index

“BACT” Best Available Control Technology

“CAA” Clean Air Act

“EPA” Environmental Protection Agency

“ID DEQ” Idaho Department of Environmental Quality

“MOA” Memorandum of Agreement

“MU” Monitoring Unit

“MT DEQ” Montana Department of Environmental Quality

“MT/ID Airshed Group” Montana/Idaho Airshed Group

“SMP” Smoke Management Program

“WFU” Wildland Fire Use

Definitions

"Airshed" is a geographical area in which atmospheric characteristics are similar e.g. mixing height and transport winds. The Montana/Idaho Airshed Group has identified twenty-eight airsheds for the purpose of operating the program. (*See Appendix 1*)

"Airshed Committee" means a committee consisting of representatives from the agencies and companies conducting wildland/prescribed burning within a local airshed, as well as representatives of the local health department and National Weather Service. This committee meets at least once per year to discuss and coordinate issues within their airshed.

"Airshed Group" refers to the Montana/Idaho Inter-State Airshed Group.

"Airshed Units" are the administrative subunits of the Airshed Group.

- Montana Airshed Unit: Airsheds 1 - 10
- North Idaho Airshed Unit: Airsheds 11 - 13
- South Idaho Airshed Unit: Airsheds 14 - 25

"Annual Meeting" Each Airshed Unit (Montana, North Idaho, and South Idaho) will meet individually at least one time per year to perform a program evaluation. Each organizational member of the Airshed Units will have an opportunity to discuss the operation and policies of the SMP. The

intent of the Annual Meeting is to evaluate the SMP and make the necessary changes to fulfill the objectives agreed to in the MOA.

“Best Available Control Technology (BACT)” For Montana burners, means those techniques and methods of controlling emissions of pollutants from an existing or proposed open burning source which limit those emissions to the maximum degree which the Department of Environmental Quality determines, on a case-by-case basis, is achievable for that source, taking into account impacts on energy use, the environment, the economy and any other costs, including the cost to the source.

- 1) Such techniques and methods may include the following:
 - a. Scheduling of burning during periods and seasons of good ventilation;
 - b. Applying dispersion forecasts;
 - c. Utilizing predictive modeling results performed by/available from DEQ to minimize smoke impacts;
 - d. Limiting the amount of burning to be performed during any one time;
 - e. Using ignition and burning techniques which minimize smoke production;
 - f. Selecting fuel preparation methods that will minimize dirt and moisture content;
 - g. Promoting fuel configurations which create adequate air-to-fuel ratio;
 - h. Prioritizing burns as to air quality impact and assigning control techniques accordingly;
 - i. Promoting alternative treatments and uses of materials to be burned.
- 2) For essential agricultural open burning or prescribed wildland burning during the months of September, October or November, BACT includes burning only during the time periods specified by DEQ, which may be determined by calling (800) 225 6779.
- 3) For prescribed wildland open burning during December, January or February, BACT includes burning only during the time periods specified by DEQ, which may be determined by calling (800) 225 6779.

“Burn Plan” Operational Plan for managing a specific fire. When required, Burn Plans should include the following smoke management components (per EPA Interim Air Quality Policy, May 1998):

- 1) Fire prescription, including emission reduction components:
 - a. Actions to minimize fire emissions
 - b. Smoke dispersion evaluation
 - c. Public notification and exposure reduction procedures
 - d. Plan to conduct air quality monitoring
- 2) Criteria for making go/no-go burn decisions.
- 3) Safety and contingency plans to address smoke intrusions

“Class I Area” is the Clean Air Act classification that protects the air quality in international parks, national parks greater than 6,000 acres, and national wilderness areas greater than 5,000 acres that existed on August 7, 1977.

“Burn Recommendations” The Monitoring Unit makes burn recommendations to the burners or DEQs based on the number of proposed burns, current and forecasted meteorology and air quality concentrations. The final decision to burn is always left to the burner depending on local conditions. See Section 7-1 for the categories by which burns may be restricted.

“Burn Restriction/Approval” Burning limitation issued by the Montana DEQ for Montana burners from September 1st to November 30th. If a burn is not considered restricted by MT DEQ, it is considered approved. Other regulatory agencies have the authority to issue restrictions within their jurisdictional authority during times of emergency episodes or pursuant to local authority.

“De Minimis Burning” Members do not need to have a STAG (State Airshed Group) number to report proposed burning if the following burn conditions are met:

- 1) The total amount of material to burn is less than six tons total.
- 2) The burn does NOT exceed air quality standards or visibility impairment or otherwise violate permit conditions.

"Emission Factors" apply to Montana members only for permit fee calculations, and are based on the EPA's AP-42 Handbook. Emissions rates are stated as “Pounds of emission produced per ton of fuel consumed.” There are four major emissions monitored in prescribed burning:

- CO: Carbon Monoxide
- NO_x: Nitrogen Oxides
- PM-10: Particulate matter 10 microns in diameter or smaller
- VOC: Volatile Organic Compounds

Each has a specific emission rate:

- CO: 222.5 lbs. produced for each ton of fuel consumed
- NO_x: 3.63 lbs. produced for each ton of fuel consumed
- PM-10: 12.06 lbs. produced for each ton of fuel consumed
- VOC: 4.0 lbs. produced for each ton of fuel consumed

Emission rates are based on tons of fuel consumed, which is not widely used or measured. A more common method is a pre-loading fuel measurement. As a general rule of thumb, tons/acre for all types of burning is 60 percent consumption. This can be higher in clean harvester piles and less in broadcast burns with larger fuels, but 60 percent is a good average. To calculate tons/acre consumed, multiply the pre-loading measurement by 60 percent (0.60).

"Essential Winter Burning" is prescribed burning in Montana that cannot be performed at other times of the year because of fire hazard or safety issues. A special permit is required from Montana DEQ to conduct any Essential Winter Burning.

"Impact Zone" means any area of Montana or Idaho that the Airshed Group recognizes to be smoke sensitive and/or have an existing air quality problem. There are seven impact zones in Montana and ten in Idaho (See Appendix 1).

"Major Open Burner" applies to Montana members only and “is any person, institution, business or industry conducting open burning that emits more than 500 tons of carbon monoxide (CO) or 50 tons of any other pollutant...per calendar year” (Montana ARM 17.8.601). Under normal forestry conditions, anyone who burns over 250 acres/year is classified as a Major Open Burner. Major Open Burners in Montana must obtain an annual burning permit from Montana DEQ and pay a fee based on the amount of emissions produced. Membership in the Montana/Idaho Airshed Group facilitates obtaining this permit from Montana DEQ.

"Member" denotes any organizational entity (agency or company) that is a signatory of the MOA for the Smoke Management Program in Montana, North Idaho or South Idaho.

"Montana/Idaho Airshed Group" (Airshed Group) denotes the agencies and industries that sign the Montana, North Idaho or South Idaho Cooperative Smoke Management Program Memorandum of Agreement, and implement the Smoke Management Program in Montana and Idaho.

"Non-attainment Areas" are areas that have exceeded the National Ambient Air Quality Standards (NAAQS) for certain "criteria" pollutants established by the EPA. Standards exist for ozone, carbon monoxide, sulfur dioxides, nitrogen dioxide, lead, and particulate matter (PM).

"Smoke Management Program" is the program implemented by the Montana / Idaho Airshed Group to manage smoke impacts from forest and rangeland prescribed burning for federal, tribal, state and private agencies/industries in Montana and Idaho.

"RAZU" Online burn reporting system used by members of the Airshed Group.

"Reporting Acres" are acres that are reported as part of a burning list (preseason, daily and annual accomplishment). It should represent the acres from which smoke will be produced, i.e. "Slash generated acres." All non-activity fuel burning will be reported as estimated blackened acres to be burned or accomplished.

Examples of activity fuels:

- If a 50-acre unit is 100 percent lopped and only small landings are burned, only report several acres of which represent the landings.
- In a 50-acre unit, if 20 acres are lopped and 30 acres are dozer piled, report 30 acres.
- In a 50-acre unit, feller bunched and whole tree yarded to landings, report all 50 acres. Even though you are burning landings which are only several acres, the slash on those areas represent 50 acres of slash. (This can be adjusted if tops are returned to the unit).
- In an Ecosystem or Understory burn, report acres that are proposed for burning (blackened). These may differ from project acres (ie: 1000 acres with 500 proposed for burning, which would be reported as 500 acres).

"STAG Number" refers to the State Airshed Group Number, which is the specific numerical identifier for each individual burn unit in the RAZU online burn reporting system's database.

(Refer to Appendix 3 for more information on STAG number assignments)

SECTION III - MONTANA/IDAHO AIRSHED GROUP SMOKE MANAGEMENT PROGRAM

1. PURPOSE

The intent of the Montana/Idaho Smoke Management Program (SMP) is to minimize or prevent smoke impacts while using fire to accomplish land management objectives. The SMP identifies the responsibilities of Montana and Idaho air regulatory agencies and federal, state, tribal and private land managers while providing accurate and reliable guidance and direction to the individuals conducting the burning. The entities will manage smoke impacts from prescribed fire while allowing land managers to use fire as a resource management tool. This program is designed to meet the state's regulatory needs as well as the EPA Interim Policy.

Each land management agency/industry is encouraged to consider and evaluate alternative treatments other than fire to achieve land management objectives. These alternatives include mechanical treatments (thinning, chipping, etc.) and chemical treatments. If there are no feasible alternatives to using fire, the land manager will employ emission reduction techniques and be responsible for proper smoke management. This includes performing the proper burn documentation and providing personnel training in smoke management techniques. Each land manager will adhere to the operating procedures outlined in this document.

2. GOALS

- Minimize or prevent the accumulation of smoke in Montana and Idaho from prescribed fire to such a degree as is necessary to meet state and federal ambient air quality standards.
- Provide for the use of prescribed burning as necessary for purposes such as hazard reduction, forest/rangeland regeneration and wildlife habitat improvement.
- Report and coordinate burning operations on forests and rangelands in Montana and Idaho.
- Evaluate the SMP annually and revise as necessary.
- Ensure burning activities are conducted during periods of optimal smoke dispersion and air quality conditions as advised by the MU.
- Meet the requirements of EPA's Interim Policy.

3. POLICY

The cooperative effort of all organizations involved in the use of fire for the disposal of logging residue, or for the accomplishment of management objectives, is essential for the success of the SMP.

The MU is responsible for the daily monitoring of meteorological data, air quality information and planned burning. It is also responsible for notifying all members when acceptable limits of smoke accumulation are threatened or exceeded.

Each member of the Airshed Group in Montana is required to have an annual air quality permit by the Montana Department of Environmental Quality (DEQ). The DEQ or a local air pollution control agency may take appropriate action as authorized under existing state or local statutes, rules and regulations for violation of open burning rules and regulations. The program is the same for Idaho with the exception that the program is voluntary and permits are not required. Should a member

agency/industry fail to follow all procedures or burn restrictions/approvals issued under the SMP, it may be considered grounds for revocation of permit or membership in the Airshed Group.

4. ORGANIZATION

By virtue of signing the Memorandum of Agreement, each signatory receives full membership in their respective Airshed Unit and therefore in the Airshed Group. The role of the Airshed Group is to:

- 1) Develop policy;
- 2) Define standards;
- 3) Establish procedures;
- 4) Determine appropriate boundaries for Airsheds and Impact Zones;
- 5) Provide direction to the Monitoring Unit in carrying out the daily operation of the Program;
- 6) Resolve inter-airshed, interstate and international smoke problems;
- 7) Hold each Airshed Unit's annual meeting;
- 8) Provide smoke management training for member organizations;
- 9) Prepare and disseminate information to interested parties regarding open burning, fire ecology, SMP, public health effects and other material of interest.

The organizational structure developed to operate the Smoke Management Program is shown in Figure 1 (page 8):

- Montana DEQ and the MU advise and interact with the Executive Board, which is tasked with managing the business of the Airshed Group. The MU is responsible to the Airshed Group for the daily operation and management of the SMP.
- The Airshed Group is composed of the Montana, North Idaho and South Idaho Airshed Units. Airshed Unit Liaisons serve as coordinators for the three Airshed Units.
- For operational purposes, the three Airshed Units are divided into 28 geographically defined airsheds that may be further subdivided if necessary (i.e. Impact Zones). Each airshed has an Airshed Coordinator, who acts as a point of contact for the airshed.
- Within each airshed are various field offices of the member organizations that form a local airshed committee. Participation on the committee by non-member organizations and county officials is encouraged. These field offices are the level where final responsibility for burning lies. Member Representatives act as representatives for their industry/agency.

ORGANIZATIONAL STRUCTURE

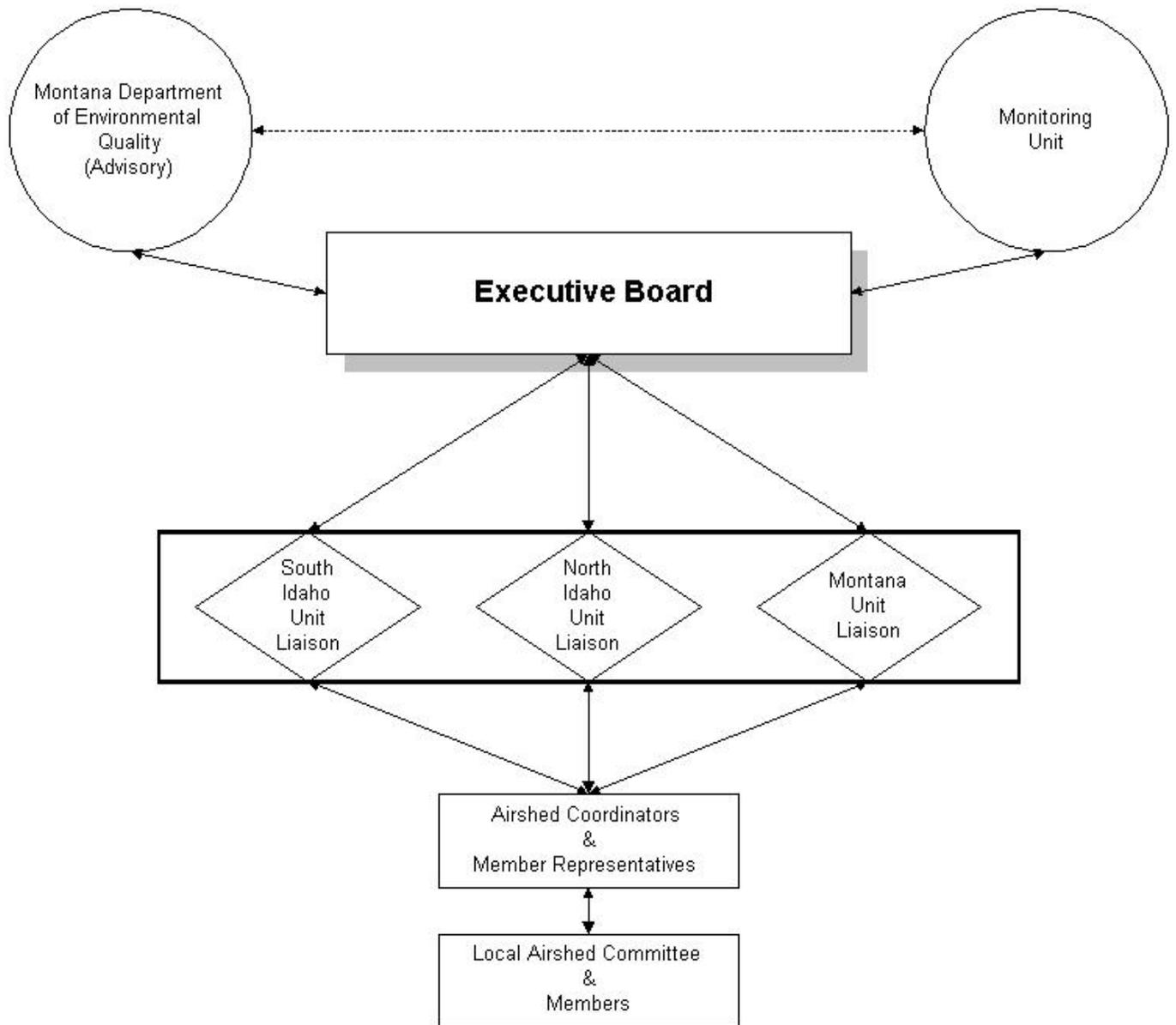


Figure 1. Airshed Group Organizational Structure.

4-1. Roles and Responsibilities

4-1a. Burners

- 1) Obtain daily burn information from the MU's website
- 2) Curtail burning when smoke dispersion is inadequate
- 3) Enter proposed burns into RAZU (daily by 12 pm)
- 4) Enter accomplishments into RAZU (daily)
- 5) Check for correct data entry on daily and preseason burn lists
- 6) Check accomplished burn list for accuracy
- 7) Enter weekend and holiday burns on time
- 8) Build preseason burn list on RAZU (January 2 - February 27)
- 9) Modify burn lists for fall (July 1 – August 15)
- 10) Have backup trained on all duties, including RAZU
- 11) Inform Airshed Coordinator of local conditions and issues
- 12) Provide additional burn project information to Airshed Coordinator as requested
- 13) Communicate potential or existing smoke problems/complaints to Airshed Coordinator
- 14) Request exemptions to burn restriction/approvals from Airshed Coordinators
- 15) Contact the MU only when Airshed Coordinator or Member Representative is unavailable
- 16) Attend annual Airshed Unit meetings
- 17) Answer questions and inquiries from the public concerning the SMP

4-1b. Airshed Coordinators

- 1) Handle local burn coordination, problem solving and communication within airshed
- 2) Compile and maintain contact list of all burners in the airshed
- 3) Submit daily proposed burns to RAZU if burners are unable to access system
- 4) Have backup trained on RAZU
- 5) Obtain daily forecast/restriction message from the MU's website
- 6) Obtain daily airshed burn lists through RAZU
- 7) Request exemptions to burn restriction/approvals from the MU
- 8) Communicate information from the MU to airshed burners
- 9) Facilitate pre-season (or as needed) airshed meetings to discuss procedures and requirements
- 10) Receive smoke complaints from burners, perform initial investigation, report complaints to the MU
- 11) Submit airshed burns through backup reporting system if RAZU is not working
- 12) Attend annual Airshed Unit meeting
- 13) Answer questions and inquiries from the public and from airshed burners concerning the SMP

4-1c. Member Representatives

- 1) Act as agency/industry representative
- 2) Coordinate burn activities for member burners
- 3) Act as point of contact for communicating information within the Airshed Group to members
- 4) Resolve issues concerning the SMP within the organization
- 5) Inform members on, and ensure compliance with, the procedures of the SMP
- 6) Assign STAGs to organization's preseason burn lists, ensuring each burn has a unique STAG
- 7) Ensure that the member preseason burn list is accurate and complete
- 8) Collect, review for completeness and submit member planned winter burn list to the MU
(Montana only)
- 9) Obtain daily member burn list from RAZU

- 10) Train individual members on RAZU
- 11) Have backup trained on RAZU
- 12) Obtain daily forecast/burn recommendation message from the MU's website
- 13) Serve on the Executive Board and special committees as required
- 14) Perform complete investigation into burn complaints made against organization, report findings to the MU
- 15) Attend annual Airshed Unit Meeting
- 16) Answer questions and inquiries from the public and member burners concerning SMP

4-1d. Airshed Unit Liaisons

- 1) Airshed Unit point of contact; coordinate with Unit members on smoke management issues
- 2) Facilitate annual Airshed Unit meetings to evaluate program effectiveness and solve local issues
- 3) Serve as secretary/treasurer to keep records and monitor expenses of respective Airshed Unit and Western Forestry Conservation Association.
- 4) Serve as Airshed Unit representative on the Executive Board
- 5) Recommend operational or program changes to the Executive Board
- 6) Monitor complaints involving Airshed Unit burners
- 7) Assign, train and inform Executive Board of new Airshed Coordinators
- 8) Submit needed Airshed Unit information to the MU for annual reports
- 9) Attend Annual Airshed Unit Meeting
- 10) Answer questions and inquiries from the public and Airshed Unit members concerning the SMP

4-1e. Monitoring Unit

(Refer to Appendix 7, Guiding Principles, for more information on the MU)

- 1) Provide leadership to the Airshed Group for smoke management
- 2) Develop smoke forecasts and burn recommendations
- 3) Serve on Executive Board on an advisory basis
- 4) Interact with Airshed Group members, Montana and Idaho DEQs and local governments
- 5) Provide training to members on smoke management
- 6) May take action on Airshed Coordinator requests for exceptions to burn recommendations
- 7) Collect daily planned burn information from member burners
- 8) Determine when to accept additional burns when deadlines are missed (annual and/or daily)
- 9) Maintain website and electronic database
- 10) Work with the Montana DEQ and Idaho DEQ on complaint response
- 11) Report complaints against burners to appropriate Member Representatives
- 12) Prepare annual reports prior to annual meetings
- 13) Prepare Operating Guide revisions
- 14) Advise Airshed Coordinators to hold meetings on program procedures and regulations
- 15) Attend annual Airshed Unit meetings and local meetings
- 16) Answer questions and inquiries from the public and from Airshed Group members about the SMP

4-1f. Montana and Idaho DEQ

- 1) MT DEQ approves or denies all MU burning recommendations from September 1 to November 30
- 2) MT DEQ pre-approves winter burns for Montana members
- 3) Review and provide input for the MU's daily dispersion forecast and burn recommendations

- 4) Ensure the SMP complies with the Clean Air Act (CAA) and EPA's Interim Policy
- 5) Handle communications concerning the SMP from the public and Airshed Group members
- 6) Investigate/respond to complaints, maintain complaint log and pass complaints on to the MU
- 7) Idaho DEQ serves as an official Executive Board member
- 8) Montana DEQ serves in an advisory capacity to the Executive Board
- 9) Montana DEQ issues permits to and collects permit fees from Montana members
- 10) Provide the MU with air quality monitoring data and summaries for the annual reports
- 11) Obtain daily forecast and burn recommendation message from the MU's website
- 12) Attend annual Airshed Unit meetings
- 13) Answer questions and inquiries from the public concerning the SMP

4-1g. Executive Board

(Refer to Appendix 7, Guiding Principles, for more information on the E-Board)

The Executive Board of the Airshed Group was formed with the concurrence of the entire membership at the annual 1995 winter meeting. The Board is composed of state, federal, tribal and private industry Member Representatives and Airshed Unit Liaisons. It will meet twice yearly or as required. See the MU's website www.smokemu.org for the current list of Executive Board members. The Executive Board is composed of the following organizations:

- US Forest Service Region 1
- US Forest Service Region 4
- US Fish and Wildlife Service
- Montana Department of Natural Resources and Conservation
- Montana Bureau of Land Management
- Idaho Bureau of Land Management
- Idaho Department of Environmental Quality
- Idaho Department of Lands
- Western Montana private industry
- Eastern Montana private industry
- Idaho private industry

Montana DEQ and the MU Meteorologist serve on an advisory basis to the board (Figure 1).

The Executive Board's primary responsibilities include:

- 1) Develop program policies and standards
- 2) Set annual budget
- 3) Establish procedures
- 4) Determine appropriate boundaries for airsheds and impact zones.
- 5) Provide direction to the MU in carrying out the daily operation of the SMP
- 6) Address inter-airshed, interstate, and international smoke problems
- 7) Annually review and evaluate SMP
- 8) Elect Executive Board members and positions

EXECUTIVE BOARD OFFICERS

The Executive Board officers are composed of a **Chairperson** and a **Vice Chairperson** (one representing Montana members and one representing Idaho members), and a **Secretary**. The Vice Chairperson rotates into the Chairperson position, with each serving a two-year appointment. The Executive Board Officers are chosen from existing Board members. The Chairperson conducts Executive Board meetings, the Secretary records and distributes meeting minutes.

4-2. Annual Meeting

Each Airshed Unit will meet individually at least one time per year to perform a program evaluation. Each organizational member of the Airshed Units will have an opportunity to discuss the operation and policies of the SMP. The intent of the Annual Meeting is to evaluate the SMP and make the necessary changes to fulfill the objectives agreed to in the MOA.

5. MONTANA / IDAHO AIRSHED GROUP MEMBERSHIP CRITERIA

- 1) All state airshed members as of July 1, 1984 are permanent members (**Applies to Montana Members Only**).
- 2) New members must be either landowners or agencies charged with the responsibility of managing public lands or involved in air pollution control efforts.
- 3) New members must own or manage over 5,000 acres and must use fire as a management tool on these lands as an ongoing program (**Applies to Montana Members Only**).
- 4) An individual from the member organization must be appointed to represent the organization.
- 5) Members should attend regular and special meetings as they are called.
- 6) Members should be available to become involved with committee assignments.
- 7) Organization representatives are responsible for educating and disseminating smoke management and air quality information and training opportunities to the member organization. Representatives should ensure that their organization participates at the local airshed level.
- 8) Members must promote good smoke management practices and minimize burn emissions.

5-1. Local Airshed Membership Criteria

- 1) Coordinate local burning through the local airshed coordinator.
- 2) Attend annual local airshed meeting.
- 3) Provide pre-burn and accomplishment information as requested.
- 4) Members must promote good smoke management practices and minimize burn emissions.
- 5) Members may need to obtain a local air quality permit (for some counties in Montana).

6. MONITORING UNIT OPERATING PROCEDURES

6-1. Purpose of the Monitoring Unit

- 1) Coordinate burning and smoke emissions by the Airshed Group to minimize smoke accumulation.
- 2) Through burners and Airshed Coordinators monitor prescribed burns to ascertain/encourage compliance.
- 3) Record and document information pertinent to prescribed burning that leads to improved future operations and a better understanding of smoke accumulation problems and cures.
- 4) Provide smoke dispersion forecasts and air quality monitoring support for program burners.

6-2. Composition of the Monitoring Unit

- 1) Meteorologist/Program Coordinator
 - a. Currently the meteorological services are contracted with PNW Research Station.
- 2) Location: Aerial Fire Depot (Smoke Jumper Base and Northern Rockies Coordination Center), 5765 West Broadway, Missoula, MT 59808.
- 3) Operational Schedule:
 - a. Spring operations will begin full-time on February 28th and run through May 31st. If conditions allow, Spring operations may continue past May 31st.

- b. Summer operations (June 1st to September 1st) will be on an as needed basis since this is the height of the wildfire season when the anticipated workload for prescribed burning is minimal. (Contact the MU Meteorologist with any information or plans for burning during summer).
- c. Fall operations begin on September 1st, or sometime thereafter, and go through November 30th. Although September 1st is the start date of the permit season in Montana, the fall program may start after September 1st if the wildfire season is not over by this date. The decision to begin the fall burn program is the responsibility of the MU Meteorologist, and is based on weather conditions, fuel conditions, and the amount of proposed burning. The start-up date typically occurs within the first two weeks of September, and an announcement of the exact date is sent out to member representatives and airshed coordinators beforehand.
- d. Winter burning is conducted only with a special permit in Montana (Section 9, page 23).

6-3. Meteorological Support Stations

- 1) Due to lack of consistent balloon launches and the cost of the program, it was decided to seek other means for acquiring this information (RAWS, aviation, etc.) The PIBAL program is suspended.

6-4. Daily Operational Procedures

- 1) Use of Proposed Burn information:
 - a. Proposed burns are received by the MU at 12pm Mountain Time via RAZU.
 - b. Data is tabulated by location, acreage, elevation, type of burn, etc. Impact Zones are identified as sensitive areas and receive heightened consideration.
 - c. Proposed burns are considered along with expected ventilation or smoke dispersion conditions and existing air quality to determine burn recommendations for the following day (with concurrence from DEQs).
 - d. The MU will notify the Airshed Coordinators by fax with burn recommendations if the Internet and/or the MU's website is not functioning properly.
- 2) Issuance of Burn Recommendations by the Monitoring Unit:
 - a. Monday-Thursday: Burn recommendations and the dispersion forecast for the following day is e-mailed to the Montana and Idaho DEQs by 3:30pm Mountain Time. Both DEQs review the forecast and burn recommendations by 4pm and send the MU any needed changes. Changes will be incorporated into the final forecast message and posted on the MU's website by 4pm. If there is no response from the DEQs by 4pm the MU will post the message on the website. During the Fall, Montana DEQ must approve the Montana burns through RAZU by 4pm.
 - b. Friday: Burn recommendations and the dispersion forecast for Saturday, Sunday, and Monday (Tuesday is also included if Monday is a federal holiday; weekend burn recommendations are issued Thursday at 4pm if Friday is a federal holiday, and the restrictions will include Friday, Saturday, Sunday, and Monday) are e-mailed to the Montana and Idaho DEQs by 3:30pm Mountain Time. Both DEQs review the forecast and recommendations by 4pm and send the MU any needed changes. Changes will be incorporated into the final forecast message and posted on the MU's website by 4pm. If there is no response from the DEQs by 4pm the MU will post the message on the website. During the Fall, Montana DEQ must approve the Montana burns through RAZU by 4pm.

7. MONITORING UNIT SERVICES

This section outlines the seasonal services of the Monitoring Unit.

7-1. Spring and Fall Burn Seasons

Daily meteorological forecast: Meteorological conditions will be compiled daily (Monday-Friday) by the MU Meteorologist, who will issue an updated smoke dispersion forecast for the following day at approximately 4pm Mountain time. The Friday forecast will be for Saturday, Sunday and Monday. If Monday is a federal holiday the Friday forecast will be for Saturday, Sunday, Monday and Tuesday. Weekend forecasts will not be updated after Friday unless unusual conditions require an update. These forecasts are available to anyone and are posted on the smokemu.org webpage.

Daily existing Air Quality: The MU will consider existing air quality conditions when determining burn recommendations. Current air quality conditions for smoke sensitive sites in Montana and Idaho will be posted by the MU each day (Monday-Friday) by 12pm Mountain Time. The actual recorded air quality values at 8am Mountain Time will be posted in table format along with a color-coded air quality map based on the Environmental Protection Agency's (EPA) Air Quality Index (AQI) levels. The posted air quality data can be found at the following web address:
http://www.fs.fed.us/r1/fire/nrcc/Smoke_web_pages/teom.htm

Daily Burn Recommendations: Upon analysis of all available information concerning planned burning, forecast meteorological conditions and existing air quality, the MU will issue burn recommendations for the following day. Burn recommendations can be issued as follows:

- 1) By individual burn (STAG) number
- 2) By Impact Zone
- 3) By elevation within each Impact Zone
- 4) By individual Airshed
- 5) By elevation within each Airshed
- 6) By time periods in any Airshed or Impact Zone
- 7) Statewide
- 8) By Montana DEQ or Idaho DEQ, based on state regulations
- 9) Any combination of the above options

The MU will post burn recommendations on the Smoke MU web site to be in effect for the following day by 4pm Mountain Time. All members in both states are responsible for acquiring current burn recommendations from RAZU and the MU's web site (www.smokemu.org). Burn recommendations are in effect for the time period indicated on the daily message (normally 24 hours). Burn recommendations for weekends (issued on Friday) will indicate the effective time period. If it is necessary to extend burn recommendations for a second or subsequent day, the MU must reissue the burn recommendations using the procedures described above. If a member is unable to access the Internet, they may call the toll-free numbers (see appendix 3) or request that the Airshed Coordinator e-mail or fax the burn recommendation information.

7-2. Summer and Winter Burn Seasons

Note: During the summer and winter burn seasons, burns entered into RAZU will not require review or approval by MT DEQ or the MU but will be automatically 'approved' through RAZU so that accomplishments can be entered into the reporting system.

Daily meteorological forecast: Meteorological conditions will be compiled on a case-by-case basis using all available data by the MU Meteorologist. Burners need to give the Meteorologist as much advance notice as possible, preferably one week, if forecast services are needed. The Meteorologist will issue an updated smoke dispersion forecast approximately 4pm Mountain Time the day before it is required. If a forecast is needed for Saturday, Sunday or Monday it will be issued by 4pm Mountain Time the Friday before. If Monday is a federal holiday and a forecast is needed on Tuesday the Friday forecast will be for Saturday, Sunday, Monday and Tuesday. Weekend forecasts will not be updated after Friday unless unusual conditions require an update.

Daily existing Air Quality: See section 7-1.

Daily Burn Recommendations: MU burn recommendations will be made on a case-by-case basis. The MU will provide burn recommendations for the following day, as in section 7-1. Recommendations can be made by the same nine categories found in section 7-1 under Daily Burn Recommendations.

If required, the MU will post burn recommendations on the Smoke MU web site to be in effect for the following day by 4pm Mountain Time. The posting of recommendations will be done on a case-by-case basis. If no burns are proposed to the MU, burn recommendations will not be posted on the following day. All members in both states are responsible for acquiring current burn recommendations from RAZU and the current burn recommendation message from the Monitoring Unit's web site (www.smokemu.org).

Burn recommendations are in effect for the time period indicated on the daily message (normally 24 hours). Burn recommendations for weekends (issued on Friday) will indicate the effective time period. If it is necessary to extend burn recommendations for a second or subsequent day, the MU must reissue the burn recommendations using the procedures described above. If a Member is unable to access the Internet, he or she may call the toll-free numbers (see appendix 3) or request that the MU e-mail or fax the burn recommendation information.

Idaho Members should conduct winter burns only when good or excellent dispersion conditions are indicated. Burners may consult with the MU Meteorologist or with Idaho DEQ or check National Weather Service forecasts to determine dispersion conditions prior to ignition. In order for DEQ to be able to respond to public complaints as a result of winter burning, burners may be requested by Idaho DEQ to provide information on the burn such as location, type, size, etc.

Montana Members must follow requirements as specified in Section 9, Page 23.

8. REPORTING PROCEDURES

In 2001, the Airshed Group developed a new Internet-based reporting system for tracking and reporting prescribed fires for Program members. This new system, called RAZU, was implemented operationally in spring 2002. The RAZU burn reporting system allows members to build pre-season burn lists directly into the program's master database, propose burns on a daily basis and report accomplishments on burns they conduct. The software for this new system resides on a server located at the MU in Missoula, Montana. Access to the system requires passwords, which are distributed to the members via their Member Representatives (contact agency Representative for passwords). The system also allows Airshed Coordinators and Member Representatives to access proposed and completed burn information directly via the Internet for tracking and planning

prescribed fires. The system is administered by the Program Meteorologist and Program Assistant, and can be accessed from any personal computer with Internet access capability. RAZU can be found on the links pages of the Monitoring Unit's website, www.smokemu.org. Please use the web browser *Internet Explorer* when connecting to RAZU. The system does not operate correctly when using *Netscape Composer*.

8-1. Preseason/Fall Update Database Reporting Elements

Between January 2nd and February 27th of each year, members will submit to the Monitoring Unit a list of all prescribed burns planned for the current calendar year through the RAZU online burn reporting system (See Figure 2). This list can be updated July 1st through August 15th for the fall burn season. Burn lists should contain the following information for each planned burn (*refer to Appendix 4*):

- 1) STAG Number
- 2) Unit Name
- 3) Location Description
- 4) Airshed
- 5) Impact Zone
- 6) Elevation
- 7) Burn Type
- 8) Preburn Loading (tons/acre) (Optional in Idaho)
- 9) Acres
- 10) Township
- 11) Range
- 12) Section
- 13) Quarter Section

Images 1 and 1A below show examples of the RAZU screens that are used to enter burns into the reporting system for building preseason lists and fall updates.



Montana/Idaho Smoke Management Program

Preseason Burns
 Time 11:42:09 AM Date 7/17/2002

Idaho Fish and Game, Office ID: IFG

[Navigation>>](#) | [Login](#) | [Enter Preseason Burns](#) | [Propose Burns](#) | [View Approved Burns](#) | [Report Daily Burns](#) | [Member Reports](#) | [Logout](#)

Enter Values For all fields. Do not use characters such as ("',#,&,"etc.) Format for Township, Range and Section should be 2 characters long. (e.g. 12, 02) Help for each item can be found by clicking on the input field name.

Stag Number Unit Name

Location Description

Airshed Impact Zone Elevation

Burn Type Preburn Loading (Tons/Acre) Acres

Township Range Section 1/4 Section

Airshed Prescribed Burn Project - Fire Center

Image 1: Preseason/Fall Update Reporting Screen One



Montana/Idaho Smoke Management Program

Idaho Fish and Game, Office ID: IFG

[Navigation>>](#) | [Login](#) | [Enter Preseason Burns](#) | [Propose Burns](#) | [View Approved Burns](#) | [Report Daily Burns](#) | [Member Reports](#) | [Logout](#)

Values inserted into Planned Burns

Stag: 00004
 Unit Name: Mansion on the Hill
 Location Description: out on Highway 61
 Airshed: 2
 Impactzone: K
 Elevation: 8888
 Burntype: Wildlife Habitat
 Tonsacre: 12
 Acres: 468
 Section: 22P
 Township: 24N
 Range: 36E
 1/4 Section: NW
 Latitude: 47.8263
 Longitude: -107.083

Click to Edit this info:

Image 1A: Preseason/Fall Update Reporting Screen Two

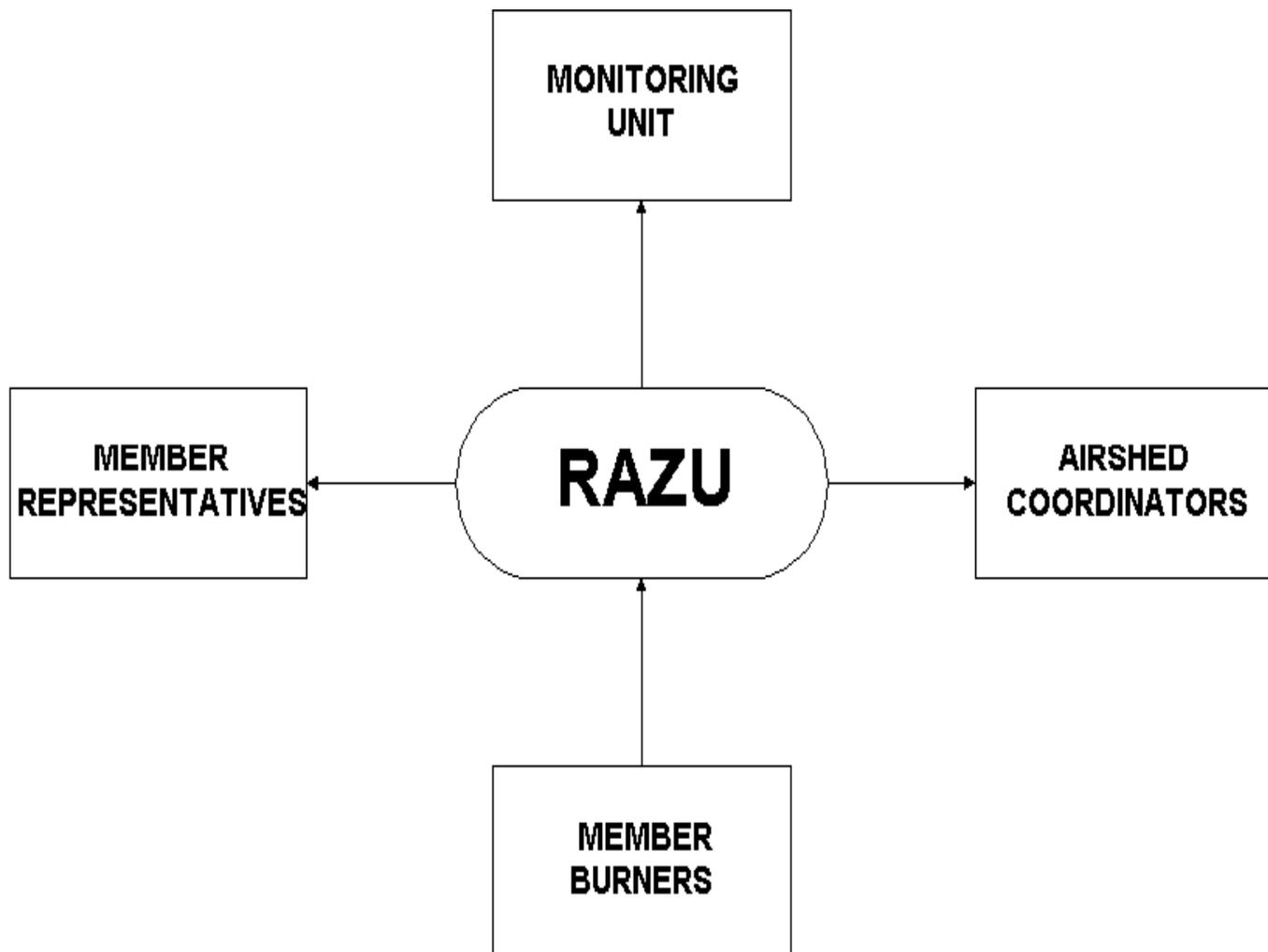


Figure 2. The Flow of Burn Information with the RAZU online burn reporting system.

8-2. Daily Burn Reporting

(see Figure 3)

8-2a. Daily Member Burn Reporting

Each Member is required to submit a daily report of planned burning for the next day to the MU through RAZU. Burns must be submitted to the MU by 12pm Mountain time each day, and should include the following (see Images 2 and 2A below):

- 1) Proposed Units (STAG #s)
- 2) Priority (A or B) for each STAG #
- 3) Proposed Acres for each STAG # (must be less than or equal to Acres Left)
- 4) Proposed Date for each STAG #

Montana/Idaho Smoke Management Program

Time 11:54:33 AM Date 7/18/2002

Propose Burns

Idaho Fish and Game, Office ID: IFG

Navigation>> Login | Enter Preseason Burns | **Propose Burns** | View Approved Burns | Report Daily Burns | Member Reports | Logout

Propose Burns
To select multiple stags, hold down the CTRL key.

4
4897
6842
7888
8432

Stag # Submit

Image 2: Daily Burn Report Example

Montana/Idaho Smoke Management Program

Time 11:57:13 AM Date 7/18/2002

Input Propose Burn Info

Idaho Fish and Game, Office ID: IFG

Navigation>> Login | Enter Preseason Burns | Propose Burns | View Approved Burns | Report Daily Burns | Member Reports | Logout

Stag	Priority	Unit Name	Airshed	Impact Zone	Elevation	Burn Type	Acres	Proposed Acres	Acres Left	PLS	Lat	Long	Proposed Date
4	A	Mansion on the Hill	2	K	8888	Wildlife Habitat	468	88	468	24N36E22P	47.8263	-107.083	7/19/2002

Propose

Airshed Prescribed Burn Project - Fire Center
 DOWNLOAD The Airshed Group Operation Guide - 2001
 Best viewed with Internet Explorer 4.0 or higher.

Image 2A: Daily Burn Report Example

8-2b. Airshed Coordinator and Member Representative Daily Burn Reports

Through RAZU, Airshed Coordinators and Member Representatives are able to generate Daily Burn Reports. Logging on to RAZU as an Airshed Coordinator allows the user to create a daily proposed burn report for their airshed(s). The daily proposed burn report can be used to look at both recommended and not recommended burns for each day's report. The Airshed Coordinator can also generate a completed burns report by selecting the airshed and date range for which they would like to see the completed burns. Logging on to RAZU as a Member Representative allows the user to create a daily proposed burn report for their member organization. The daily proposed burn report can be used to look at both recommended and not recommended burns for each day's report. The Member Representative can also generate a completed burns report by selecting the member organization and date range for which they would like to see the completed burns.

8-3. Accomplishment Reporting

(See Figure 2)

8-3a. Daily Accomplishment Reporting

Each burn that is proposed through RAZU must have the accomplished acres reported into the online burn reporting system once the burn is completed. The accomplished acres must be reported by noon Mountain time the *day after* the burn was proposed to be burned (i.e., a burn is proposed in RAZU on 9/10/2002 to be burned on 9/11/2002. Accomplished acres for the burn must be reported on by noon Mountain time 9/12/2002).

When a burner logs on to RAZU the day after the proposed date for a burn, the screen in Image 3 below will appear. This screen lists the burns that were proposed for the previous day and requires the user to enter the acres that were actually accomplished for each burn. If no acres were accomplished the user enters zero into the *Actual acres burnt* box. The user will not be allowed to propose more burns until the previous days accomplishments have been reported. This screen will not appear if no burns were proposed for the previous day. In this case the main menu screen will be the first screen to appear after logging in to the system.

Montana/Idaho Smoke Management Program

Burn Reporting
Time 10:55:15 AM Date 9/11/2002

Idaho Fish and Game, Office ID: IFG

Navigation >> Login | Enter Preseason Burns | Propose Burns | View Approved Burns | Report Daily Burns | Member Reports | Logout

Stag	Unit Name	Airshed	Impact Zone	Elevation	Burn Type	Tons/Acres	Acres	Actual acres burnt
6B42	Yankee Power	2	K	4828	Wildlife Habitat	4	294	<input type="text"/>

submit

Airshed Prescribed Burn Project - Fire Center
DOWNLOAD The Airshed Group Operation Guide - 2001
Best viewed with Internet Explorer 4.0 or higher.

Image 3: Daily Accomplishment Reporting

8-3b. Annual Accomplishment Reporting

RAZU automatically keeps track of all burn accomplishments throughout the year. Members, Airshed Coordinators and Member Representatives can view accomplishments through their respective logins on RAZU. The MU will compile and include in the annual report a final accomplishment report for the full membership at the annual meeting(s).

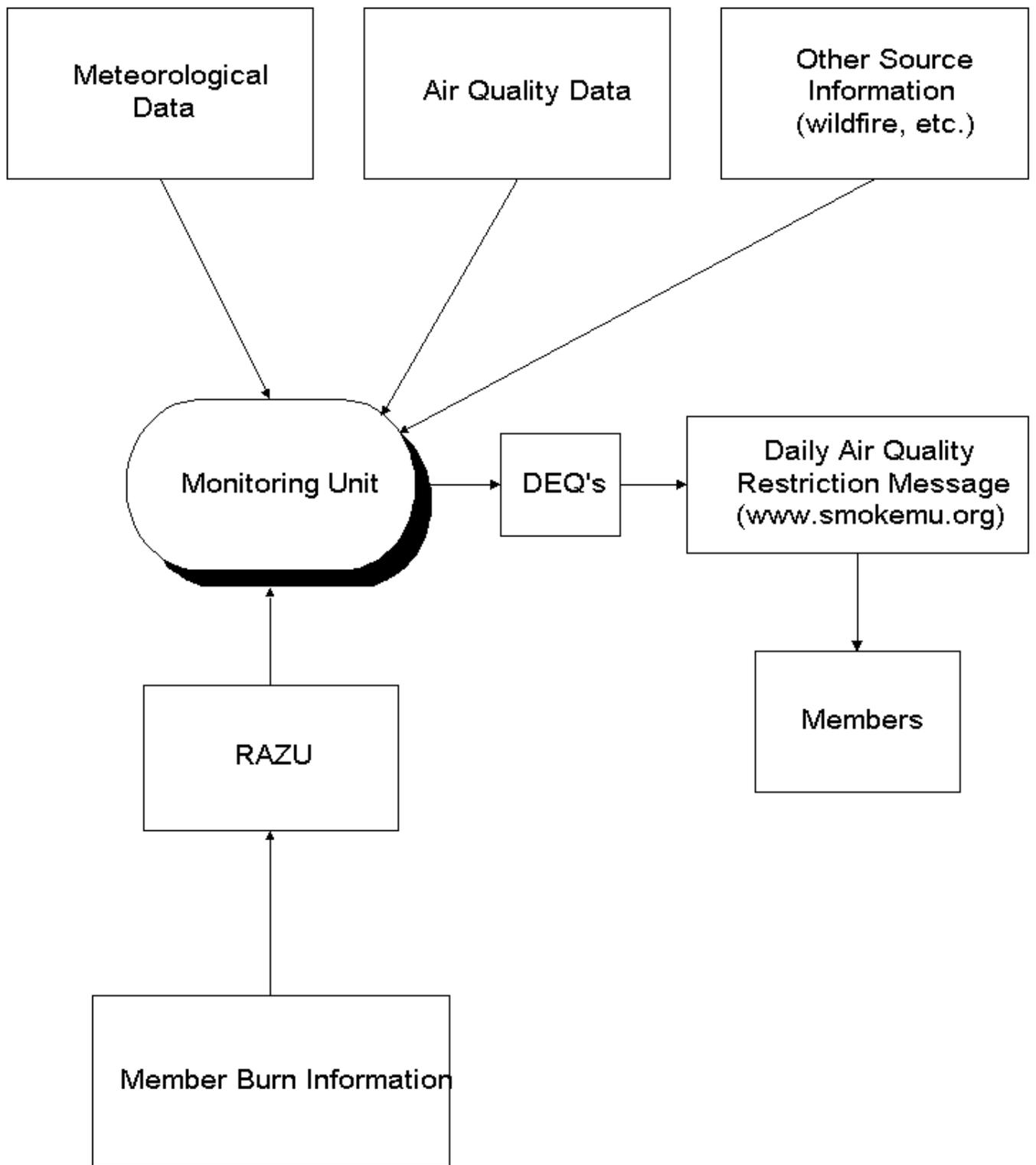


Figure 3. The Daily Flow of Information During Burning Seasons

9. DEQ OVERSIGHT

The following table displays the seasonal differences for burn restrictions/approvals and recommendations by state:

Burn Season	Oversight of MU Burn Recommendations		Frequency of MU Forecasts/Burn Recommendations
	MT DEQ	ID DEQ	
Spring	Reviews	Reviews	Daily
Summer	Reviews	Reviews	Case-by-Case
Fall	Restrict/Approve	Reviews	Daily
Winter	N/A*	Reviews	Case-by-Case

*In the winter, MT DEQ does its own burn restrictions/approvals without MU forecasts/recommendations.

The final responsibility for ignition rests with the cooperating member agency or company. Members are expected to curtail burning if, in their opinion, they are not getting adequate smoke dispersion, or if local weather factors are such that smoke problems could result. Conversely, if local weather conditions appear to be more favorable for burning than what was forecast, burners may contact the appropriate Airshed Coordinator to request an exception to the burn recommendation. The Airshed Coordinator shall consult with the MU and if deemed appropriate, the MU may then grant an exception to the burn recommendation. An updated burn recommendation message will be posted to the homepage if an exception or change to a burn recommendation message is issued.

ID DEQ's oversight is the same regardless of season. ID DEQ reviews all burn recommendations made by the MU and provides advice on potential air quality impacts.

In the Spring and Summer, MT DEQ reviews all burn recommendations made by the MU and provides advice on potential air quality impacts.

In the Fall, MT DEQ considers MU burn recommendations and issues final burn restrictions/approvals. The MT DEQ has final authority over MU burn recommendations and the MU must abide by DEQ rulings. Burn restrictions/approvals can be made by the same nine categories found in section 7-1.

In the winter, MT DEQ issues burn restrictions/approvals without MU services. DEQ regulations regarding essential prescribed wildland open burning during the winter (December-February) follow:

- ARM 17.8.605 Special Open Burning Periods
 - 1) Prescribed wildland open burning may be conducted during the entire year.
- ARM 17.8.610 Major Open Burning Source Requirements
 - 2) Receive and adhere to any conditions in any air quality permit issued to it by the department.

The above regulations are in effect because open burning during winter months can result in poor smoke dispersion. But, on infrequent occasions, forestry interests in the state find it necessary to do some open burning related to disposition of slash and hazard reduction. The allowable burning is

considered “Essential Winter Burning” and consists of prescribed burns that cannot be performed at other times of the year, particularly in eastern Montana. It is not to be used to continue or extend the fall burning season. Signatory members accept the responsibility for scheduling these burns so as not to result in objectionable or excessive smoke accumulation.

It is necessary that planned burns during winter be documented. If an agency or industry plans to conduct winter burns a planned burn list must be submitted to the MU no later than November 1. The burn list includes all the typical burn report elements (see section 8.1) as well as a brief justification for essential winter burning. The list will be screened by the Program Coordinator and MT DEQ with approval coming from the MT DEQ. Each member representative that submitted winter burns will be notified if their planned burns have been approved by MT DEQ.

The information requirements and conditions under which burning may take place will be spelled out in the members' annual open burning permits.

The scheduling of the burns will be the responsibility of the appropriate land manager (member) and any enforcement action will be taken against the permit holder (i.e., smoke management member).

10. SMOKE COMPLAINT AND INTRUSION PROCEDURES

An Airshed Group member (member) may receive smoke complaints from the public, other members, or other agencies. Members may also be aware of potential or actual smoke intrusions. The following procedures are to be followed for responding to smoke concerns in each airshed. These procedures are in addition to any individual agency or company policies that may already exist. Since it is not possible to cover every potential situation, members should contact their Member Representative or Airshed Unit Liaison with any questions.

The objectives of these procedures are as follows:

- Provide public health protection by minimizing smoke impacts
- Ensure response is timely and professional
- Track and document smoke concerns effectively
- Measurement tool for program evaluation

Proper attention to smoke concerns will better protect public health impacts and prevent additional burn restrictions, penalties, litigation, etc. Smoke concerns can serve as an early warning system so that adverse smoke impacts can be avoided whenever possible. It is not possible for the Airshed Group to be aware of all smoke concerns since the information may never reach an Airshed Group member. However incomplete the information may be, tracking smoke concerns is still important. Everyone will probably be aware of the most serious smoke conditions. However, an effective process for handling smoke concerns can also serve to reduce smoke impacts or unnecessary escalation of a smoke problem. In addition, any contact with the public or other agencies should be seen as an educational opportunity for discussing the smoke management program, public health, and the role of fire.

Smoke concerns will have varying levels of intensity. Smoke complaints need to be distinguished from inquiries. Some smoke complaints are nuisance-based and others are health-based. While the Airshed Group wants to prevent either one, health-based complaints are more serious and immediate in nature. The urgency of the smoke concern also depends on the location. Smoke in impact zones

or sensitive areas such as a hospital is more serious than in remote, unpopulated areas. EPA's air quality index provides a guide for ranking health effects of smoke. If real-time particulate matter monitoring data are not available, concentrations can be estimated visually using the table below. Visibility estimates can also be obtained from nearby airports. In the Bitterroot Valley, the U.S. Forest Service has observed that complaints tend to start when PM10 levels reach and persist at 30 $\mu\text{g}/\text{m}^3$ over four or more hours. Complaints significantly increase when levels reach and persist at 60 $\mu\text{g}/\text{m}^3$ and higher. PM_{2.5} levels persisting in the 40-80 $\mu\text{g}/\text{m}^3$ range (unhealthy for sensitive individuals) are of concern because of possible health impacts and exceedences of the 24-hour federal standard.

Visibility Range ¹ (miles)	Air Quality Category	1-Hr PM _{2.5} ($\mu\text{g}/\text{m}^3$) ²	Health Effects
>10	Good	0.0 – 40.0	None
5 – 10	Moderate	40.1 – 80.0	Unusually sensitive ³ people should consider reducing prolonged or heavy exertion
3 – 5	Unhealthy for Sensitive Groups	80.1 – 175.0	Sensitive people ³ should reduce prolonged or heavy exertion
1½ - 3	Unhealthy	175.1 – 300.0	Sensitive people ³ should avoid prolonged or heavy exertion; everyone else should reduce prolonged or heavy exertion
1- 1½	Very Unhealthy	300.1 – 500.0	Sensitive people ³ should avoid all physical activity outdoors; everyone else should avoid prolonged or heavy exertion
< 1	Hazardous	≥ 500.1	Sensitive people ³ should remain indoors and keep activity levels low; everyone else should avoid all physical activity outdoors.

1. To estimate the visible range: face away from the sun and look for targets at known distances. The visible range is that point at which even high contrast objects totally disappear.

2. PM₁₀ can be divided by 0.75 to estimate PM_{2.5}.

3. Sensitive people include those with heart or lung disease, older adults, and children.

10-1. Procedures

Any member (including the DEQs and Monitoring Unit) who receives a smoke concern has the responsibility to notify the appropriate Airshed Coordinator as soon as possible. It is important for the Airshed Coordinator to know what is going on in his/her airshed. Notification is necessary regardless of the nature or context of the smoke concern. The member needs to provide the Airshed Coordinator with name(s), phone number(s), location, and any other relevant information that is known regarding the situation.

The member should distinguish between a smoke complaint and an inquiry. This can be accomplished by asking the party if they are calling to obtain information or make a smoke

complaint. The member should handle inquiries if possible or pass them on to their Member Representative as necessary.

AIRSHED COORDINATOR

As soon as possible, it is important that the Airshed Coordinator notifies the Monitoring Unit and appropriate DEQ of any smoke concerns. The Airshed Coordinator may want to notify others as well.

- If Non-Member or Unknown Burning

After the Airshed Coordinator makes a reasonable effort to identify the source of the smoke concern, and the source is unknown or due to non-member burning, the Airshed Coordinator notifies the appropriate DEQ. The Airshed Coordinator should provide the DEQ with name(s), phone number(s), location, and any other relevant information that is known regarding the situation. It is the DEQ's responsibility to conduct any follow up.

- If Member Burning

If the source of the smoke concern is from member burning, the Airshed Coordinator has the option to conduct any follow up or turn the issue over to the appropriate Member Representative.

In Montana, members are required to comply with burn restrictions by law during the fall season (September 1-November 30). If the Airshed Coordinator determines that a burn restriction was not complied with, the Airshed Coordinator must immediately turn the issue over to the Montana DEQ.

A reasonable effort is made to find out what actions and conditions lead up to or caused the smoke concern. If the member burner complied with the Monitoring Unit burn recommendations then any relevant information that led up to the smoke concern is collected. For example, there may have been an unexpected change in the weather. If a member did not comply with the Monitoring Unit burn recommendations, the responsible party should be contacted directly. If this is not possible or the responsible party is not cooperative, then the next level of management should be notified.

All smoke concerns should be documented using the form in Appendix 6 and submitted to the appropriate DEQ.

NOTIFICATION

The best method for notification is to call the DEQ air quality official on duty directly. The Monitoring Unit may be notified either by phone or through the general email address. The latest contact information will be available as an Adobe file from the links page of the Smokemu.org web site.

It is important that the Airshed Coordinator keep the Monitoring Unit and DEQ informed on any smoke concerns. The Monitoring Unit may want to consider the information for developing burn recommendations or watching conditions more closely. The DEQs may have separate procedures for responding to smoke concerns. The DEQ may need to initiate an investigation, or respond to questions from the media and public. It is the responsibility of the DEQs to coordinate any follow-up activities with the Airshed Coordinator (or Member Representative) as needed.

Documentation of all member-related smoke concerns will be kept by the appropriate DEQ (forward completed documentation to Diane Riley for Idaho complaints). At the end of the year, the DEQs will summarize the information for the Airshed Group’s annual report.

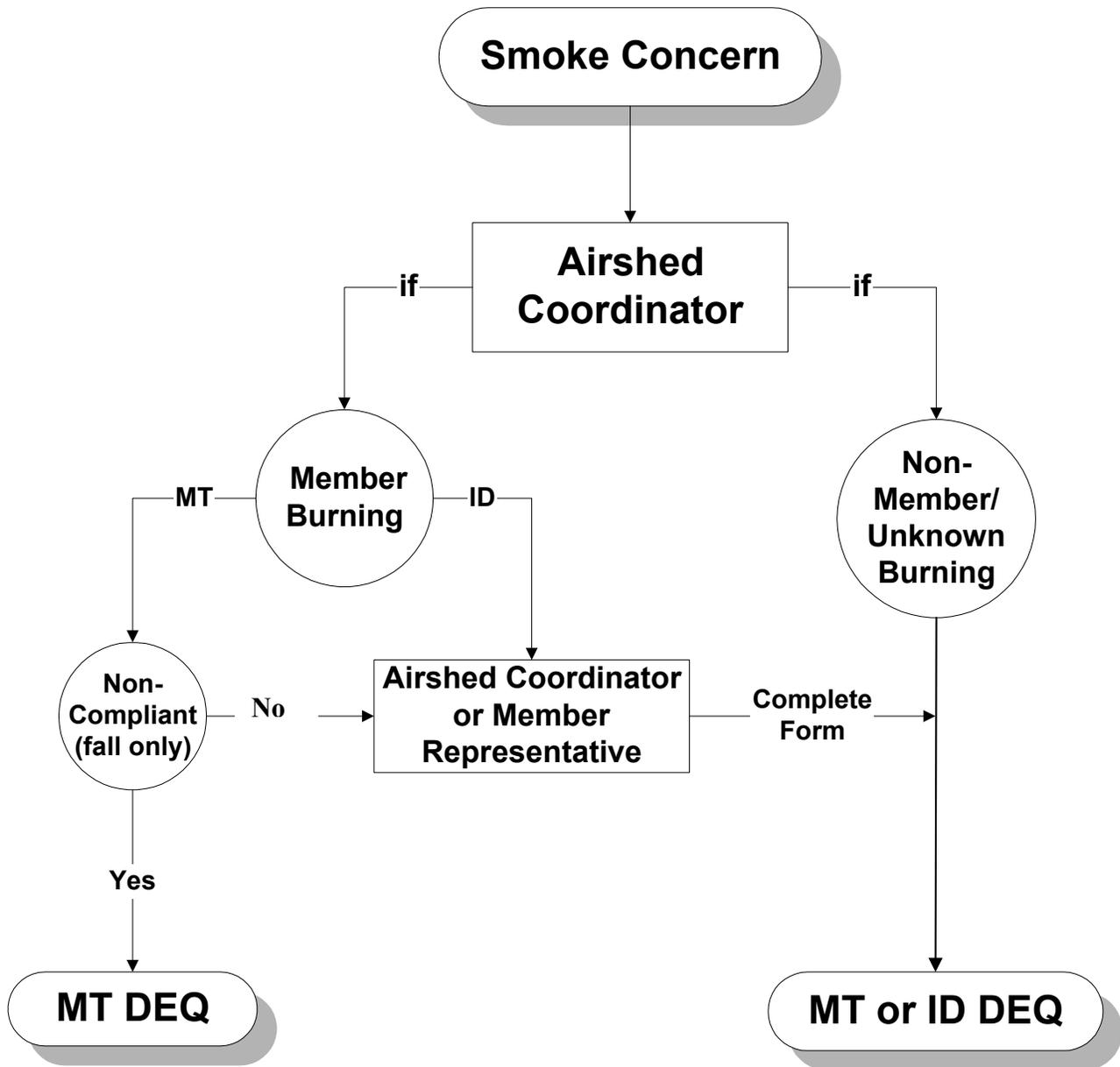


Figure 4. Smoke Concern Flowchart

SECTION IV - MEMORANDUM OF AGREEMENTS (MOAs)

1. MONTANA SMOKE MANAGEMENT MEMORANDUM OF AGREEMENT

This Agreement is entered into effect July 31, 1978. The agencies and companies that are signatories to this Agreement hereby agree to abide by the Smoke Management Program for Montana attached hereto. As each agency and company signs this Agreement, they shall automatically become a member of the State Airshed Group described herein. Other agencies and companies may from time to time become a party to this Agreement and a member of the State Airshed Group by signing this agreement and submitting a copy to each of the other signatories. Prospective members must meet membership requirements established by the State Airshed Group (membership requirements on file with Monitoring Unit). The signatories hereto are dedicated to the preservation of air quality in Montana. However, the continuing importance of prescribed burning for removal of logging residue to assure protection and regeneration of forest areas and for other accepted forest practices, such as wildlife habitat improvement, is recognized. The objectives of this Agreement are as follows:

- 1) To minimize or prevent the accumulation of smoke in Montana to such degree as is necessary to protect State and federal ambient air quality standards when prescribed burning is necessary for the conduct of accepted forest practices such as hazard reduction, regeneration and wildlife habitat improvement. The development of alternative methods shall be encouraged when such methods are practical.
- 2) To develop a smoke management plan for reporting and coordinating burning operations on all forest and range lands in the State. Guidelines in the plan will be based upon the principles of and technical information currently available on smoke dispersion and on State and Federal air quality regulations. A copy of the Smoke Management Program is attached and incorporated herein by reference. The Smoke Management Program shall be reviewed periodically and changes may be made with the approval of all signatories or their designated representative. Such approval shall be given in writing.
- 3) To evaluate the program, review the Agreement and improve the Smoke Management Program where feasible.

Any signatory hereto may withdraw from this agreement upon thirty (30) days written notice to the Executive Board.

/s/ Tony Colter July 3, 2002
Procurement Manager – NW Division
Louisiana Pacific Corporation

/s/ Tom Ray July 15, 2002
General Manager – NW Region
Plum Creek Timber Company

/s/ Bruce Timpano June 26, 2002
Forester
Pyramid Mountain Lumber

/s/ Ed Regan June 28, 2002
Resource Manager
R-Y Timber Company

/s/ Rick Franke July 18, 2002
Northwest Area Manager
Smurfit-Stone Container

/s/ Dwight C. Opp July 5, 2002
Fee Lands Manager – Inland Region
Stimson Lumber

/s/
F.H. Stoltze Land and Lumber
/s/ Bill Rossbach September 25, 2002
Chair- Air Pollution Control Board
Missoula City-County Health Department

/s/ Bradley E. Powell July 8, 2002
Regional Forester
USDA Forest Service, Northern Region

/s/ Don Childress July 2, 2002
Wildlife Division Administrator
Montana Fish Wildlife and Parks

/s/
Bureau of Land Mgmt, MT Area Office

/s/
Yellowstone National Park

/s/ Keith Harding July 1, 2002
Chief Forester
Wyoming Sawmills, Inc.
/s/

Confederated Salish and Kootenai Tribes

/s/ Anthony L. Liane July 11, 2002
Administrator (Acting) – Forestry Division
Montana Dept of Natural Resources &
Conservation

/s/
Bureau of Indian Affairs, Flathead Agency

/s/ Pete Hart July 1, 2002
Acting Superintendent
Glacier National Park

/s/ Louise Zokan-Dilos Reyes July 16, 2002
Director
Bureau of Indian Affairs, Rocky Mt. Region

2. NORTH IDAHO SMOKE MANAGEMENT
MEMORANDUM OF AGREEMENT
JUNE 1990

This agreement is entered into effect September 7, 1990. The agencies and companies that are signatories to this agreement hereby agree to abide by the Cooperative Smoke Management Program for north Idaho attached hereto. As each agency and company signs this agreement, they shall automatically become a member of the North Idaho Airshed Group described herein. Other agencies and companies may from time to time become a party to this agreement and a member of the North Idaho Airshed Group by signing this agreement and submitting a copy to each of the other signatories. Prospective members must meet membership requirements established by the North Idaho Airshed Group. The signatories hereto are dedicated to the preservation of air quality in North Idaho. However, the continuing importance of prescribed burning for removal of logging residue to assure protection and regeneration of forest areas and for other accepted forest practices, such as wildlife habitat improvement, is recognized.

The objectives of this Agreement are as follows:

- 1) To minimize or prevent the accumulation of smoke in Idaho to such degree as is necessary to protect State and federal ambient air quality standards when prescribed burning is necessary for the conduct of accepted forest practices such as hazard reduction, regeneration and wildlife habitat improvement. The development of alternative methods shall be encouraged when such methods are practical.
- 2) To develop a smoke management Program for reporting and coordinating burning operations on all forest and range lands in the state. Guidelines in the Program will be based upon the principles of and technical information currently available on smoke dispersion and on State and Federal air quality regulations. A copy of the Smoke Management Program is attached and incorporated herein by reference. The Smoke Management Program shall be reviewed periodically and changes may be made with the approval of all signatories or their designated representative. Such approval shall be given in writing.
- 3) At the end of each burning year, evaluate the program, review the agreement and improve the Smoke Management Program where feasible.
- 4) To enter into an agreement with the Montana State Airshed Group to jointly use the Smoke Management Monitoring Unit, located in Missoula, Montana, for the implementation of the North Idaho Cooperative Smoke Management Program. This interim agreement will allow the North Idaho Airshed Group the flexibility to evaluate the program and make necessary changes to insure adequate program requirements are being met for the operation of the North Idaho Cooperative Smoke Management Program. This gives the option to the North Idaho Airshed Group, after evaluation, to establish their own monitoring unit if deemed necessary.

Any signatory hereto may withdraw from this agreement upon 30 days written notice to the North Idaho Airshed Group in care of the Idaho Department of Environmental Quality, Air Quality Bureau. Agreed to by NORTH IDAHO SMOKE MANAGEMENT AGREEMENT signatories.

/s/ _____

Potlatch Corporation

/s/ _____

Inland Empire Paper

/s/

Plum Creek Timber Company

/s/

Idaho Dept of Environmental Quality

/s/

US Army Corps of Engineers

/s/

Stimpson Lumber Company

/s/

USDA Forest Service, Region 1

/s/

Bureau of Land Management

/s/ Forrest Cameron

Regional Chief, National Wildlife Refuge System
For the Regional Director, Pacific Region

/s/

University of Idaho

/s/

Louisiana Pacific Corporation

/s/

Coeur d' Alene Tribe

/s/

Idaho Department of Lands

/s/

US Fish and Wildlife Service

/s/

Forest Capitol North

3. SOUTH IDAHO SMOKE MANAGEMENT MEMORANDUM OF AGREEMENT

This agreement is entered into effect February 01, 1999. The agencies and companies that are signatories to this agreement hereby agree to abide by the Draft Cooperative Smoke Management Program for south Idaho attached hereto. As each agency and company sign this agreement they shall automatically become a member of the South Idaho Airshed Group (Unit) described herein. Other agencies and companies may from time to time become a party to this agreement and a member of the south Idaho Airshed Group (Unit) by signing this agreement and submitting a copy to each of the other signatories.

Prospective members must meet membership requirements established by the South Idaho Airshed Group (Unit) (membership requirements on file with the Monitoring Unit). The signatories hereto are dedicated to the protection of air quality in south Idaho. However, the continuing importance of prescribed burning for removal of fuel to assure protection and regeneration of forest areas and for other accepted management practices, such as wildlife habitat improvement, hazard fuel reduction, and ecosystem health is recognized. The objectives of this agreement are as follows:

- 1) To minimize or prevent the accumulation of smoke in Idaho to such a degree deemed as necessary to meet state and federal ambient air quality standards when prescribed burning is necessary to conduct accepted management practices such as hazard reduction, regeneration, and wildlife habitat improvement. The development of alternative methods shall be encouraged when such methods are practical.
- 2) To develop a smoke management Program for reporting and coordinating burning operations on all forest and range lands in the state. Guidelines in the Program will be based upon the principles of and technical information currently available on smoke dispersion and on state and federal air quality regulations. A copy of the Draft Cooperative smoke Management Program is attached and incorporated herein by reference. The Program shall be reviewed periodically and changes may be made with approval of all signatories or their designated representative. Such approval shall be given in writing.
- 3) At the end of each burning year, evaluate the program, review the agreement and improve the Cooperative Smoke Management Program where feasible.
- 4) To enter into an agreement with the Montana State Airshed Group to jointly use the Smoke Management Monitoring Unit, located in Missoula, Montana, for the implementation of the south Idaho Cooperative Smoke Management Program. This interim agreement will allow the south Idaho Airshed Group the flexibility to evaluate the program and make necessary changes to insure adequate program requirements are being met for the operation of the South Idaho Cooperative Smoke Management Program. This gives the option to the south Idaho Airshed Group, after evaluation, to establish their own monitoring unit if deemed necessary.
- 5) The National Weather Service will act as a technical advisor to fulfill meteorological data forecast obligations in support of federal land management agencies that are members of the South Idaho Airshed Group.

Any signatory hereto may withdraw from this agreement upon 30 days written notice to the South Idaho Airshed Group in care of the Idaho Division of Environmental Quality, Air and Hazardous Waste Division Bureau. Agreed to by South Idaho Cooperative Smoke Management Agreement signatories.

/s/

Idaho Dept of Environmental Quality

/s/

USDA Forest Service, Region 4

/s/

Idaho Dept of Lands

/s/

Bureau of Land Management

/s/

National Weather Service –Western Region

/s/

Boise Cascade Corporation

/s/

US Fish and Wildlife Service

s/ Forest Cameron 11/29/01

Regional Chief, National Wildlife Refuge System for the Regional Director, Pacific Region

/s/ C. Stephen Allred 6/18/99

Director
Idaho Department of Environmental Quality

4. NORTH IDAHO AND MONTANA AIRSHED GROUP
MEMORANDUM OF AGREEMENT

This agreement is entered into effect August 30, 1990. The signatories to this agreement represent North Idaho and Montana Airshed Groups. These two groups agree to the following objectives of this agreement.

- 1) To minimize or prevent the accumulation of smoke in Idaho and Montana to such degree as is necessary to meet state and federal ambient air quality standards when prescribed burning is necessary to conduct accepted forest practices such as hazard reduction, regeneration site preparation and wildlife habitat improvement. The development of alternative methods shall be encouraged when such methods are practical.
- 2) To develop smoke management plans for reporting and coordinating burning operations on all forest and rangelands in North Idaho and Montana. Guidelines in the plans will be based upon the principles of and technical information currently available on smoke dispersion and on state and federal air quality regulations. The two separate Cooperative Smoke Management Programs shall be reviewed periodically and changes may be made with the approval of all signatories or their designated representatives within each plan.
- 3) At the end of the burning year (on December 1) an evaluation of each program, review of the agreements and improvements to each Cooperative Smoke Management Program will take place. These efforts will be coordinated between each state airshed units.
- 4) To enter into an agreement between the North Idaho and Montana State Airshed Units to jointly use the Smoke Management Monitoring Unit located in Missoula, Montana for the implementation of the North Idaho Cooperative Smoke Management Program. This interim agreement will allow the North Idaho Airshed Group the flexibility to evaluate the program and make necessary changes to insure adequate program requirements are being met for the North Idaho Cooperative Smoke Management Program. This gives the North Idaho Airshed Group the option, after evaluation, to establish a monitoring unit, as deemed necessary.
- 5) To cooperate fully between the North Idaho and Montana Airshed Groups as outlined in each Cooperative Smoke Management Program.

Agreed to by the NORTH IDAHO AND MONTANA STATE AIRSHED GROUPS:

/s/ Brian Shiplett August 30, 1990
Unit Liaison
North Idaho Airshed Group

/s/ Ed Mathews August 30, 1990
Program Coordinator
Montana State Airshed Group

SECTION V - APPENDICES

Appendix 1

AIRSHED AND IMPACT ZONE BOUNDARIES

Appendix 2

CORRELATION BETWEEN NWS FIRE WEATHER ZONES AND AIRSHEDS

Appendix 3

STAG NUMBER ASSIGNMENTS, IMPORTANT DATES, BURN TYPE CODES, TELEPHONE NUMBERS

Appendix 4

DAILY BURN REPORTING DATA DESCRIPTION

Appendix 5

AGENCY/INDUSTRY ABBREVIATIONS

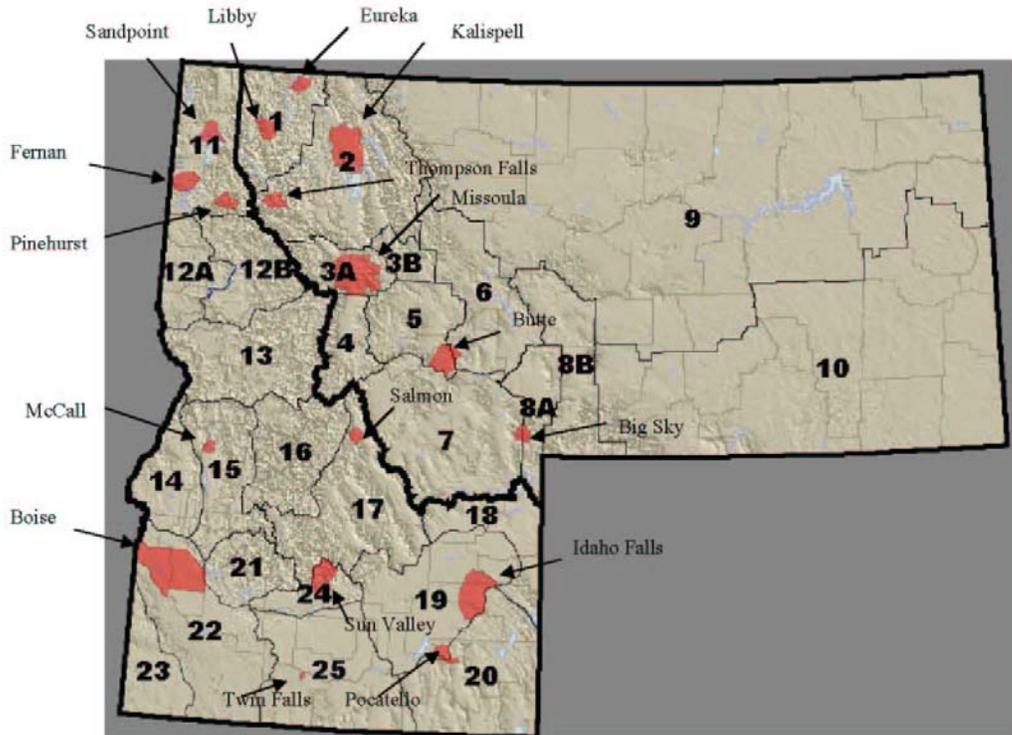
Appendix 6

Appendix 7

EXECUTIVE BOARD GUIDING PRINCIPLES

Appendix 1

AIRSHED AND IMPACT ZONE BOUNDARIES



Idaho/Montana Airsheds and Impact Zones

MONTANA AIRSHED BOUNDARY DESCRIPTIONS

- 1) **Airshed 1** contains all of Lincoln County and the NW tip of Sanders County. The area of Sanders County included here is bordered on the north and east by Lincoln County, on the west by the Idaho border, on the south by the southern edge of the Beaver Creek drainage, through Noxon Reservoir, and the southern edge of the Vermillion River drainage.
 - a. The ***Libby Impact Zone***, within Airshed 1, includes all land within the following describe areas:

Beginning at Kootenai Falls (1), going SE to Scenery Mountain (2), then south to Indian Head (3), then south to Treasure Mountain (4), then south to Mount Snowy (5), then east to Double N Lake (6), then across Highway 2 going NE to McMillan Mountain (7), then north to Swede Mountain (8), then NE across Highway 37 to the Vermiculite Mine (9), then west to Sheldon Mountain (10), then WNW to Flagstaff Mountain (11), then SW to Kootenai Falls (1), the point of the beginning.
- 2) **Airshed 2** contains all of Flathead and Lake Counties and all of Sanders County except for the NW tip (described in paragraph 1), which is part of Airshed 1. Airshed 2 also contains the northern portions of Missoula and Powell Counties, which lies in the Swan River drainage, and the South Fork of the Flathead River drainage. The boundary here is the divide between the Swan River and the Clearwater River drainages in Missoula County and the divide between Monture Creek and the South Fork of the Flathead River drainage in Powell County. Also, the northern half of Mineral County (that portion north of Superior) is included in Airshed 2. This line runs east and west between T16N and T17N, M.P.M., then north along Mineral County to Sanders County line.
 - a. The ***Kalispell Impact Zone***, within Airshed 2, includes all land within the following described area:

Beginning in the town of Hungry Horse, cross the Flathead River and head NW to Teakettle Mountain, then WSW to a point on Trumbull Creek between sections 24, 25 in T31N, R21W. Go directly West to the corner of sections 20, 21, 28, and 29 in the same Township and Range, then head North to the corner of sections 16, 17, 20, and 21, same T and R. Now head West to the line that divides R21W and R22 W, then North to Big Mountain, then SW down Big Mountain Ridge face toward Whitefish Lake at a point just SE of where Hell Roaring Creek enters the lake. Cross the lake to a point called “Vista” in section 9, T31N, R22W, and then generally follow the higher points, through Woods Lake, Murray Lake, crossing Highway 93 in section 24, T31N, R23W. Continue through Little Bootjack Lake and follow the high points generally WSW to a point on Tally Lake where Logan Creek enters the lake. The boundary crosses the lake generally SSW to Talley Mountain, then generally South to Reid Point Lookout, then South along the “Reid Divide” to the boundary between T30N, T29W, and R23W, and R24W. Turn SE and follow the ridge to a point on Big Lost Creek in section 16, T29N, R23W, then follow the ridge around to “McMannamy Draw” in section 26, T29N, R23W, then generally following the ridges South to Boorman Peak and then South along the Pack Trail to a point where “Dower Draw” enters Ashley Creek. Cross Ashley Creek to a point at the foot of the ridge in section 19, T27N, R22W, then follow this ridge up to Wild Bill Mountain, then straight to Eagle Mountain, then straight to Blacktail Mountain, then generally NW to Lion Mountain, then head straight SE through Baldy Mountain, and on to the Flathead/Lake County line on Highway 93 in section 33, T26N, R20W. Boundary now head directly East across Flathead Lake to Highway 35 and then follows the shore line North along the Flathead/Lake County line to the corner of sections 4,5,8 and 9 in T26N, R19W, then directly North to Hash Mountain, then

straight to Doris Mountain then straight to Columbia Mountain and finally straight back to the start point in the town of Hungry Horse, the point of the beginning.

- 3) **Airshed 3** includes Mineral County south of Superior, along the township line separating T16N and T17N, M.P.M., all of Missoula County south of Swan-Clearwater divide, and the central portion of Powell County, which includes all of the Blackfoot River drainage. This Airshed is further divided into 3A and 3B sections. The division is a NW-SE line from near the headwaters of the South Fork of the Jocko River to near Garnet ghost town. 3A is in the western section. A description of the dividing line between 3A and 3B is (b) below.

- a. The ***Missoula Impact Zone***, within Airshed 3, includes all land within the following described area:

Beginning at the intersection of the Carlton Creek Road and Highway 93 (1), going west to Lolo Peak (2), then north down the south fork of Lolo Creek to Highway 12, then west on Highway 12 to a point where Davis Creek enters Lolo Creek, then north to Telephone Butte (3), then NW to Petty Mountain (4), then north to Interstate 90 where Six Mile Creek enters the Clark Fork, then NE to a high-point (5), then ENE to Charity Peak (6), then across Highway 93 to Murphy Peak (7), then NE along the Reservation Boundary to Triangle Peak (8), then SE to Boulder Lake (9), then sought t Bull Lake (10), then SE to Shoofly Meadows (11), then SW to Sheep Mountain (12), then WSW to Blue Point (13), then south along Johnson Gulch to Highway 200, then SW on Highway 200 to Bonner, then east on Interstate 90 to the mouth f Bear Gulch, then up south Bear Gulch to map point 14 at the head of Bear Run Creek, then down Bear Run Creek, across Miller Creek and up to the head of Davis Creek, then down Davis Creek, across the Bitterroot River to Highway 93, then south on Highway 93 to Carlton Creek (1), the point of beginning.

- b. The line dividing Airshed 3 into 3A and 3B is described as:

A line beginning at Boles Point in section 30, T16N, R16W, going SE to Belmont Peak, then SSE down Game Ridge to the SE corner o Section 36, T15N, R16W, then south to Morison Peak, then SE to Lubrecht Camp, then SE along the Garnet Range Road to the Granite county line.

- 4) **Airshed 4** contains all of Ravalli County and its boundaries are identical with the Ravalli County boundaries.
- 5) **Airshed 5** contains all of Granite, and the southern portion of Powell County, which includes the Clark Fork and Little Blackfoot River drainages. It also contains the northern half of both Deer Lodge and Silver Bow Counties. The dividing line is the continental divide starting at Mount Tiny in Deer Lodge County to Homestake Pass in Silver Bow County.

- a. The ***Butte Impact Zone***, within Airshed 5, includes all land within the following described area:

Beginning at the top of Homestake Pass in I-90, proceeding north along the continental divide to Maxwell, then NE to Whitetail Peak, then NW across I-15 to Sheephead Mountain, then W to the forest road intersection near Cotton, then SW across I-90 and SW further to Burnt Mountain. The boundary then goes eastward along the continental divide to Feeley Hill then SE to near Basin Creek Reservoir then NE to Homestake Pass, the point of beginning. Exact boundary locations can be determined from maps on file in the Monitoring Unit.

- 6) **Airshed 6** includes all of Lewis and Clark County and most of Broadwater County excluding the small portion south of Interstate 90 from the Jefferson county line to Three Forks. It also includes the northern three-quarters of Jefferson County. The boundary across Jefferson County follows I-90 from Homestake Pass to the Broadwater county line.
- 7) **Airshed 7** includes all of Beaverhead and Madison counties plus the southern one-quarter of Jefferson County south of I-90 from Homestake Pass to the Broadwater county line. The very southern tip of Broadwater County south of I-90 from the Jefferson county line to Three Forks is also included. Airshed 7 also contains the southern half of both Deer Lodge and Silver Bow counties south of the Continental Divide starting at Mt. Tiny in Deer Lodge County to Homestake Pass in Silver Bow County.
- 8) **Airshed 8A** includes all of Gallatin County. The boundary is identical to the boundary of the county.
- 9) **Airshed 8B** includes all of Park and Meagher Counties and the boundaries are identical to the boundaries of those two counties.
- 10) **Airshed 9** includes all of the following counties: Glacier, Toole, Liberty, Hill, Blaine, Phillips, Valley, Daniels, Sheridan, Roosevelt, Richland, McCone, Garfield, Petroleum, Fergus, Musselshell, Golden Valley, Wheatland, Judith Basin, Choteau, Cascade, Teton and Ponderosa.
- 11) **Airshed 10** includes all of Prairie, Dawson, Wibaux, Fallon, Carter, Powder River, Big Horn, Carbon, Sweet Grass, Stillwater, Yellowstone, Treasure, Rosebud, and Custer Counties.

Idaho Airshed Boundary Descriptions

Airshed 14 Starting at Bald Mountain, head northwest to Old Timer Mountain. Head NNW to Stormy Point. Head WNW to the Idaho and Oregon boundary on the Snake River. Follow the Idaho and Oregon boundary south to just north of the town of Payette, ID. Head east to just north of Black Canyon Reservoir. Head east one mile to the north of and paralleling the Payette River to Horseshoe Bend. Head NNE along the ridge west of and paralleling the Payette River to Banks. Continue along the ridge west of and paralleling the Payette River to Smiths Ferry. Head north to Colier Peak. Head northwest to Lookout Peak. Follow the Payette and Boise National Forest boundary to No Business Lookout. Head northwest along Blue Bunch Ridge to the intersection of Road 169 and Road 173. Head northwest on the west side of the Little Salmon River thru Rubigon to the end of Road 290. Head northwest thru Railroad Saddle to Lick Creek Lookout. Head northwest thru Bear Saddle to Pyramid Peak. Head NNW along the Seven Devils Mountains thru Horse Heaven to Pyramid Mountain. Head NNW then NNE to Bald Mountain.

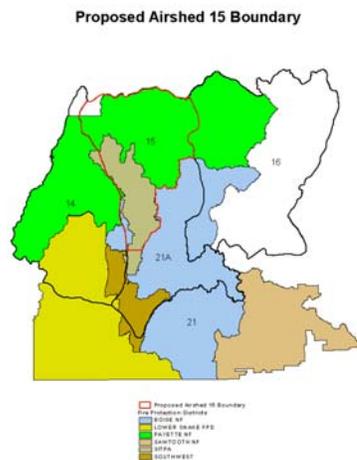
A change to the boundary of Airshed 15 has been proposed and excepted by all effected parties, to be adopted in fall season 2004.

Proposed Airshed 15 The Payette National Forest, Boise National Forest, and the Southern Idaho Timber Protection Association are proposing a boundary change to Airshed 15. Burners from this group agree that the current boundary does not adequately reflect the flow and pooling of smoke they

experience, and it is their opinion that the present boundaries may have unnecessarily limited past burning opportunities for some cooperators. In the future, as Prescribed Fire programs escalate in response to the National Fire Plan, the potential for lost burning opportunities will only increase. It is this group's opinion that significant terrain breaks exist, and can be utilized to more effectively plan for and manage prescribed fire smoke emissions. The current airshed boundaries encompass most of the Payette River watershed. The upper end of the North Fork of the Payette River watershed drains into a long, broad, relatively flat, high elevation valley that includes Payette Lake and the town of McCall, which has been designated as an impact zone. This broad valley extends southward past the town of Cascade. Approximately six miles south of Cascade the terrain changes significantly and becomes characterized by steep, well-developed, narrow river canyon lands. In general, it is where this change occurs that the proposed airshed boundary changes are focused. Smoke emitted from the southern portions of the current Airshed 15, typically does not impact the northern portions and, conversely, while smoke generated in northern portions can pool in the upper valley, it usually does not impact the southern portions of the airshed.

The group recommends altering the boundary in the following manner:

1. Start where the current Airshed 15 boundary intersects the Payette National Forest boundary at T19N, R8E, Sec 26 NE/NE.
2. Follow the Payette National Forest Administration boundary west and south until T16N, R5E, Sec 2.
3. Head south along the Boise National Forest North Zone Wildland Protection boundary (North Fork of the Payette Range ridge) until it intersects the T12N / T11N line.
4. Follow the T12N / T11N line west until it intersects the current Airshed 15 boundary.
5. Follow the current Airshed 15 boundary north, then east, then south to the starting point above.



The group also recommends designating the southern portion of the current Airshed 15 as Airshed 21A. Boise National Forest personnel would do the vast majority of the burning in this area. The group, therefore, recommends that the current Airshed 21 Coordinator administer the newly designated area.

Airshed 18 Beginning at the Idaho – Wyoming border, on the south side of Palisades Reservoir, the boundary heads northwest along Palisades Reservoir and Hwy 26 staying .25 to .5 miles south of the highway to the north end of Ririe Lake. This section is shared with Airshed 20 to the south. At this point north of the Ririe Lake outlet, the border runs east to northeast across Kelly and Lookout Mountains, continuing north to north east across the Madison – Teton county line to the north end of the Big Hole Mountain Range. Border turns due north to the town of Clemensville. Border proceeds northwest through Linderman dam to just south of Ashton and continues northwest crossing the Henry’s Fork River and northwest to 1/8 mile south of Sand Creek Reservoir. At this point, border runs almost due west to Dubois. Continues west to southwest along hwy 12 to the Clark – Jefferson county line. This section is shared with Airshed 19 to the west and south. Now, the boundary turns north and follows the ridge-top of the mountain range to the Idaho – Montana state line. This section runs just west of Gallagher Peak, Bluebird Mountain, and Scott Peak. This section shares the boundary with Airshed 17 to the west. From here, the boundary follows the Idaho – Montana line east, then the Idaho – Wyoming line south to the beginning point south of Palisades Reservoir.

Airshed 19 Boundary begins .25 miles north of Power Cassia county line and .5 west of Register Rock Picnic ground area. It runs east to northeast and generally follows I-86 to Pocatello, staying .25 to 1 mile south of the freeway and Pocatello city. At I-15 and the north slope of the Bannock Range, boundary turns due north following the Pocatello Range ridge top for 2 miles. From Camelback Mountain, boundary proceeds northeast to Mount Taylor, passing through Fort Hall Indian Reservation. This section is east of Baden Peak and east of Stevens Peak. Then, it proceeds north crossing the Bingham and Bonneville county line to the north end of Ririe Lake outlet. This section borders Airshed 20 to the southeast. At the point north of the Ririe Lake outlet, the border runs east to northeast across Kelly and Lookout Mountains, continuing north to north east across the Madison – Teton county line to the north end of the Big Hole Mountain Range. Border turns due north to the town of Clemensville. Border proceeds northwest through Linderman dam to just south of Ashton and continues northwest crossing the Henry’s Fork River and northwest to 1/8 mile south of Sand Creek Reservoir. At this point, border runs almost due west to Dubois. Continues west to southwest along hwy 22 to the Clark – Jefferson county line. To this point Airshed 20 has bordered with Airshed 18 to the north and east. Airshed 19 continues southwest paralleling hwy 22 to the town of Howe. From Howe, the boundary proceeds south and west of Howe Peak following the Salmon - Challis National Forest boundary. It follows the boundary hooking around to the north and west to Beaverland Pass, where the boundary proceeds due north through the Salmon-Challis, following the ridge-top to .25 miles south of Sunset Peak. The boundary turns due west to the Butte-Custer county line. Then, it goes southwest to the town of Mackey. From Mackey, the line continues west for 1 mile just south of Mackey reservoir, and then turns southwest running west of Mackey Peak and crossing Stewart Canyon. The line continues southwest past Copper Basin Knob to the junction of Butte, Blaine and Custer counties. This section borders with Airshed 17 to the northwest. From this point, Airshed 19 continues south following the Blaine county line to hwy 93. This section is bordered on the west by Airshed 24. From here, the boundary runs south, southeast passing to the east of Laidlaw Butte, continuing south southeast past the Minnidoka – Blaine county line then southeast to the Blaine and Power county line. Then, southeast to the Wapi Station, and then due south to the Snake River, then .5 miles east to the beginning point.

Airshed 20 Starts at the Utah – Idaho border .5 miles east of I-84. Proceeds north along the west side of the Curlew National Grasslands. Then, continues north along the ridge top of the Sublett Range to .25 north of the Power – Cassia County line. This section borders with Airshed 25 on the west. Boundary now turns east to northeast and generally follows I-86 to Pocatello, staying .25 to 1 mile south of the freeway and Pocatello city. At I-15 and the north slope of the Bannock Range, boundary turns due north following the Pocatello Range ridge top for 2 miles. From Camelback Mountain, boundary proceeds northeast to Mount Taylor, passing through Fort Hall Indian Reservation. This section is east of Baden Peak and east of Stevens Peak. Then, it proceeds north crossing the Bingham and Bonneville county line to the north end of Ririe Lake. This section has bordered on the west with Airshed 19. North of Ririe Lake, Airshed 19 turns southeast staying .5 to .25 miles south of hwy 26, along the southern side of Palisades Reservoir to the Idaho – Wyoming Border. This last section bordered with Airshed 18 to the north and east. From this point, Airshed 20 continues south along the Idaho – Wyoming state line, and then proceeds west along the Idaho – Utah border to the starting point .5 miles east of I-84.

Airshed 21 Clockwise description:

Starting at the west end of the airshed, Airshed 21 includes the northeast corner of the Boise Impact Zone. It proceeds north to the intersection of Airsheds 21, 22 and 15, where it continues northeast west of Mores Creek drainage. It continues north/northeast cross country to a point one mile south of Wilson Pk, where it turns east to Pilot Pk. From there it goes north along various ridgelines to Beaver Creek Summit, then turns east north of Sawmill Creek, again following ridges and peaks past Banner Ridge and Archie Mountain. At Archie Mountain, the boundary turns southeast, continuing to follow peaks and ridge tops, to Tye Mountain, where it turns north and northeast to the Sawtooth National Recreation boundary. It turns north, following the Recreation Area boundary, to the Boise – Elmore County line. Airshed 21 boundary follows the Elmore County line south to the Blaine County line, and then follows Blaine County line south to an unnamed peak (elevation 8200 feet). Here it proceeds cross-country west to Soldier Mountain; hop scotching across various mountaintops to the intersections of Airsheds 21, 22 and 24. The boundary line between 21 and 22 proceeds west along Immigrant/Canyon Creek/Mayfield roads to the northwest to the Boise Impact Zone. Airshed 21 includes southern Boise County, northern Elmore County, and the north half of Camas County. It includes the southwest portion of the Sawtooth Class 1 Airshed.

Airshed 22 The southwest boundary ties in with Airshed 23 (see that narrative).

Counterclockwise description:

Starting at the south end along the Nevada border, the east boundary of Airshed 22 and Airshed 25 proceeds north along the Owyhee and Twin Falls county line. It then heads west/northwest cross country before turning back east to tie in with Salmon Falls Creek at the confluence of Salmon Falls and Devil Creeks. It proceeds north following Salmon Falls Creek to the Snake River at Blue Springs. It follows the Snake R. west along the Twin Falls/Gooding county line to Bliss Reservoir. There it follows the Snake R. along Elmore/Gooding county line. It crosses the Snake River several times as it proceeds north and northwest to King Hill town. The boundary then cuts cross-country north to the intersection of Airsheds 22, 24 and 25. The boundary continues north several miles to the intersection of Airshed boundaries 21, 24 and 22 a mile SE of Packer Butte. It then follows cross-country to Bennett Mountain Lookout, then to US highway 20. It follows US 20 to Immigrant/Canyon Creek/Mayfield roads to the northwest to the Boise Impact Zone, which it bisects as it heads north. Airshed 22 intersects Airsheds 15, 22 and 21 one mile north of Daggett Creek. Airshed 22 proceeds northwest to a point just east of Shafer Butte Lookout. It then passes over Mores Mountain, continues northwest to pass two miles south of Horseshoe Bend town. Just west of Horseshoe Bend, it loses Airshed 15 and borders Airshed 14 from here on. It crosses the Payette River just west of Horseshoe bend, and proceeds west paralleling the

Payette River one mile to the north. It passes to the north of Black Canyon Reservoir as it proceeds west. It continues cross-country to just north of the town of Payette on the Snake River at the Oregon border. Airshed 22 includes the southern halves of Payette and Gem counties, south end of Boise County, NE corner of Ada County, southern half of Elmore County, northwest Twin Falls County, and east half of Owyhee County.

Airshed 23 Clockwise description:

Encompasses southwest corner of Idaho that borders SE Oregon and northern Nevada. Includes the region south of the Owyhee Mountains. Airshed lies entirely in Owyhee County. It borders Airshed 22 entirely. The boundary between Airsheds 22 and 23 cuts across country, over mountain peaks (Rooster Comb Ok, Glass Hill, New York Summit, and Duncan Pk) following the spine of the Owyhee Mountains. Between these peaks, the boundary cuts across open country.

Appendix 2

CORRELATION BETWEEN NWS FIRE WEATHER ZONES AND AIRSHEDS

In order to interpret the National Weather Service Fire Weather Forecasts, the following guidelines should be used to correlate fire weather zones and airsheds:

MONTANA:

- 1) Airshed 1 (Kootenai):
Use dispersion forecasts for FW Zone 104. For this forecast FW Zone 104 will be extended westward to the Idaho border.
- 2) Airshed 2 (Flathead):
Use dispersion forecasts for FW Zones 104-107.
- 3) Airshed 3A and 3B (Blackfoot-Clark Fork):
Use dispersion forecast for FW Zones 106-108.
- 4) Airshed 4 (Bitterroot):
Use dispersion forecast for FW Zone 109.
- 5) Airshed 5 (Upper Clark Fork):
Use dispersion forecasts for FW Zones 108 and 110.
- 6) Airshed 6 (Helena):
Use dispersion forecast for FW Zones 111, 114, 116 and 118.
- 7) Airshed 7 (Beaverhead):
Use dispersion forecasts for FW Zones 110 and 111.
- 8) Airshed 8A and 8B (Gallatin):
Use dispersion forecasts for FW Zones 117, 118 and 123.
- 9) Airshed 9 (Missouri):
Use dispersion forecasts for FW Zones 112-115, 117, 119-122, 124, and 127.
- 10) Airshed 10 (Yellowstone):
Use dispersion forecasts for FW Zones 122, 124-126 and 128-133.

NORTH IDAHO:

- 1) Airshed 11 (Idaho Panhandle):
Use dispersion forecasts for FW Zone 101.
- 2) Airshed 12A and 12B (Clearwater):
Use dispersion forecasts for FW Zone 102.
- 3) Airshed 13 (Nez Perce):
Use dispersion forecasts for FW Zone 103.

SOUTH IDAHO:

- 1) Airshed 14:
Use dispersion forecasts for FW Zones 400 and 401.
- 2) Airshed 15:
Use dispersion forecasts for FW Zones 402-404.
- 3) Airshed 16:
Use dispersion forecasts for FW Zones 402, 403, 405 and 406.
- 4) Airshed 17:
Use dispersion forecasts for FW Zones 405-407 and 410.

- 5) Airshed 18:
Use dispersion forecasts for FW Zones 410 and 411.
- 6) Airshed 19:
Use dispersion forecasts for FW Zones 409 and 410.
- 7) Airshed 20:
Use dispersion forecasts for FW Zones 410 and 413.
- 8) Airshed 21:
Use dispersion forecasts for FW Zones 404 and 407.
- 9) Airshed 22:
Use dispersion forecast for FW Zone 408.
- 10) Airshed 23:
Use dispersion forecast for FW Zone 408.
- 11) Airshed 24:
Use dispersion forecasts for FW Zones 407 and 409.
- 12) Airshed 25:
Use dispersion forecasts for FW Zones 408, 409 and 412.

Appendix 3

STAG NUMBER ASSIGNMENTS, IMPORTANT DATES, BURN TYPE CODES, TELEPHONE NUMBERS

ASSIGNED BURN NUMBER LIST

Member/Office	Assigned Block	Comments
Beaverhead-Deerlodge NF	1-700; 2101- 2800	
Dillon RD	100-199	
Wisdom/Wise River RD's	200-299	
<i>Reserved</i>	300-399	
Butte/Jefferson RD's	400-499	
Pintlar RD	500-599	
Madison RD	600-699	
Bitterroot NF	701-1400	
Stevensville RD	701-799	
Darby RD	800-899	
Sula RD	900 -999	
West Fork RD	1000 -1099	
Custer NF	1401 - 2100	
Beartooth RD	1400- 1499; 1700-1799	
Sioux RD	1500-1599; 1800-1899	
Ashland RD	1600-1699; 1900-1999	
Flathead NF	2801- 3500	
Swan Lake RD	2801 - 2825; 2889 - 2899	
Three Forks Zone	2826 - 2864	
Tally Lake RD	2865 - 2915	
<i>Not assigned</i>	2916 - 3500	
Gallatin NF	3501- 4200	
Big Timber RD	3501-3601	
Livingston RD	3602-3702	
Gardiner RD	3703-3803	
Bozeman RD	3804-3904	
Hebgen RD	3905-4005	
Helena NF	4201- 4900	
Townsend RD	4201-4399	
Helena RD	4400-4549	
Lincoln RD	4550-4900	
Kootenai NF	4901- 7000	
Rexford RD	4901-5300	
Fortine RD	5301-5700	
Three Rivers RD	5701-6100	
Libby RD	6101-6500	
Cabinet RD	6501-6900	
Lewis and Clark NF	7001- 7600	Assigned in Dispatch
Lolo NF	7601- 9800	
Missoula RD	7601-7900	
Ninemile RD	7901-8300	
Plains/Thompson Falls RD	8301-8899	
Seeley Lake RD	8900-9100	

Superior RD	9101-9200	Airshed 3A
	9201-9399	Airshed 2
<i>Unassigned</i>	9400-9800	
Idaho Panhandle NF	71001-75000	
Coeur d'Alene River RD	71001-71500; 72001-72500	
St. Joe RD	71501-72000; 72501-73000	
Sandpoint RD	73001-73500	
Bonnars Ferry RD	73501-74000	
Priest Lake RD	74001-74500	
Clearwater NF	67001- 71000	
Pierce (and Lochsa)	67001-67500	
Palouse	67501-68000	
North Fork	68001-68500	
Lochsa	68501-69000	
Powell	69001-69500	
Nez Perce NF	63001- 67000	
Salmon River RD	63001-63400	
Clearwater RD	63401-63800	
<i>Not issued (District Consolidation)</i>	63801-64200	
Moose Creek RD	64201-64600	
Red River RD	64601-65000	
Boise NF	97,501- 98,000	
Idaho City RD		
Cascade RD		
Lowman RD		
Emmett RD		
Mountain Home RD		
Payette NF	96,001- 97,000	
Council RD		
McCall RD		
Krassel RD		
New Meadows RD		
Weiser RD		
Sawtooth NF	97,001- 97,500	
Fairfield RD		
Sawtooth NRA		
Ketchum RD		
Minadoka RD		Old Burely/Twin Falls RD
Salmon/Challis NF	95,001- 96,000	BLM-Bill Baer: 95600-95650 Jim Tucker: 95651-95699
North Fork RD	95700-95899	
Middle Fork RD	95300-95399	
Lost River	95400-95499	
Yankee Fork	9500-95099	
Challis	95500-95599	
Salmon/Cobalt	95100-95299	
Caribou NF	94,001- 95,000	Caribou /Targhee
Westside		One Forest
Montpelier		
Soda Springs		

Targhee NF		
Teton Basin		
Dubois		
Palisades		
Ashton/Island Park		
Idaho Tribes		
Coeur d'Alene	78001- 79000	
National Park Service	15001- 16000	
Glacier NP	15001-15099	
Bighorn Canyon	15100-15199	
Fort Union	15200-15299	
Yellowstone	15300-15399	
Grant-Kohrs	15400-15499	
Bighole	15500-15599	
BLM		
Salmon/Challis	89301-89400	
Idaho Falls/Pocatello	89201-89300	
Shoshone/Burley	89101-89200	
Lower Snake River District	89001-89100	Four Rivers, Owhyee, and Jarbidge
Coeur d'Alene	49001-51000	
FWS	92001-93000 79001-79100	
Kootenai NWR	79001-79100	
Minidoke NWR	92001-92200	
Grace Lake NWR	92201-92400	
Bear Lake NWR	92401-92600	
Camas NWR	92601-92800	
Deer Flats NWR	92801-93000	

When assigning a STAG number, consider combining burn units together.

A Stag Number is assigned to a burn project that has multiple units, landings piles, etc., as long as the burn units are generally in the same vicinity and have the same smoke characteristics. Burn units within a Stag Number can be spread out over several contiguous square miles as long as the fuel types and smoke behavior are similar. For example, if the burn units are separated by large areas, or geographic characteristics, or burn units have substantially different fuel types (grass versus timber), they should be assigned separate Stag Numbers.

Use the center section of the units for the legal description, and the highest and lowest elevation. "Be a lumper, not a splitter" whenever possible. It's easier for the Monitoring Unit to work with one Stag Number with multiple units than to work with 25 5-acre units having separate Stag Numbers. Contact the Member Representative for assistance."

DATES TO SUBMIT PLANNED BURN REPORTS TO THE MONITORING UNIT

ANNUAL PLANNED BURN LIST: **DUE NOVEMBER 29** (Year prior to permit year, MT only).

SPRING BURN LIST: **JANUARY 1 – FEBRUARY 27.**

FALL UPDATE TO ANNUAL PLANNED BURN LIST: **JULY 1 – AUGUST 15.**

WINTER ESSENTIAL BURN LIST: **DUE NOVEMBER 1.** (MT only)

BURN TYPE CODES

- 0- UNSPECIFIED: Miscellaneous; used when a burn cannot be categorized as any other burn type
- 1- BROADCAST: Unpiled activity fuels, continuous
- 2- HAND PILES: Hand piled activity fuel
- 3- MECHANICAL PILES: Machine piled activity fuels (dozer or excavation)
- 4- JACKPOT: Unpiled fuels, light, discontinuous
- 5- WILDLIFE HABITAT: Timber with shrub understory
- 6- UNDERSTORY: Natural fuels, timber/litter fuels
- 7- RANGE: Grass, brush and/or shrub fuels
- 8- LANDINGS: Large piles generated by mechanical logging
- 9- RIGHTS OF WAY: Slash generated from road construction

TELEPHONE NUMBERS

MONTANA AIR QUALITY-TOLL FREE NUMBER: 1-800-225-6779

NORTH IDAHO AIR QUALITY HOTLINE: 1-800-633-6247

NORTH IDAHO RECOMMENDATIONS HOTLINE: 1-800-442-0351

SOUTH IDAHO AIR QUALITY HOTLINE NUMBERS:

Pocatello/Chubbuck: (208) 236-6173

Treasure Valley: (208) 373-0313 OR (208) 373-0514

Montana Unit Liaison: Scott Kuehn(406) 542-3273
North Idaho Unit Liaison: Craig Glazier.....(208) 666-8647
South Idaho Unit Liaison: Kim VanHemelryck.....(208) 373-4047
Monitoring Unit:(406)329-4952

WEBSITES

- Smoke Monitoring Unit: <http://www.smokemu.org>
- Smoke Management Coordination: www.fs.fed.us/r1/fire/nrcc/Smoke_web_pages/intro.htm
- RAZU: <http://airshed.polaraweb.com/airshed/>
- MU daily air quality web page: http://www.fs.fed.us/r1/fire/nrcc/Smoke_web_pages/teom.htm
- DEQ-Idaho: www.deq.state.id.us
- DEQ-Montana: www.deq.state.mt.us/

Appendix 4

DAILY BURN REPORTING DATA DESCRIPTION

- 1) **STAG**: Designated burn number for each proposed burn.
- 2) **UNIT NAME**: Name assigned by burner to each proposed burn.
- 3) **LOCATION DESCRIPTION**: General location of the burn.
- 4) **AIRSHED**: **Two digit** designated airshed number for each proposed burn.
- 5) **IMPACT ZONE**: One to three alphabetic abbreviations of designated impacts zones within each proposed burn.
- 6) **ELEVATION**: Top-elevation of the unit proposed for burning. Example: Top elevation is 7500, enter as 7500.
- 7) **BURNTYPE**: One digit numeric code representing the burn type for each proposed burn. If two types of burns are to take place choose the burn type most representative of the burns management goals and objectives. Example: a broadcast burn is completed to enhance wildlife habitat. Enter the burn type representing wildlife habitat (5), because it is most representative of management objectives for the prescribed burn
- 8) **PREBURN LOADING**: Estimated fuel loading of section(s) proposed for burning. Numeric values are to be expressed as tons/acre
- 9) **ACREAGE**: Nearest whole number representing proposed acres to be burned
- 10) **TOWNSHIP**: Township of the section(s) proposed for burning. If more than one township is involved enter the most representative township. Enter **two digit** numeric value accompanied by N or S designation. Example: Township 2 north is entered as 02N.
- 11) **RANGE**: Range of the section(s) proposed for burning. If more than one range is involved enter the most representative range. Enter **two digit** numeric values accompanied by E or W designation. Example: Range 2 west is entered as 02W.
- 12) **SECTION**: **Two-digit** numeric value of the section(s) proposed for burning. If more than one section is to be burned enter the most representative value. Example: Sections 12, 13, 14, 15, 16 will be involved in proposed burn, SECTION value is 14.
- 13) **QUARTER**: Quarter section of the section to be burned. Example: Northwest quadrant of section 23, enter as NW.

Appendix 5

AGENCY/INDUSTRY ABBREVIATIONS

Based on RAZU Member Logins

Agency/Industry	Office	District
Boise Cascade Corporation: BCC	Southern Idaho Timber Protection Association: SIS	--
Boise Cascade Corporation: BCC	Southwest Idaho: SWS	--
Bureau of Indian Affairs: BIA	Fort Belknap: FTB	--
Bureau of Indian Affairs: BIA	Northern Cheyenne: NCA	--
Bureau of Indian Affairs: BIA	Confederated Salish and Kootenai: CSK	--
Bureau of Indian Affairs: BIA	Rocky Boy: RCB	--
Bureau of Indian Affairs: BIA	Crow: CRO	--
Bureau of Indian Affairs: BIA	Blackfeet: BFT	--
Bureau of Indian Affairs: BIA	Fort Peck: FTP	--
Bureau of Indian Affairs Idaho: BIAID	Bureau of Indian Affairs Idaho: BIAID	--
Bureau of Land Management: BLM	Salmon: SAL	--
Bureau of Land Management: BLM	Billings: BIL	--
Bureau of Land Management: BLM	Dillon: DIL	--
Bureau of Land Management: BLM	Missoula: MSO	--
Bureau of Land Management: BLM	Lower Snake River District: LSRD	--
Bureau of Land Management: BLM	Idaho Falls: IDF	--
Bureau of Land Management: BLM	Shoshone: SHO	--
Bureau of Land Management: BLM	Butte: BUT	--
Bureau of Land Management: BLM	Lewiston: LWT	--
Bureau of Land Management: BLM	Challis: CHA	--
Bureau of Land Management: BLM	Cottonwood: CW	--
Bureau of Land Management: BLM	Miles City: MC	--
Bureau of Land Management: BLM	Coeur d' Alene: CDA	--
MT Department of Natural Resources and Conservation: DNRC	Southwest Land Office: SW	Hamilton: HAM
MT Department of Natural Resources and Conservation: DNRC	Southwest Land Office: SW	Clearwater: CLW
MT Department of Natural Resources and Conservation: DNRC	Southwest Land Office: SW	Anaconda: ANA
MT Department of Natural Resources and Conservation: DNRC	Southwest Land Office: SW	Missoula: MSO
MT Department of Natural Resources and Conservation: DNRC	Southwest Land Office: SW	Lubrecht: LUB
MT Department of Natural Resources and Conservation: DNRC	Southwest Land Office: SW	Lincoln: LCN
MT Department of Natural Resources and Conservation: DNRC	Northwest Land Office: NW	Stillwater: STL
MT Department of Natural Resources and Conservation: DNRC	Northwest Land Office: NW	Kalispell: KAL
MT Department of Natural Resources and Conservation: DNRC	Northwest Land Office: NW	Plains: PLN
MT Department of Natural Resources and Conservation: DNRC	Northwest Land Office: NW	Lewiston: LWN
MT Department of Natural Resources and Conservation: DNRC	Northwest Land Office: NW	Swan: SWN
MT Department of Natural Resources and Conservation: DNRC	Northeast Land Office: NE	Libby: LIB
MT Department of Natural Resources and Conservation: DNRC	Northeast Land Office: NE	Northeast Land Office: NLO
MT Department of Natural Resources and Conservation: DNRC	Central Land Office: CLO	Bozeman: BOZ
MT Department of Natural Resources and Conservation: DNRC	Central Land Office: CLO	Dillon: DLN
MT Department of Natural Resources and Conservation: DNRC	Central Land Office: CLO	Helena: HLN
MT Department of Natural Resources and Conservation: DNRC	Southern Land Office: SLO	Southern Land Office: SLO
MT Department of Natural Resources and Conservation: DNRC	Eastern Land Office: ELO	Eastern Land Office: ELO
Forest Capitol North: FCN	Bonner's Ferry: BF	--
Forest Capitol North: FCN	Coeur d' Alene: CDA	--
Forest Capitol South: FCS	Coeur d' Alene: CDA	--
Forest Capitol South: FCS	Saint Maries: SM	--
Idaho Department of Lands: IDL	South Idaho Timber Protection Association: SIDTPA	--
Idaho Department of Lands: IDL	Ponderay: POR	--
Idaho Department of Lands: IDL	Catadallo: CAT	--
Idaho Department of Lands: IDL	Ponderosa: PON	--
Idaho Department of Lands: IDL	West St. Joe: WSJ	--
Idaho Department of Lands: IDL	Kootenai Valley: KTV	--
Idaho Department of Lands: IDL	Mica: MIC	--
Idaho Department of Lands: IDL	Craig Mountain: CMF	--

Agency/Industry	Office	District
Idaho Department of Lands: IDL	Eastern Idaho: EAST	--
Idaho Department of Lands: IDL	Maggie Creek: MAG	--
Idaho Department of Lands: IDL	Southwest Idaho: SWS	--
Idaho Department of Lands: IDL	Southern Idaho Timber Protection Association: SIS	--
Idaho Department of Lands: IDL	Clearwater-Potlatch Timber Protection Association: CPTPA	--
Idaho Department of Lands: IDL	Priest Lake: PLS	--
Inland Empire Paper: IEP	Inland Empire Paper: IEP	--
Louisiana Pacific: LP	Belgrade	--
Louisiana Pacific: LP	Deerlodge	--
MT Department of Fish, Wildlife & Parks: FWP	MT Department of Fish, Wildlife & Parks: FWP	--
National Park Service: NPS	Fort Union Tr Post	--
National Park Service: NPS	Bighorn Canyon	--
National Park Service: NPS	Grant-Kohrs	--
National Park Service: NPS	Yellowstone National Park: YNP	--
National Park Service: NPS	Gallatin National Park: GNP	--
National Park Service: NPS	Bighole Battlefield	--
Plum Creek Timber: PCT	Seeley South	--
Plum Creek Timber: PCT	Kalispell: KAL	--
Plum Creek Timber: PCT	Libby: LIB	--
Plum Creek Timber: PCT	Fleathead: FLH	--
Plum Creek Timber: PCT	Seeley North	--
Plum Creek Timber: PCT	Missoula: MSLA	--
Potlatch: POT	St. Maries: STM	--
Potlatch: POT	Orofino: ORO	--
Potlatch: POT	Panhandle: PAN	--
Potlatch: POT	Headquarters: HDQ	--
Potlatch: POT	Pierce: PRC	--
Potlatch: POT	Palouse North: PLN	--
Potlatch: POT	Palouse South: PLS	--
Potlatch: POT	Fernwood: FRN	--
Pyramid Mountain Lumber: PML	Westside	--
Pyramid Mountain Lumber: PML	Eastside	--
RY Timber: RYT	Livingston	--
Smurfit-Stone Container Corporation: SCC	Smurfit-Stone Container Corporation: SCC	--
Stimson Lumber: STIM	Newport, WA: NWPT	--
Stimson Lumber: STIM	Coeur d' Alene: CDA	--
Stimson Lumber: STIM	Bonner: BON	--
Stoltze Land & Lumber: STO	Stoltze Land	--
University of Idaho: UI	University of Idaho: UI	--
US Fish and Wildlife Service: USFWS	Charles M. Russell: CMR	--
US Fish and Wildlife Service: USFWS	Benton Lake: BLR	--
US Fish and Wildlife Service: USFWS	National Bison Range: NBR	--
US Fish and Wildlife Service: USFWS	Lee Metcalf: LMR	--
US Fish and Wildlife Service: USFWS	Kootenai: KOR	--
US Fish and Wildlife Service: USFWS	Medicine Lake: MLR	--
US Fish and Wildlife Service: USFWS	Bowdoin: BWR	--
US Fish and Wildlife Service: USFWS	Bear Lake: BLK	--
US Fish and Wildlife Service: USFWS	Gray's Lake: GLR	--
US Fish and Wildlife Service: USFWS	Deer Flats: DFR	--
US Fish and Wildlife Service: USFWS	Minidoka: MNR	--
US Fish and Wildlife Service: USFWS	Camas: CSR	--
US Fish and Wildlife Service: USFWS	Red Rock Lake: RLR	--
Wyoming Sawmills: WYS	Yellowstone	--

Agency/Industry	Office	District
Wyoming Sawmills: WYS	Treasure	--
Wyoming Sawmills: WYS	Bighorn/Rosebud	--
US Forest Service: USFS	Beaverhead-Deerlodge NF: BDF	Jefferson
US Forest Service: USFS	Beaverhead-Deerlodge NF: BDF	Dillon
US Forest Service: USFS	Beaverhead-Deerlodge NF: BDF	Wise River
US Forest Service: USFS	Beaverhead-Deerlodge NF: BDF	Wisdom
US Forest Service: USFS	Beaverhead-Deerlodge NF: BDF	Pintler
US Forest Service: USFS	Beaverhead-Deerlodge NF: BDF	Butte
US Forest Service: USFS	Beaverhead-Deerlodge NF: BDF	Madison
US Forest Service: USFS	Boise NF: BOF	Emmett
US Forest Service: USFS	Boise NF: BOF	Lowman
US Forest Service: USFS	Boise NF: BOF	Cascade
US Forest Service: USFS	Boise NF: BOF	Mountain Home
US Forest Service: USFS	Boise NF: BOF	Idaho City
US Forest Service: USFS	Bitterroot NF: BRF	West Fork
US Forest Service: USFS	Bitterroot NF: BRF	Darby
US Forest Service: USFS	Bitterroot NF: BRF	Stevensville
US Forest Service: USFS	Bitterroot NF: BRF	Sula
US Forest Service: USFS	Caribou NF: CAF	Westside
US Forest Service: USFS	Caribou NF: CAF	Montpelier
US Forest Service: USFS	Caribou NF: CAF	Soda Springs
US Forest Service: USFS	Custer NF: CNF	Beartooth
US Forest Service: USFS	Custer NF: CNF	Ashland
US Forest Service: USFS	Custer NF: CNF	Sioux
US Forest Service: USFS	Clearwater NF: CWF	Lochsa
US Forest Service: USFS	Clearwater NF: CWF	Palouse
US Forest Service: USFS	Clearwater NF: CWF	North Fork
US Forest Service: USFS	Clearwater NF: CWF	Powell
US Forest Service: USFS	Flathead NF: FNF	Swan Lake
US Forest Service: USFS	Flathead NF: FNF	Tally Lake
US Forest Service: USFS	Flathead NF: FNF	Spotted Bear
US Forest Service: USFS	Flathead NF: FNF	Hungry Horse/Glacier View
US Forest Service: USFS	Gallatin NF: GNF	Bozeman
US Forest Service: USFS	Gallatin NF: GNF	Hebgen
US Forest Service: USFS	Gallatin NF: GNF	Big Timber
US Forest Service: USFS	Gallatin NF: GNF	Livingston
US Forest Service: USFS	Gallatin NF: GNF	Gardiner
US Forest Service: USFS	Helena NF: HNF	Helena
US Forest Service: USFS	Helena NF: HNF	Lincoln
US Forest Service: USFS	Helena NF: HNF	Townsend
US Forest Service: USFS	Idaho Panhandle NF: IPF	Coeur d Alene River
US Forest Service: USFS	Idaho Panhandle NF: IPF	St. Joe
US Forest Service: USFS	Idaho Panhandle NF: IPF	Sandpoint
US Forest Service: USFS	Idaho Panhandle NF: IPF	Bonnars Ferry
US Forest Service: USFS	Idaho Panhandle NF: IPF	Priest Lake
US Forest Service: USFS	Kootenai NF: KNF	Cabinet
US Forest Service: USFS	Kootenai NF: KNF	Rexford
US Forest Service: USFS	Kootenai NF: KNF	Three Rivers
US Forest Service: USFS	Kootenai NF: KNF	Fortine
US Forest Service: USFS	Kootenai NF: KNF	Libby
US Forest Service: USFS	Lewis and Clark NF: LCF	Musselshell
US Forest Service: USFS	Lewis and Clark NF: LCF	White Sulphur

Agency/Industry	Office	District
US Forest Service: USFS	Lewis and Clark NF: LCF	Judith
US Forest Service: USFS	Lewis and Clark NF: LCF	Belt Creek
US Forest Service: USFS	Lewis and Clark NF: LCF	Augusta
US Forest Service: USFS	Lewis and Clark NF: LCF	Rocky Mountain
US Forest Service: USFS	Lolo NF: LNF	Missoula
US Forest Service: USFS	Lolo NF: LNF	Ninemile
US Forest Service: USFS	Lolo NF: LNF	Superior
US Forest Service: USFS	Lolo NF: LNF	Plains/Thompson
US Forest Service: USFS	Lolo NF: LNF	Seeley Lake
US Forest Service: USFS	Nez Pierce NF: NPF	Salmon River
US Forest Service: USFS	Nez Pierce NF: NPF	Red River
US Forest Service: USFS	Nez Pierce NF: NPF	Moose
US Forest Service: USFS	Nez Pierce NF: NPF	Clearwater
US Forest Service: USFS	Payette NF: PAF	Council
US Forest Service: USFS	Payette NF: PAF	Weiser
US Forest Service: USFS	Payette NF: PAF	New Meadows
US Forest Service: USFS	Payette NF: PAF	McCall
US Forest Service: USFS	Payette NF: PAF	Krassel
US Forest Service: USFS	Salmon-Challis NF: SCF	Yankee
US Forest Service: USFS	Salmon-Challis NF: SCF	Leadore
US Forest Service: USFS	Salmon-Challis NF: SCF	North Fork
US Forest Service: USFS	Salmon-Challis NF: SCF	Lost River
US Forest Service: USFS	Salmon-Challis NF: SCF	Challis
US Forest Service: USFS	Salmon-Challis NF: SCF	Salmon/Cobalt
US Forest Service: USFS	Salmon-Challis NF: SCF	Middle Fork
US Forest Service: USFS	Sawtooth NF: STF	Fairfield
US Forest Service: USFS	Sawtooth NF: STF	Sawtooth
US Forest Service: USFS	Sawtooth NF: STF	Ketchum
US Forest Service: USFS	Sawtooth NF: STF	Burley/Twin Falls
US Forest Service: USFS	Targhee NF: TAF	Teton Basin
US Forest Service: USFS	Targhee NF: TAF	Dubois
US Forest Service: USFS	Targhee NF: TAF	Palisades
US Forest Service: USFS	Targhee NF: TAF	Ashton/Island Park

Appendix 6

Montana/Idaho Airshed Group - Smoke Complaint/Intrusion Form

(to be filled out by either the Airshed Coordinator or Member Representative)

1. Caller Information

Name/title of caller: _____ Address: _____
Agency: _____
Date/time: _____ Work phone: _____
Anonymity requested: YES: ___ NO: ___ Other phone: _____
Callback requested: YES: ___ NO: ___ Email: _____

2. Description of smoke concern (more instructions on reverse side)

Location: _____
Date/time observed and duration: _____
Who contacted: _____
Other information: _____
Responsible party if known (name, agency, phone, address): _____

3. Follow Up

Responsible party an Airshed Group member? YES: ___ NO: ___
Restrictions in place? YES: ___ NO: ___
Impact Zone? YES: ___ NO: ___
Which Impact Zone? _____
Date/time of callback: _____
Description of follow up:

4. Filled out by (name, agency, phone, email): _____

(additional room and instructions on reverse side)

Complaint/Spill Report

Montana Dept. of Environmental Quality

PLEASE FILL OUT AS COMPLETELY AS POSSIBLE		Complaint Report? Y <input type="checkbox"/> N <input type="checkbox"/>		Spill Report? Y <input type="checkbox"/> N <input type="checkbox"/>	
		Method of Receipt: Phone <input type="checkbox"/>		Mail <input type="checkbox"/> Field <input type="checkbox"/> Other <input type="checkbox"/>	
Report Completed By:			Bureau/Program:		
Report Date:		Time:		Phone:	
COMPLAINANT INFORMATION		Anonymity Requested? Y <input type="checkbox"/> N <input type="checkbox"/>		Reply Requested? Y <input type="checkbox"/> N <input type="checkbox"/>	
Name:		Address:		Zip:	Phone:
Other Agencies Contacted by Complainant:					
REPORTING INFORMATION		Responsible Party (person or company):			
Mailing Address:				Zip:	
Contact Person:				Phone:	
Program/Facility ID#:			Incident County:		
Location of Complaint/Spill:					
Surface Waters Impacted: Y <input type="checkbox"/> N <input type="checkbox"/> If yes, name:					
Detailed Site: T ___ R ___ Section ___ ¼Sec. ___ Lat. ___ Long. ___ GIS ___					
DESCRIPTION OF INCIDENT		Date Observed:		Duration of Activity:	
Describe Complaint:					
Type and Amount of Pollutant:					
Approximate Area Impacted (include groundwater):					
Describe Cleanup Procedures Used:					
MCA/ARM Violation Citation:					
SUGGESTED ACTION/ACTION TAKEN					
ENFORCEMENT DIVISION USE ONLY		Enforcement ID#:		Complaint/Violation ID#:	
Complaint Type:		Assign:	Status:		Referred:

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY COMPLAINT REPORT

Appendix 7

EXECUTIVE BOARD GUIDING PRINCIPLES

ARTICLE I - Purpose

The purpose of these Guiding Principles is to better define how the Executive Board (Board) conducts business on behalf of the MT/ID Airshed Group (Airshed Group).

ARTICLE II - Board Duties

The mission of the MT/ID Airshed Group is to minimize or prevent smoke impacts to communities while using prescribed fire to accomplish land management objectives. Membership includes state, federal, tribal, and private land owners/managers, and state air regulatory agency(s). The Airshed Group formed the Board in 1995 to provide a more effective way to accomplish the business of the Airshed Group.

The responsibilities of the Board include:

1. Provide program operational and policy guidance
2. Provide oversight for the Monitoring Unit
3. Provide support for the Monitoring Unit and Airshed Group as a whole
4. Address regional issues related to the program raised by members/public
5. Establish ad-hoc committees for specific projects with assigned leads/deadlines

ARTICLE III - Board Members

The Board will strive to have equal membership from the states of Montana and Idaho, and to keep the number of Board members to ten or less. Should a Board member withdraw, representation for the other state would not necessarily be reduced. However voting representation would remain equal for both states. The existing Board will appoint new Board members.

Board membership may include representatives from the following stakeholder groups:

1. Federal land management agencies (BIA, BLM, F&WS, NPS, USFS)
2. State land management agencies (IDL and MT DNRC)
3. Private land owners/managers
4. State air regulatory agencies (Idaho and Montana DEQ)
5. Tribes

Board members shall:

1. Serve as Board officers on a rotational basis
2. Attend or provide a representative for all Board and annual Airshed Unit meetings
3. Represent their stakeholder group
4. Address problems specific to their stakeholder group
5. Be aware of financial and other issues
6. Volunteer and participate in ad-hoc committees
7. Take lead on projects and meet deadlines
8. Develop proposals for program-related projects for Board consideration

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ARTICLE IV - Board Officers

The Board officers shall include a Chairperson and a Vice-chairperson (one representing Montana membership and the other representing Idaho membership), a Secretary, and three Treasurers (one from each Airshed Unit). The Vice-chairperson rotates into the Chairperson position, with each serving a single two-year appointment beginning and ending on the date of the respective years of the annual meeting. The existing Board members will appoint new Board officers.

Chairperson

The Chairperson shall:

1. Provide leadership and direction to Board
2. Direct and oversee preparation of Board meetings
3. Preside and vote at Board meetings
4. Ensure Board commitments are accomplished on schedule

Vice-Chairperson

The Vice-Chairperson shall:

1. Exercise the responsibilities of the Chairperson in the absence of or at the direction of the Chairperson
2. Succeed the Chairperson in the event the Chair is unable to complete the remainder of the term

Secretary

The Secretary shall provide a written record of all Board meetings clearly identifying the agenda, members present, decisions made, and follow-up actions and responsibilities.

Treasurers

Each Airshed Unit will appoint a Treasurer.

The Treasurers shall:

1. Work together to develop an annual Airshed Group financial plan
2. Keep accurate books of account of all the business and transactions of the Airshed Unit
3. When the Treasurer is not also the Airshed Unit Liaison, the Treasurer and the Airshed Unit Liaison together must approve all expenditures
4. Provide the Board with the status of the finances at Board meetings

ARTICLE V - Monitoring Unit

The Monitoring Unit is the program's meteorological and administrative office located in Missoula, Montana.

The Monitoring Unit shall:

1. Serve at the pleasure of the Board
2. Serve in an advisory capacity on the Board
3. Implement procedures as outlined in the Airshed Group Operating Guide
4. Interact with the Airshed Group members as needed
5. Provide training for members
6. Prepare annual timeline for operations
7. Prepare Operating Guide revisions as needed and approved by the Board
8. Provide annual reports (due at the time of the annual Airshed Unit membership meetings) that include:
 - Planned and accomplished burned acres
 - Burn restrictions summary

- Air quality summary
 - Complaint report
 - Financial summary
 - Updated membership list
9. Attend or provide a representative for all Board and annual Airshed Unit meetings
 10. Annually maintain a file of all original agreements, operating plans, signature documents, annual reports, and other documents pertinent to the program
 11. Facilitate the maintenance of the program's website and on-line reporting system

Monitoring Unit Staff Supervisor shall provide:

1. General direction and guidance on behalf of the Board
2. Annual performance evaluations with Board input
3. Leave, training, and travel request approval
4. Emergency expenditure approval

ARTICLE VI - Meetings

Annual Board meetings shall be held on a rotating basis in each Airshed Unit. The number of Board meetings per year will be minimized to reduce expenses as much as possible. Business requiring Board approval arising the rest of the time will be accomplished through conference calls or electronic mail whenever possible. In addition to the Board members, the Monitoring Unit staff will also attend Board meetings. The Board will strive to make all decisions on a consensus basis. Actions requiring voting shall require consent of two thirds of the Board members. When voting is necessary, the Board will follow Robert's Rules of Order. In case of absence, each Board member may appoint a proxy if desired for voting purposes. Board meetings will be open to the public.

The Board will take the following actions at the annual meeting:

1. Determine policy and program priorities for the following year
2. Approve new Board member and officer appointments
3. Review and approve the following:
 - Annual operating plan
 - staffing
 - financial plan
 - timeline
 - renewal of agreements and contracts
 - Annual report
 - Any operational and policy changes
 - Operating Guide revisions
 - Guiding Principles

ARTICLE VII - Finances

An Understanding of Support and Funding will outline the finances for the Airshed Group. The Understanding will be reviewed annual and updated as needed. Agreements between agencies in order to carry out the Understanding will be maintained by the responsible agencies.

UNDERSTANDING FOR SUPPORT AND FUNDING OF THE SMOKE MONITORING UNIT OF THE MONTANA/IDAHO AIRSHED GROUP

I. Introduction

The BLM-Montana/Idaho, the U.S. Fish and Wildlife Service-Region 1 and Region 6, and the USFS-Region 1 and Region 4 have agreed to jointly sponsor a smoke management meteorologist and program assistant to perform duties as outlined by the Montana/Idaho Airshed Group. The federal agencies have agreed to sponsor a meteorologist position to assist the Montana DEQ¹ and Idaho DEQ in minimizing smoke impacts related to prescribed burning and wildland fire use. BLM has agreed to sponsor the FTE and 20% of salary/support costs, the USFWS 10%, and the USFS has agreed to support the remaining 70%. The position will be duty stationed at the Aerial Fire Depot in Missoula, MT with space and telecommunication support provide by the USFS.

II. Program and Funding Commitments

The purpose of this Understanding is to document the tracking of funding and commitments between the federal agencies and the stat/private members. An annual financial plan will be prepared by the Airshed Unit Treasurers (as approved by the Executive Board) to guide expenditures.

The federal agencies will support staffing to provide smoke dispersion forecasting and recommended burning restrictions for spring and fall prescribed burning. The meteorologist (or their acting) will support State and Private member, as well as federal agency burning for four months in the fall (mid-August through mid-December). Daily smoke forecasts will be issued in the months of September, October and November). The remaining 8 months of the year will be supported solely by the federal agencies.

Program costs for State and Private members will be divided equally between the three Units (i.e. North Idaho, South Idaho, Montana). State and private members will pay their fair share of the fall program related to computer support and communications (see Table 1). These costs can range from greater than \$10,000 per Unit per year when purchasing new equipment to \$3000 per year to maintain a system. Each Unit will maintain an account with the non-profit Western Forestry and Conservation Association (WFCA) with a goal of a minimum balance of \$10,000.

Fees will be assessed as follows:

Montana: per Montana Administrative Rules, MT DEQ assesses annual fees to all major burners based on tons of emissions produced through a burner's prescribed burning.

Idaho: North Idaho, \$0.11/ac burned (on a running 3 year average) and \$200.00 annual membership fee; South Idaho, \$0.219/ac burned(forest), \$0.10/ac burned range)(actual acres burned/yr) and \$1000.00 annual membership fee.

¹ MT DEQ is not a member of the Airshed Group but is the regulatory entity authorized to issue Major Open Burning Permits to Montana members of the MT/ID Airshed Group. MT DEQ acts solely as an advisor to the MT/ID Airshed Group.

Table 1. Specific support and funding provided by the federal agencies and the State/Private members:

<i>Federal Member support includes:</i>	<i>State/Private Member support includes:</i>
<ul style="list-style-type: none"> • Salary • Travel • Training • Office support (e.g. copying, some computer support, facility support) • Telecommunications (e.g. phone support) • Miscellaneous office supplies (e.g. postage, paper, pencils) • Office space and furniture 	<ul style="list-style-type: none"> • Computer hardware and software • Computer communications (e.g. Internet connection, web page development and hosting) • Computer maintenance • Other items as authorized by the Unit Liaison and Airshed Unit Treasurer
<i>Federal support does NOT include computer software, hardware, maintenance and communications</i>	<i>State/Private support does NOT include program salary, travel, and training</i>

III. Description of Duties

The federally funded meteorologist (or their acting) will provide smoke management forecasts for the purposes of prescribed burning and wildland fire use to all members of the Montana/Idaho Airshed Group. These forecasts shall include recommended geographic restrictions to the Montana and Idaho DEQs. In addition, travel to burn locations, meetings, and training will be included.

A synthesis of seasonal duties is depicted below:

Burn Season	Oversight of MU Burn Recommendations		Frequency of MU Burn Recommendations
	MT DEQ	ID DEQ	
Spring	Reviews	Reviews	Daily
Summer	Reviews	Reviews	Case-by-Case
Fall	Restrict/Approve	Reviews	Daily
Winter	N/A*	Reviews	Case-by-Case

*In the winter, MT DEQ does its own burn restrictions/approvals without MU services.

IV. Time Period for Completion

Forecasts will be provided daily during the period of March 1st through May 30 and September 1st through November 30 of each year. For the remaining months, meteorological services will be available to all members of the Montana/Idaho Airshed Group on an as needed basis (see Section 7-2 of this guide for specific requirements and details regarding Summer and Winter forecast support by the Monitoring Unit).