

MONTANA/IDAHO AIRSHED GROUP



Operating Guide
Operating Guide

June 2010

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INTRODUCTION

The Montana/Idaho Airshed Group (the Group) is composed of state, federal, tribal and private member organizations who are dedicated to the preservation of air quality in Montana and Idaho. Its members are prescribed burners and the public health and regulatory agencies that regulate this burning working cooperatively to prevent smoke impacts while using fire to accomplish land management objectives. This Operating Guide is meant to provide accurate and reliable guidance to Group members and serves as the primary reference document for anyone seeking information about the Group. The Operating Guide contains current pertinent agreements, guidelines, deadlines, plans and procedures inherent to successful operation of the Montana/Idaho Airshed Group smoke management program.

The 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. The group consolidated previous Memoranda of Agreement into one Memorandum of Understanding (MOU, see Appendix 2) which describes the Smoke Management Program (SMP) and commits signatories to abide by that plan. The three Units abide by the Operating Guide which details the policy and procedures to which all members agree. Adherence to the Operating Guide is critical to the Airshed Group's success.

The Smoke Management Unit (SMU) located in Missoula, Montana, coordinates the prescribed burning activities of the three units. Airshed Group members observe operating procedures administered by the SMU in order to prevent adverse smoke impacts.

The Airshed Group Executive Board (Eboard) conducts annual meetings with member burners in each of the geographic Units and subsequently reviews this Operating Guide to adapt the procedures as necessary. This exceeds the standard recommended by the U.S. Environmental Protection Agency (EPA) in their May 1998 Interim Air Quality Policy on Wildland and Prescribed Fires (<http://www.epa.gov/ttncaaa1/t1/memoranda/firefnl.pdf>) which recommends that program evaluation occur every three to five years.

Members with comments or suggestions regarding the Operating Guide can discuss their ideas at the annual meetings or can submit comments at any time to their member representatives, Airshed Coordinators or to the Management Unit.

MONTANA/IDAHO AIRSHED GROUP

SMOKE MANAGEMENT PROGRAM

PURPOSE

The intent of the Montana/Idaho Airshed Group smoke management program is to minimize or prevent smoke impacts while using fire to accomplish land management objectives. The Group's Operating Guide identifies the responsibilities of member regulatory agencies as well as those of federal, tribal, state and private land managers while also providing guidance and direction to the individuals conducting the burning. The smoke management program is designed to help burners meet the states' regulatory requirements (MT - <http://deq.mt.gov/dir/Legal/Chapters/CH08-08.PDF> and ID - <http://adm.idaho.gov/adminrules/rules/idapa58/0101.pdf> p. 169) using the EPA's Interim Policy as guidance.

Each land management agency or industry is encouraged to consider and evaluate alternative treatments to fire to achieve land management objectives. Alternatives can include mechanical treatments such as thinning and chipping, chemical treatments, and incineration. (For guidance on evaluating alternatives to burning, see the Western Regional Air Partnership Fire Emissions Joint Forum (<http://www.wrapair.org/forums/fejftasks/FEJFtask3.html>)). Technology, methods and markets for alternatives are a regular topic at Airshed Group annual meetings. When there are no feasible alternatives to using fire, the land manager shall employ emission reduction techniques as appropriate and be responsible for proper smoke management. This includes performing proper burn documentation and providing personnel training in smoke management techniques. Each land manager is expected to adhere to the operating procedures outlined in this document.

GOALS

Goals of the Montana/Idaho Airshed Group Smoke Management Program include to:

- Provide for the use of prescribed burning for purposes such as fire hazard reduction, forest and rangeland regeneration, and wildlife habitat improvement.
- Prevent adverse smoke impacts from prescribed fire in Montana and Idaho in order to protect public health and meet state and federal ambient air quality standards and visibility guidelines.
- Evaluate the Smoke Management Program annually and revise as necessary in order to better meet smoke management program goals.

POLICY

The cooperative effort of all member organizations in the Airshed Group is essential for the success of the Smoke Management Program. The organizations will jointly use the Airshed Management System (AMS) database to coordinate burning through the Smoke Management Unit.

Each member of the Group conducting prescribed burning in Montana is required to have an annual air quality major outdoor burning permit issued by the Montana Department of Environmental Quality (MT DEQ). In addition, a local air pollution control agency and/or a fire safety outdoor burning permit may be required as well. Smoke Management Program requirements are the same for Idaho, however ID members are not issued a permit. DEQs or the local air pollution control agency may take appropriate action according to applicable state or local statutes, rules, and regulations to ensure compliance.

A member's failure to follow all procedures or burn restrictions or approvals issued under the SMP may result in Letters of Warning, Notices of Violation, or fines from state DEQs, or ultimately, may be considered grounds for revocation of membership in the Montana/Idaho Airshed Group.

ORGANIZATION

1. MEMBERSHIP

Membership Criteria

- 1) Members must be either landowners, agencies, or industries charged with the responsibility to manage public, Tribal or private lands, or who are involved in air pollution control efforts.
- 2) In Montana, members must own or manage over 5,000 acres and must use fire as a management tool on these lands as an ongoing program.
- 3) Each member organization shall appoint an individual to represent the organization.

By virtue of signing the MOU, each signatory receives full membership in the MT/ID Airshed Group. Potential new members may petition the Eboard with a letter of intent to join. Any signatory may withdraw from the Group by providing the Eboard written notice.

Organization Structure

**Montana/Idaho Airshed Group
Organizational Structure**

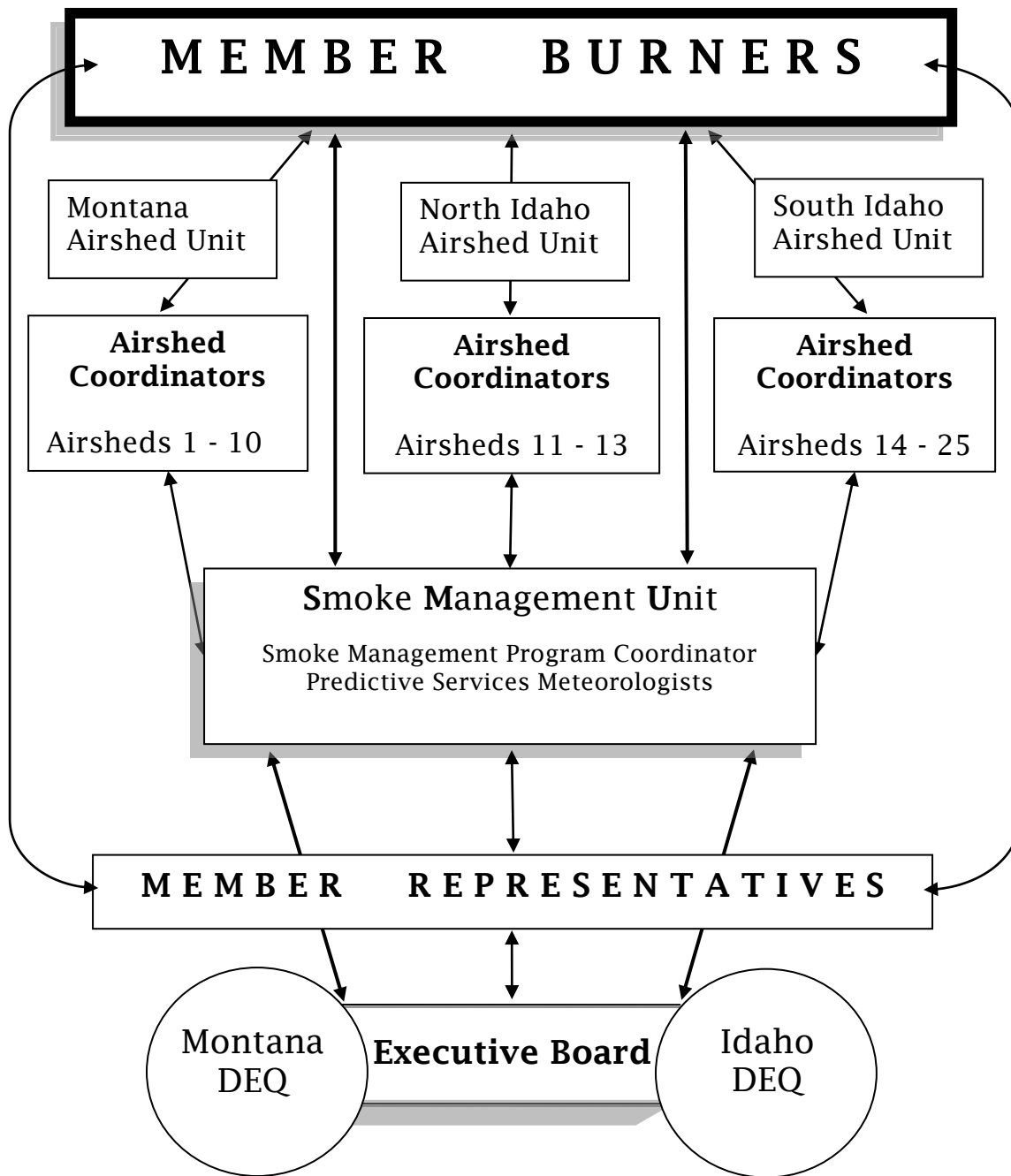


Figure 1. MT/ID Airshed Group Organizational Structure.

There are currently 20 member organizations with just over 200 individual burner field offices participating in the MT/ID Airshed Group Smoke Management Program. Because of the historical growth and development of the Airshed Group, burners within the Group are organized within the three original geographic units from which the Group evolved; the Montana, North Idaho, and South Idaho Airshed Units. An Airshed Unit Liaison serves as coordinator for his or her respective airshed unit.

For operational purposes, each Airshed Unit is further divided into geographically defined airsheds (see Appendix 5). Each airshed has an Airshed Coordinator who acts as the point of contact for the members operating within that airshed. Within each airshed, field offices of the member organizations may get together to form a local *ad hoc* airshed committee. Participation in the committees by non-member organizations and county officials is encouraged.

The Smoke Management Unit is responsible to the Eboard, the DEQs, and each member burner for the daily operation and management of the Smoke Management Program. During burn seasons the SMU meteorologists provide daily dispersion forecasts for Montana and Idaho, and additional individual burn support as requested on a case-by-case basis. The Program Coordinator is responsible for reviewing appropriate air quality monitoring data, evaluating planned burning data against the forecast meteorology, and posting daily burn recommendations. The Coordinator is also the point of contact for maintenance and upgrades to the AMS.

Member Representatives represent their respective industry or agency within the Airshed Group. They provide organization-specific guidance to their members when required, and as such function as an additional level of support to the burners equal to but separate from the Airshed Coordinators.

The Eboard of the Airshed Group was formed with the concurrence of the entire membership at the 1995 annual winter meeting. Each member who signed the MOU receives one vote on the Eboard. The EBoard meets twice yearly in the spring and fall or as required. A current list of EBoard members is attached in Appendix 4. The Board is composed of representatives from the following organizations:

- Idaho Department of Environmental Quality.
- Idaho Department of Lands.
- Idaho private industry.
- Montana Department of Natural Resources and Conservation.
- Eastern Montana private industry.
- Western Montana private industry.
- USDA Forest Service Regions 1 and 4.
- USDI Bureau of Indian Affairs, Rocky Mountain and Portland areas.
- USDI Bureau of Land Management, Montana and Idaho State Offices.
- USDI Fish and Wildlife Service Regions 1 and 6.

Montana DEQ and the Smoke Management Unit serve on an advisory basis to the board.

The Eboard officers are composed of a **Chairperson** and a **Vice Chairperson**, one being from the Montana membership and the other from Idaho, a **Secretary**, and a **Treasurer**. The Board officers are chosen from existing Board members, usually by volunteering, and each board officer serves a two-year appointment. The Vice Chairperson rotates into the Chairperson position effective at the spring Eboard meeting at the end of the two-year term. The Chairperson conducts Board meetings and the Secretary records and distributes meeting minutes. In addition to mandatory attendance at the two annual Eboard meetings, Eboard members are encouraged to attend each of the Airshed Unit annual meetings, particularly the one occurring within their geographic area of membership.

For more information regarding the Eboard, refer to Appendix 7, Guiding Principles.

Roles and Responsibilities

a) Airshed Group

The role of the Airshed Group is to:

1. Develop policy to implement the smoke management program;
2. Establish procedures to implement policy;
3. Work to resolve inter-airshed, interstate and international smoke problems relevant to the Airshed Group membership;
4. Provide smoke management oversight for member organizations; and
5. Prepare and disseminate information to interested parties regarding open burning, fire ecology, the MT/ID Airshed Group smoke management program, public health effects from smoke, and other materials of interest.

b) Executive Board

To achieve those ends, the Eboard's responsibilities include to:

1. Elect Eboard members and officers;
2. Attend twice annual Eboard meetings;
 - Poll member representatives within their area of responsibility for issues and concerns to be addressed at Eboard meetings;
3. Adapt existing program policies to meet current needs;
4. Refine procedures to better implement current policy, to include:
 - Annual review of the Operating Guide.
 - Determine appropriate boundaries for airsheds and impact zones.
5. Set annual budget, complete at spring meeting; and
6. Provide direction to the SMU in carrying out the daily operation of the SMP.

7. Coordinate logistics for annual airshed unit meetings held within their geographic unit.
 - Where more than one Eboard member resides within a geographic unit, those members may establish a rotation or elect a member to manage the annual meeting.

c) Montana and Idaho Departments of Environmental Quality agree to:

1. Ensure the Smoke Management Program complies with the Clean Air Act (<http://www.epa.gov/air/caa/>) and the EPA Interim Air Quality Policy on Wildland and Prescribed Fire;
2. Review and provide input to the SMU's daily burn recommendations according to established timeframes (see page 16);
3. Investigate and respond to complaints according to established complaint process (see page 19);
 - Notify the affected Airshed Coordinator and the Program Coordinator regarding relevant complaints received;
4. Attend annual airshed unit meetings; and
5. Answer questions from member burners and the public concerning the SMP.

MT DEQ issues permits to and collects permit fees from Montana members, and approves or restricts all burning in Montana from September 1st to November 30th. In addition, the MT DEQ manages all winter burns for Montana members. Idaho DEQ serves as an official Eboard member, and Montana DEQ serves in an advisory capacity to the Board.

Each DEQ has a unique login and password to access the burn map and data in the AMS. DEQs may download data for proposed, approved and completed burns for any desired range of dates available in the AMS.

d) Member Representatives

Member Representatives function as an additional level of support to the burners equal to but separate from the Airshed Coordinators. They:

1. Act as agency or industry representative;
 - Point of contact for communicating Airshed Group information to their burners, and their burners' issues to the Eboard.
 - Inform members regarding the procedures of the SMP and ensure compliance.
 - Resolve issues concerning the SMP within the respective organization.
2. Train Airshed Coordinators on policies and procedures of the Airshed

Group and the AMS.

3. Assist burners with using the AMS;
 - Evaluate AMS access requests from potential members and forward approved requests to program coordinator.
 - Ensure that the member preseason burn list is accurate and complete.
 - Ensure that the member annual burn report is accurate and complete.
4. Coordinate burn activities for member burners.
 - Participate in burn prioritization when necessary.
5. Where they exist, facilitate local *ad hoc* airshed meetings to discuss Airshed Group procedures and resolve issues.
6. Serve on the Eboard and special committees as required.
7. Assist with investigations into smoke complaints made against their members' burns, and coordinate findings with appropriate airshed coordinator, DEQ, and with the SMU.
8. Attend annual airshed unit meeting.
9. Answer questions and inquiries from the public and member burners concerning SMP.

Each Member Representative has a unique AMS login that allows the member rep to compile and analyze burn data for his or her organization. For example, member reps may use the proposed burn report to review both recommended and restricted burns. The Member Representative may also generate a completed burns report by selecting the member organization and date range for the completed burns, for example to report annual accomplishments for any given year.

e) Smoke Management Unit

The role of the Smoke Management Unit is to forecast smoke dispersion conditions and coordinate the members' proposed burning and associated smoke emissions in order to prevent adverse smoke impacts.

The meteorologists:

1. Develop daily smoke dispersion forecasts by airshed and post them to the AMS website;
2. Update the forecast as conditions warrant; and
3. Provide meteorological support to individual burns that may require additional coordination on a case-by-case basis.

The Smoke Management Program Coordinator:

1. Develops daily burn recommendations during spring and fall burn seasons and posts them to the web;
2. Considers requests for exceptions to the burn restrictions on a case-by-case basis as time allows.
 - Exceptions are coordinated with the appropriate DEQ and appropriate local regulatory authority where applicable, as needed.

3. Documents information regarding smoke accumulation problems and solutions to improve future operations;
 - reports complaints against burners to appropriate Airshed Coordinator and DEQ;
4. Coordinates the content and maintenance of the Airshed Group website and Airshed Management System database;
5. Coordinates the annual posting of the public notice for MT burners;
6. Coordinates the annual end-of-year report to MT DEQ for MT burners;
7. Serves on Eboard in an advisory capacity;
8. Interacts with Group members, Montana and Idaho DEQs, and city and county governments;
9. Provides smoke management training to members and other audiences as requested;
10. Prepares annual reports prior to annual meetings;
11. Prepares Operating Guide revisions approved by the Eboard;
12. Attends annual airshed unit meetings and local meetings; and
13. Answers questions and inquiries from the public and from Group members about the MT/ID Airshed Group and the Smoke Management Plan.
 - Assist with public education and outreach development and implementation.

f) Airshed Coordinators

1. Handle local burn coordination, problem solving, and communication within airshed;
 - obtain daily forecast/restriction message from the SMU's website;
 - obtain daily airshed burn lists through AMS;
 - submit daily proposed burns to AMS if burners are unable to access system;
 - screen burner requests and request exceptions to burn restrictions from the SMU;
 - coordinates airshed-wide prioritization if needed;
2. Compile and maintain contact list of all burners in the airshed.
3. Train and provide backup for AMS.
4. Communicate information from the SMU to airshed burners, and from burners to the Program Coordinator.
 - Airshed Coordinators must immediately forward to the Program Coordinator any notification from burners regarding changes to requested or approved burns.
5. Where they exist, facilitate local *ad hoc* airshed meetings to discuss Airshed Group procedures and resolve issues.
6. Investigate smoke complaints involving member burning and coordinate investigation with member representative and DEQ.
 - Notify the Program Coordinator of observed smoke accumulation.
7. Attend annual airshed unit meeting.
8. Answer questions and inquiries from the public and from airshed burners

concerning the SMP.

Logging on to the AMS as an Airshed Coordinator allows the user to create a daily proposed burn report for their airshed(s). Members may use the daily proposed burn report to review both recommended and not recommended burns. The Airshed Coordinator may also generate a completed burns report by selecting the airshed and date range for the completed burns.

g) Burners

1. Enter preseason burn list data into the AMS (www.smokemu.org) before the start of spring burn season, December 1-February 28.
 - Modify burn lists for fall burn season before August 30.
 - Check for correct data entry on daily and preseason burn lists.
2. Propose burns in the AMS by noon Mountain time at least one business day prior to planned burning.
 - Consider forecast dispersion and current air quality to select appropriate burn type and location.
3. Obtain daily burn recommendation from the SMU's website before ignition.
4. Enter completed acres, even if 0, into the AMS the following day, or at a minimum within 14 days of the unit being called out.
 - Program Coordinator will pull end-of-year statistics on January 15th. All completed burns **must** be reported by that time.
 - Check completed burn list for accuracy.
5. Train and assign backup for AMS data management.
6. Provide additional burn project information to Airshed Coordinator as requested.
7. Communicate potential or existing smoke problems or complaints to Airshed Coordinator.
8. Submit requests for exceptions to burn restrictions or approvals to Airshed Coordinators.
9. Contact the Airshed Coordinator(s) to provide personal contact information.
10. Attend annual airshed unit meetings.
11. Answer questions and inquiries from the public concerning the SMP.
12. Curtail burning when smoke dispersion is inadequate.

The ultimate responsibility for the effects from conducting a prescribed burn, including any smoke impacts, lies with the Burn Boss. The Airshed Group burn recommendation represents the best available information in a useable time frame to help manage adverse smoke impacts. Local conditions may indicate ignition is inappropriate even if the unit were approved.

B. OPERATING PROCEDURES

Preseason Burn Entry

During the winter (December 1st to the end of February) and summer (June 1st to August 31st) seasons, burners develop their preseason burn lists in the AMS. Online help is available within the AMS system and at the SMU web site. If additional help is required, burners may contact their Airshed Coordinator, Member Rep or the Program Coordinator.

Annual SMU Operational Schedule

- 1. Spring - March 1st to May 31st**
 - Smoke Management Unit spring operations begin full time on March 1st and continue through May 31st of each year.
- 2. Summer - June 1st to August 31st**
 - On June 1st, the AMS is set to auto-approve, and no daily decision support is provided from the SMU. Summer operations support (June 1st to September 1st) is provided to burners on an as-needed basis. Members shall continue to propose burns and report accomplishments through the AMS for annual reporting to DEQ.
 - Burners enter preseason burns for fall burning.
- 3. Fall - September 1st to November 30th**
 - Fall operations begin on September 1st and continue through November 30th.
 - Annual Accomplishment Reporting
 - Members, Airshed Coordinators, and Member Representatives may view and export their accomplishments for any range of dates. The Coordinator compiles annual accomplishments for all members and, if members are interested, may include the summary in the annual meeting presentations. Members may access historical data via the web interface.
- 4. Winter - December 1st to last day of February**
 - On December 1st, the AMS is set to auto-approve and no daily decision support is provided by the SMU. Winter burning in Montana is conducted with special authorization obtained from MT DEQ. Members shall continue to propose burns and report accomplishments through the AMS for annual reporting to DEQ.
 - **Program Coordinator will pull end-of-year statistics on January 15th; all completed burns must be reported by that time.**
 - Burners enter preseason burns for spring burning.

BURNER ACTIVITY TIMELINE

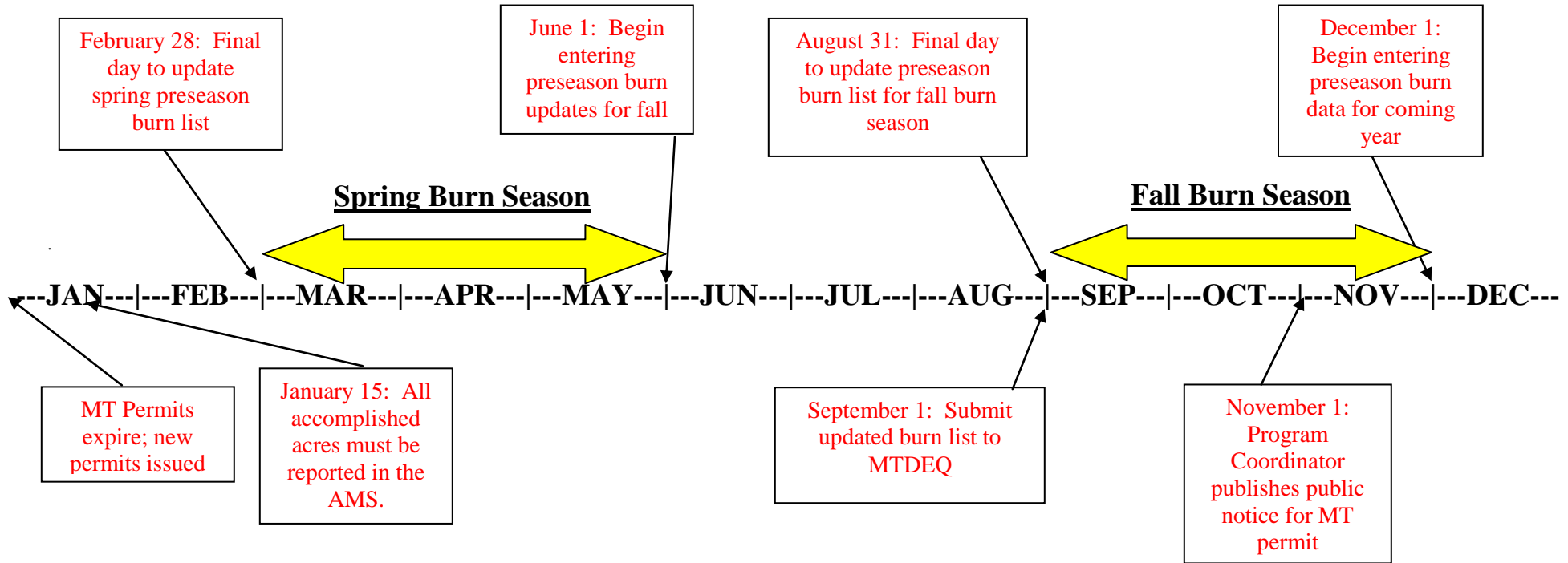


Figure 2. MT/ID Airshed Group annual operating time line.

Spring and Fall Burn Season Daily Operational Procedures

The Airshed Group operates an Internet-based Airshed Management System that allows Airshed Group member burners to enter, track and report prescribed fire data. Before the spring and fall burn seasons, members build a preseason burn list directly into the program's master database. During the burning season, members propose burns from their lists and report accomplishments for their completed acres. Access to the system requires a unique login and password distributed to the members via their Member Representative. The system also allows Airshed Coordinators, Member Representatives, DEQs and the public to access burn information directly via the Internet. Burn data are also utilized by several regional and national research organizations, including the Western Regional Air Partnership (WRAP), the National Oceanic and Atmospheric Administration National Environmental Satellite, Data and Information Service (NOAA/NESDIS) Satellite Services Division (SSD) Fire Detection Program, and the Pacific Northwest Research Station's BlueSky project, among others.

1. Meteorological forecast

- The meteorologists at the Smoke Management Unit compile data regarding forecast meteorological conditions on a daily basis Monday through Friday. The Friday forecast includes forecast conditions through Saturday, Sunday, and Monday. If Monday is a federal holiday, the Friday forecast shall continue through Tuesday. The SMU does not update weekend forecasts after Friday unless unusual conditions suggest an update is appropriate.
- SMU meteorologists post forecast smoke dispersion by airshed to the Airshed Group web page by approximately 10:00 am Mountain Time.
- In addition to two days' forecast information, the meteorologists post an outlook to help burners identify the next window of opportunity beyond the forecast coverage so they may plan accordingly.

2. Propose burns

- Before 12:00 pm Mountain Time the day before the planned burn (or before 12:00 pm Friday for burns planned for Saturday, Sunday or Monday), burners review the forecast dispersion posted on the Airshed Group home page, then log into the AMS under the appropriate profile to propose units to burn.
- Burners may select their preferred course of action by designating those units they plan to burn as an 'A' priority, and may additionally propose a 'fallback plan' as a 'B' priority in the event that their 'A' priority units are not in prescription or otherwise not feasible to burn.
 - Burners must be considerate of other burners in the airshed, particularly in the Impact Zones, and not overload the system with more burns than they plan to accomplish in order to share the available burn opportunities with other burners.
- If the burner proposes a burn as an 'A' priority and it is approved, but zero acres are burned, the burn unit will get a 'tic' counted in the overproposed

column of the preseason burn list. When the unit receives 10 overproposed counts, it will be disabled from being proposed until the burner can provide a rationale for the continued lack of accomplishment to the Program Coordinator or Member Rep.

- If the burner is having trouble getting the offending unit accomplished, the burner can monitor the count in the overproposed column and call the Program Coordinator or Member Rep before the count reaches ten in order to prevent being shut out from proposing the unit
- Burners who abuse the system by proposing all units as a ‘B’ priority may experience restrictions on their units until they return to compliance with the operating guidelines.

3. Airshed-wide Prescribed Burning Assessment

- Monday through Friday, the Program Coordinator reviews current and forecast air quality data, forecast dispersion, burn location, and other environmental factors as appropriate to evaluate burn data for units proposed for the following day. On Friday, the burn units for Saturday, Sunday and Monday are assessed. If the following Monday is a federal holiday, the assessments continue through Tuesday based on the information available the preceding Friday.
- After 1200 noon Mountain time when all proposed burns for the following day(s) have been submitted, the Program Coordinator evaluates burn information airshed-by-airshed to anticipate cumulative smoke effects for the following day. Key factors include burn elevation, wind speed and direction, type of burn, proximity to smoke-sensitive features, anticipated impacts from non-member burners, and any other pertinent information made available at the time of the decision. See Appendix 8 for a complete list of AMS data fields available for consideration.

4. DEQ recommendations

- DEQs and local air regulatory agencies may review the forecast and burn proposals by 2:30 pm Mountain Time and relay any issues or concerns to the Program Coordinator.

5. Smoke Management Unit Burn Restrictions

- The Program Coordinator may discuss proposed burns with State DEQ or local air agency representatives as needed. If interstate smoke transport concerns arise, the Program Coordinator and DEQs may conference together.
- The Coordinator posts burn restrictions (if any) to the Airshed Group home page by 1600 Mountain Time. If no restrictions are necessary, “No restrictions” is posted on the home page.
- The Coordinator shall notify the Airshed Coordinators with burn recommendations if the Internet or the SMU’s website is not functioning properly.

6. Request an Exception

- In certain instances, local air quality and dispersion conditions may indicate that a restricted burn may be successfully accomplished. In such situations, burners may request an exception to the restriction on their unit from the SMU through their Airshed Coordinator. The burner must discuss:
 - local air quality,
 - local meteorology factors, and
 - the anticipated duration and amount of residual smoke production based on fuel load and arrangement in the burn unitwhen making the case as to why the unit could be burned successfully.
- Operational commitments such as crews and helicopters or logistical commitments such as trees to plant are not valid reasons to request a last-minute exception to a daily restriction decision that has already been coordinated with DEQ and communicated to the other burners. These issues are outside the context of the air quality discussion and must already have been anticipated by the burner when the unit was proposed for burning. When burn prescription criteria are complex and a window is hard to find, a heads-up in advance to the Program Coordinator may increase your prioritization for approval for a particularly difficult unit. **It is the responsibility of the burner to identify these issues to the Airshed Coordinator ahead of time so that they may be considered in the daily airshed-wide smoke assessment and prioritized in context with other burns.**

7. Local Regulatory Authority

- Local regulatory authorities (County air programs in MT; regional DEQ offices in ID) may impose additional burn restrictions after the SMU burn recommendations have been posted. These restrictions supersede the SMU decision. While every attempt is made to anticipate and coordinate local restrictions, burners should always check for any local restrictions prior to ignition.

THE FINAL RESPONSIBILITY FOR IGNITION RESTS WITH THE BURNER.

Members must cease ignition if, in their opinion, their test fire indicates that inadequate smoke dispersion exists or if local factors indicate that smoke problems could result from burning. If ignition cannot be stopped but smoke problems are anticipated, the burner must immediately notify his or her Airshed Coordinator, or if unavailable, the Program Coordinator, or if unavailable, the appropriate DEQ representative.

8. Report Accomplished Acres

- When a Member logs on to the AMS, a prompt to enter burn accomplishments appears if the burner has previously proposed burns and those burns were approved. This prompt identifies the previously-

proposed burns and requires the burner to enter the number of acres actually burned ('black acres') for each unit. If no acres were burned, the user enters zero. The AMS prevents the user from proposing more burns until the previous accomplishments have been reported in order to encourage accurate end-of-year reporting figures.

- Members may report the accomplished acres the evening of or by noon Mountain Time the day after the unit was burned.
- If the accomplished acres value entered leaves zero acres remaining in the unit but the burner will likely burn the same unit again (for example, hand piles around structures that require annual maintenance), the burner may edit that burn to add the desired number of acres back into the existing preseason burn entry.
- MT DEQ calculates emissions from estimated consumption in accomplished acres to derive burn permit fees for Montana members. For this reason, where there is a significant mosaic of burned and unburned area within a unit, burners should enter actual black acres rather than the total acres within the unit perimeter. As a result, there may be a difference between the total acres in the unit and the final accomplished acres.
 - The unit may be archived in the AMS once activity in the unit has been completed even when the unit may show acres remaining.

9. Archive Completed Units

- When burning activity on a unit is completed and the unit is no longer active, the burner shall archive the unit to remove it from the preseason burn list.

Consecutive Days' Approval

Burns that will require more than one consecutive day of ignition to complete require additional coordination outside the AMS process. Occasionally, due to the unit size, complexity, or other factors, ignition may have to occur sequentially over a period of days because interior lines to limit fire spread and its associated smoke production are not feasible.

The airshed-wide assessment of burn activity and resulting restriction decision is valid only for the following single day's burning activity due to the limited reliability of weather forecast data. Currently, the AMS data logic is written such that the list pulled after the 'noon' deadline sees only those burns proposed for 'tomorrow' regardless of whether the burner proposes a unit for multiple consecutive days. The AMS lacks the capability to communicate a link between one day's proposals to the next if one exists unless the burner enters a note to that effect in the 'comments/location' field. By then it may be too late.

Prescribed burns that require consecutive days of ignition in order for successful completion must be identified to the SMU ahead of time by phone or email in order to communicate the challenges of the ignition sequence and if necessary, help to mitigate any potential impacts should dispersion conditions deteriorate during project implementation.

SMU meteorologists will try to identify a suitable window of sufficient duration to complete the project under good dispersion conditions. If the required duration of good dispersion is not on the horizon, the SMU will try to coordinate an acceptable compromise with the burner, the Airshed Coordinator and DEQ.

Extended-duration Landscape-scale Prescribed Burns

Some prescribed burns are ignited and managed over weeks of time to mimic the natural progression of fire on the landscape within parameters identified in the burn plan. These burns are monitored, additionally ignited, or partially extinguished until season-ending precipitation puts them out completely. Special notification and direct approval from both DEQs is required because of the special nature of these burns, and because initial ignitions often fall outside the operational season of the SMU (August). Burners should use the following procedure:

1. At least **one month prior** to the anticipated burn date, burners should identify which of their planned burns qualify as long-duration landscape burns and communicate their intent to light the unit to the SMU and their member representative.
 - Member Representative will in turn submit the burn information to the appropriate DEQs.
2. Burners should notify their member rep and the SMU of their planned ignition when they have identified their ignition window, usually about **one week before** the anticipated first ignition.
 - Burners should also provide special notification to the public describing the planned burn.
 - Once notified, the member reps will notify the appropriate DEQs and local regulatory authorities that may be affected, as well as any other members who may be burning in the vicinity during that time.
3. Within **two days** of the first ignition (in order to obtain a reasonable meteorological forecast) a conference call will be held between the burners, the necessary DEQs, interested local regulatory authorities, the Smoke Management Program Coordinator, Predictive Services Meteorologists (if available), the appropriate National Weather Service meteorologists, and any interested member burners in the vicinity. On this call, the appropriate DEQ will determine whether or not the ignition is approved.
4. For each successive ignition, the process is repeated from step 3, with the burner estimating the additional number of acres that will be ignited, and the appropriate DEQ giving approval for each ignition.

3. DEQ COORDINATION AND OVERSIGHT

The following table illustrates the level of service by season that the SMU provides and the role that the DEQs assume regarding burn restrictions:

Burn Season	Frequency of SMU Forecasts and Burn Recommendations	DEQ Oversight	
		MT DEQ	ID DEQ
Spring	Daily	As needed	Daily
Summer	By request	As needed	By request
Fall	Daily	Restrict/Approve	Daily
Winter	N/A	Case-by-Case*	Case-by-Case

*MT DEQ issues burn approvals directly with individual burners the day of ignition

In general, DEQ involvement increases with burn decision complexity. As burn windows diminish and dispersion conditions deteriorate, coordination with both state DEQs escalates commensurate with activity. Increased levels of coordination occur equally to protect the burners when conditions are poor as to open opportunities to burn when conditions unexpectedly improve. In the fall, MT DEQ reviews proposed burns and issues burn approvals on a daily basis for Montana burners.

Smoke complaint and intrusion procedures

If an Airshed Group member receives a smoke complaint or otherwise becomes aware of potential or actual smoke intrusions, the member shall notify the appropriate Airshed Coordinator as soon as possible. Proper attention to smoke concerns is an inherent function of the coordination process. It may help prevent additional burn restrictions, penalties, or even litigation. However incomplete the information regarding the source of the offending smoke may be, to track smoke concerns is important and each member is encouraged to assist with coordinating smoke complaint information to better serve the public, the DEQ and the smoke management program.

In Montana, all smoke complaints should be directed to Larry Alheim, MT DEQ Environmental Enforcement Specialist, (406) 444 2411.

In Idaho, all smoke complaints should be directed to the toll-free smoke hotline: 1 (800) 345-1007

If the person with the complaint does not want to pursue the matter officially by calling the complaint lines, the person receiving the complaint should attempt to understand and document the nature of the complaint to the extent possible using the complaint form as guidance (Appendix 7 page 53). Gathering the info prompted by the form may help the

person with the complaint better understand the SMP and the Group's concern about what happened in order to improve future burn decisions.

Everyone will probably be aware of the most serious smoke conditions. However, an effective process for handling smoke concerns before serious conditions exist may reduce smoke impacts or unnecessary escalation of a smoke problem. In addition, any contact with the public or other agencies is an outreach opportunity to discuss how the smoke management program emphasizes the protection of public health, and to discuss the tradeoffs between smoke management and the critical role that fire plays in maintaining healthy ecosystems.

Members should try to distinguish between smoke complaints that are nuisance-based in contrast with those that are based on effects to human health. $PM_{2.5}$ levels persisting in the 25 - 35 $\mu\text{g}/\text{m}^3$ range (unhealthy for sensitive individuals) are of concern because of possible health impacts when particulate exceeds the federal 24-hour standard.

Airshed Coordinator

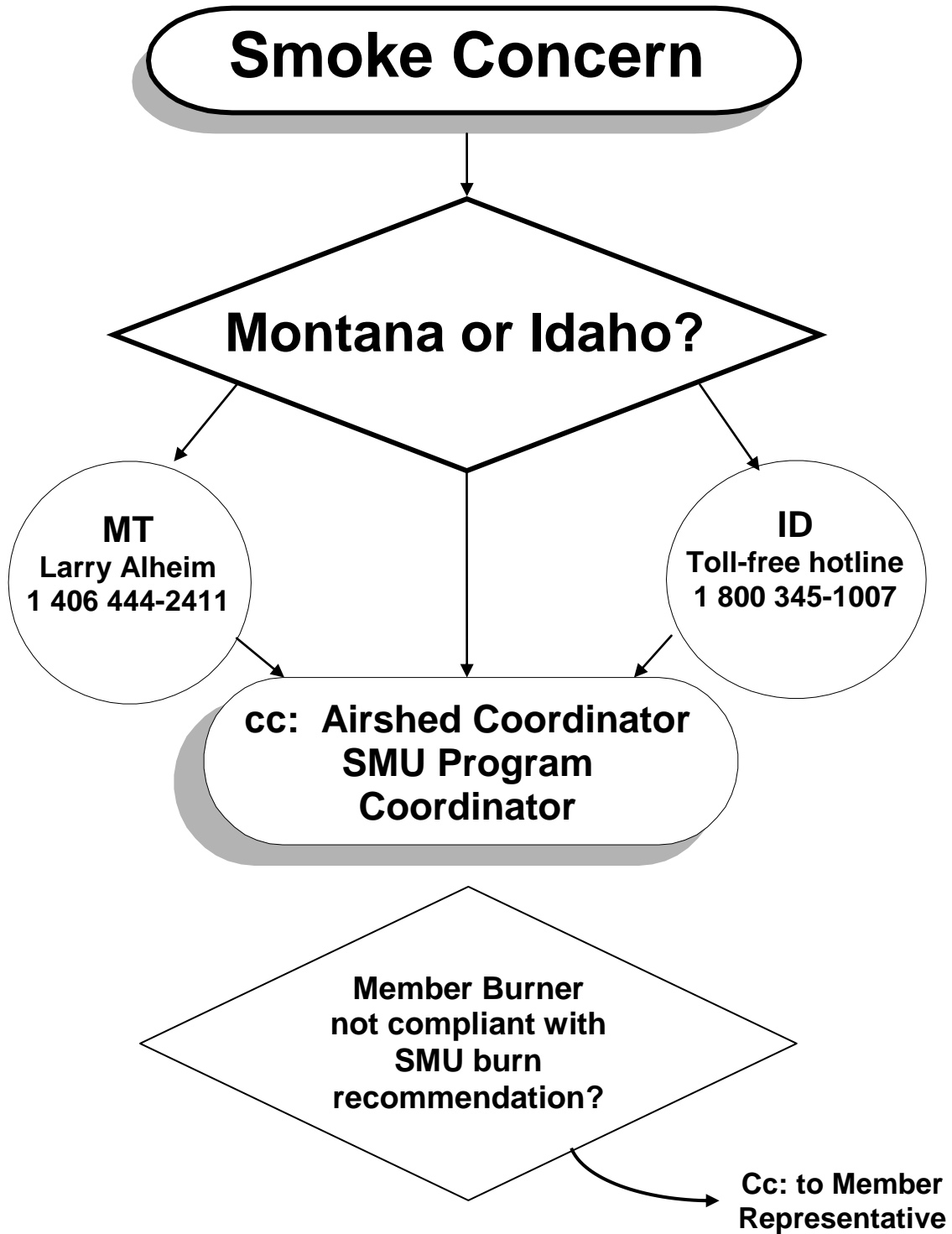
The Airshed Coordinator shall attempt to refer the complainant to the responsible DEQ. If the person calling with the complaint does not want to pursue the complaint further, the Airshed Coordinator shall document as much information as possible regarding the smoke complaint using the form in Appendix 7, and submit the form as completely as possible to the appropriate DEQ with a cc: to the Program Coordinator. DEQs shall conduct any follow up. If the source of the smoke is member burning, the Airshed Coordinator shall also notify the appropriate Member Representative.

Members and airshed coordinators shall make reasonable efforts to ascertain the actions and conditions which led to the complaint. For example, an unexpected change in the weather may have contributed to a smoky inversion. If the complaint originated as a result of a member who failed to comply with the SMU burn recommendations, the Program Coordinator shall contact the responsible party directly. If contact is not possible or the responsible party is not cooperative, the Program Coordinator shall notify the Member Representative.

When a complaint is received, the SMU will monitor conditions more closely and may consider complaint information in developing future burn recommendations for the airshed. The appropriate DEQ may initiate an investigation in order to better respond to questions from the media and the public. DEQs shall coordinate any follow-up activities with the Airshed Coordinator and Member Representative as needed.

The responsible DEQ shall maintain documentation of all member-related smoke complaints. At the end of the year the DEQs shall summarize the information for the Airshed Group annual meeting.

Smoke Complaint Process flow chart



APPENDICES

- Appendix 1 Acronyms and Definitions
- Appendix 2 Montana/Idaho Airshed Group Memorandum of Understanding
- Appendix 3 Executive Board Guiding Principles
- Appendix 4 Support and Funding
- Appendix 5 Airshed and Impact Zone Maps/Descriptions
- Appendix 6 Contact List
- Appendix 7 Smoke Complaint Form
- Appendix 8 AMS Preseason Burn Data Fields

Appendix 1

ACRONYMS AND DEFINITIONS

Acronyms

AMS - Airshed Management System

AQI - Air Quality Index

BACT - Best Available Control Technology

CAA - Clean Air Act

EPA - Environmental Protection Agency

FARR - Federal Air Rules for Reservations

FOFEM – First Order Fire Effects Model

ID DEQ - Idaho Department of Environmental Quality

MOU - Memorandum of Understanding

MT DEQ - Montana Department of Environmental Quality

NAAQS - National Ambient Air Quality Standards

NEPA – National Environmental Policy Act

SMP - Smoke Management Program

SMU – Smoke Management Unit

Definitions

Airshed is a geographical area in which atmospheric characteristics *e.g.* mixing height and transport winds are similar. The Montana/Idaho Airshed Group has identified 28 airsheds; 12 in Montana and 16 in Idaho, for the purpose of administering the smoke management program (see map Appendix 5).

Airshed Committee - consists of representatives from the agencies and companies conducting prescribed burning within a local airshed, as well as representatives of the local health department and National Weather Service.

Airshed Management System – the web-based data management system used by members of the Montana/Idaho Airshed Group to coordinate and mitigate smoke impacts from prescribed burning.

Airshed Units - 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 - meeting held by each Airshed Unit which provides members an opportunity to discuss the policies and operation of the SMP and provide suggestions for improvement.

Best Available Control Technology (BACT) - For Montana burners, means those techniques and methods of controlling emission 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, and 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 and available from MT 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; and
 - j. Selecting sites that will minimize smoke impacts.

- 2) For prescribed wildland outdoor burning during September, October, or November, BACT includes burning only during the time periods specified by MT DEQ, which may be determined by calling MT DEQ at (800) 225-6779.
- 3) For prescribed wildland outdoor burning during December, January, or February, BACT includes burning only during the time periods specified by MT DEQ, which may be determined by calling MT DEQ at (800) 225-6779.

Burn Plan - an operational plan for managing a specific prescribed 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 - 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 - daily decision posted by the SMU which indicates which of a burner's proposed units may be ignited the following day. Other regulatory agencies have the authority to issue additional restrictions within their jurisdictional authority.

Emission Factors - pounds of emission produced per ton of fuel consumed based on conditions existing at the time of burning. Emission factors are based on EPA's AP-42 Handbook. For Montana members, these are applied to calculate burn permit fees. MT DEQ monitors four different pollutants emitted by prescribed burning:

- CO: Carbon Monoxide
- NO_x: Nitrogen Oxides
- PM_{2.5}: Particulate matter 2.5 microns in diameter or smaller
- VOC: Volatile Organic Compounds

Each pollutant 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_{2.5}: 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. Consumption rates may be higher in clean harvester piles and lower in broadcast burns with larger fuels. To calculate tons/acre consumed, multiply the pre-loading measurement by 60 percent (0.60).

Impact Zone - any area of Montana or Idaho that the Airshed Group or a local program identifies as smoke sensitive or has an existing air quality problem. See map in Appendix 2.

Long-duration landscape prescribed burns - Burns where the intent of the burn is to allow the fire to move through the landscape over time within parameters identified in the burn plan. New ignition may occur over successive days to allow the fire to cover the entire treatment area.

Major Outdoor Burner - defined by Montana law to be "...any person, agency, institution, business, or industry conducting any outdoor burning that, on a statewide basis, will emit more than 500 tons per calendar year of carbon monoxide (CO) or 50 tons per calendar year of any other [regulated] pollutant" (Montana ARM 17.8.601). Under normal forestry conditions, anyone who burns over 250 acres/year is classified as a Major Outdoor Burner. Major Outdoor Burners in Montana are required to obtain an air quality major outdoor 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 MT DEQ.

Member - any entity that is a signatory of the MOU for the Smoke Management Program in Montana, North Idaho, or South Idaho.

Montana/Idaho Airshed Group - the agencies and industries that sign the Montana/Idaho Airshed Group Memorandum of Understanding and implement the forest and range land burning Smoke Management Program in Montana and Idaho.

National Ambient Air Quality Standards (NAAQS) - NAAQS exist for ozone, carbon monoxide, sulfur dioxides, nitrogen dioxide, lead, and fine (PM 0-2.5) and coarse (PM 2.5-10) particulate matter.

Non-attainment Areas - those areas that have exceeded the NAAQS for certain criteria pollutants.

Prescribed Fire - a fire ignited by management actions to meet specific objectives. A written and approved prescribed fire burn plan must exist, and NEPA requirements (where applicable) must be met, prior to ignition.

Reporting Acres - acres reported in the Airshed Management System. Acres reported as being completed represent the acres from which smoke is produced, *i.e.*, “slash-generated acres” from pile burning, or blackened acres from landscape burning.

Examples of activity fuels:

- If a 50-acre unit is 100 percent lopped and only small landings are burned, report a several-acre sample representative of 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 represents 50 acres of slash. (Make appropriate adjustment if tops are returned to the unit).
- In an ecosystem or understory burn, report blackened acres. These may differ from project acres *i.e.*, 1,000 acres with 500 proposed for burning, which would be reported as 500 acres.

Smoke Management Program - The program implemented by the Montana/Idaho Airshed Group to manage smoke impacts from wildland and rangeland prescribed burning by member federal, tribal, state and private agencies and industries in Montana and Idaho.

Winter Burning - Prescribed burning that occurs between December 1 and February 29 in Montana.

Appendix 2

Montana/Idaho Airshed Group Memorandum of Understanding

Appendix 3

EXECUTIVE BOARD GUIDING PRINCIPLES

ARTICLE I - Purpose

The purpose of these Guiding Principles is to better define how the (Eboard) 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 Management Unit
3. Provide support for the Management 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. 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)

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

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 Treasurer. 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.

Treasurer

The Treasurer shall:

1. Develop an annual Airshed Group financial plan
2. Keep accurate books of account of all the business and transactions of the Airshed Unit
3. Provide the Board with the status of the finances at Board meetings

ARTICLE V - Management Unit

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

The Management Unit shall:

1. Serve in an advisory capacity on the Board
2. Implement procedures as outlined in the Airshed Group Operating Guide
3. Interact with the Airshed Group members as needed
4. Provide training for members
5. Prepare annual timeline for operations
6. Prepare Operating Guide revisions as needed and approved by the Board
7. 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
 - Updated membership list
8. Attend or provide a representative for all Board and annual Airshed Unit meetings
 9. Annually maintain a file of all original agreements, operating plans, signature documents, annual reports, and other documents pertinent to the program
 10. Facilitate the maintenance of the program's website and on-line reporting system

Management 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 Management 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.

Appendix 4

UNDERSTANDING FOR SUPPORT AND FUNDING OF THE SMOKE MANAGEMENT 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 have 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, and 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:

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.

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. Fees will be collected from member burners when necessary to meet the proposed budget.

Idaho: \$0.10/ac burned (on a running 3 year average). Currently, however, there are no fees assessed because account balances are adequate.

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	Review	Review	Daily
Summer	Review	Review	Case-by-Case
Fall	Restrict/Approve	Review	Daily
Winter	N/A*	Review	Case-by-Case

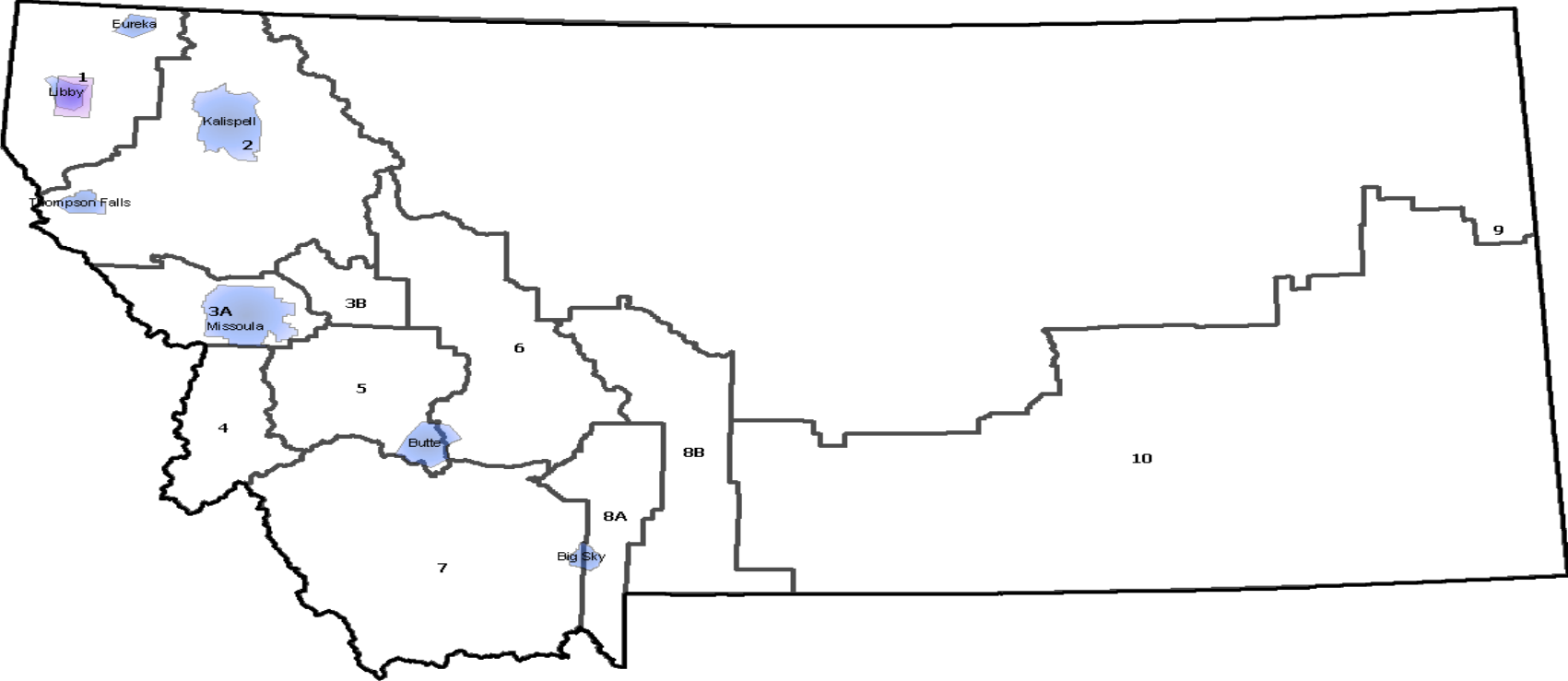
*In the winter, MT DEQ does its own burn restrictions/approvals without MU services.

IV. Time Period for Completion

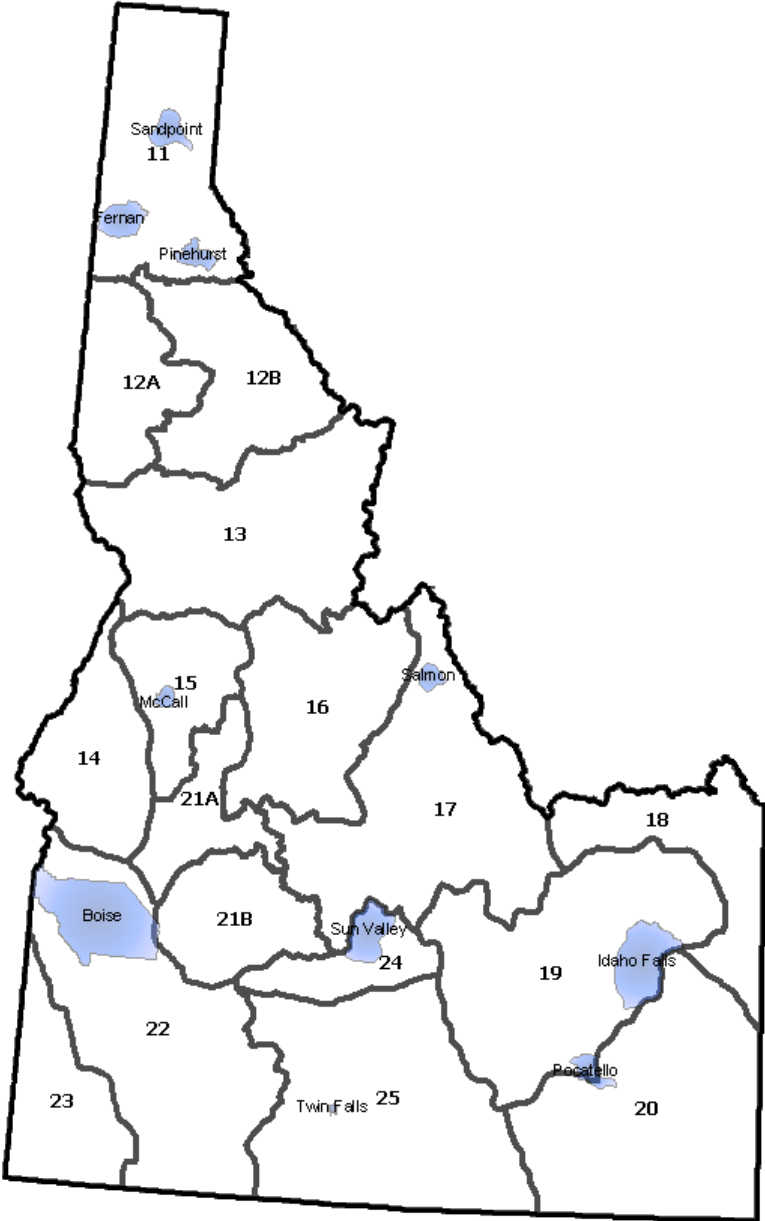
Forecasts will be provided daily during the period of March 1st through May 30 and September 1st through November 30 of each year. For the remaining months, meteorological services will be available to all members of the Montana/Idaho Airshed Group on an as needed basis (see Section 7-2 of this guide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

Appendix 5

Montana Airsheds and Impact Zones



Idaho 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 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 described 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 of 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 Program Coordinator's office.
- 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

- 1) **Airshed 11** Clockwise description: Beginning at the intersection of Idaho, Washington and Canada head east along the international boundary to the Montana state line and follow the Idaho/Montana state line south, crossing I-90, to the intersection of the Idaho/Montana state line and the Wallace/Avery Ranger District boundary in the NE corner of section 13 T47N R5E. The airshed boundary turns west and follows the ranger district boundary passing through Stevens Peak and Gold Hill turning SW to Moon Pass and Moon Peak then turning NW to the Slate Creek Saddle. The boundary continues in a generally westerly direction to Placer Peak and Bad Tom Mountain, then turns NW along the ridge to Striped Peak. Head SW to the intersection of the Wallace, Avery and St. Maries Ranger Districts in the SW corner of section 13 T47N R3E. The boundary continues west along the Wallace /St. Maries RD boundary to Kellogg Saddle where it leaves the national forest approximately 1 mile west of Kellogg Saddle. The boundary follows the ridge west to the SW corner of Section 15 T47N R2E and then follows the ridge south and west crossing the Benewah/Shoshone county line in Section 27 T47N R1E. The line continues westerly to an unnamed peak in the NW corner of Sec. 29 T47N R1E where it turns south to Reeds Baldy and swings around, south of Crystal Lake, and then follows the ridge NW to Rochat Peak and Kootenai Peak. Continue NW along the ridge to an unnamed peak in the center of section 8 T47N R1W, NW to Eagle Peak and NW along the ridge to its intersection with Robinson Creek in Sec 23 T48N R2W. Follow Robinson Creek about 1/3 mile to its intersection with Hwy. 3. Follow Hwy 3 South and west to its intersection with the Benewah/Kootenai county line on the south line of Sec. 35 T47N R3W. Head west following the county line to the Washington state line. Turn north along the Idaho/Washington state line to the point of beginning.
- 2) **Airshed 12A** Clockwise description: Beginning at the intersection of the Kootenai/Benewah county lines and the state of Washington proceed east along the county line to the intersection of Hwy 3. Follow Hwy 3 SE through St. Maries, Santa, Fernwood, Clarkia to Mazie Cr. in section 24 T42 R1E. Follow Mazie Cr. a short distance east to the St. Maries river and follow it south and west to Keeler Cr. in section 27 T42N R1E. Follow the creek south till it forks in the south east of section 3 T41N R1E. Follow the ridge south till it crosses Bobs Creek then follow the ridge line east to Hemlock Butte in section 12 T42N R2E. Continue in a southeasterly direction along the ridge line till it passes just north of Stony Creek Meadows and

continue northeast along the ridge to the junction of Stony Creek and Isabella creek in the SE of section 7 T41N R4E. Follow Stony Creek to the Dworshak Reservoir and the reservoir all the way to its outflow into the Clearwater River till it meets Big Canyon Creek and turns southeast till it intersects with Little Canyon Creek. At this intersection follow the ridge up to the south east till it meets at the Central ridge Road and follow it all the way to Mohler where in meets Hwy 64 (Holes Creek) and continue west through Craigmont to Coldspring Creek. Turn south on Coldspring Creek approximately 6/10ths of a mile till it forks and follow the dividing ridge south and west to Mason Butte. Go south to just west of Talmaks Campground till it intersects with Willow Creek. Follow the creek southwest until it meets the east west line of Townships 32 and 33. Follow the township line west to the Snake River (Idaho/Washington state line) and follow the state line north to the point of beginning.

- 3) **Airshed 12B** Counter clockwise description: Beginning at the intersection of the Idaho/Montana state line and the Wallace/Avery Ranger District boundary in the NE corner of section 13 T47N R5E. The airshed boundary turns west and follows the ranger district boundary passing through Stevens Peak and Gold Hill turning SW to Moon Pass and Moon Peak then turning NW to the Slate Creek Saddle. The boundary continues in a generally westerly direction to Placer Peak and Bad Tom Mountain, then turns NW along the ridge to Striped Peak. Head SW to the intersection of the Wallace, Avery and St. Maries Ranger Districts in the SW corner of section 13 T47N R3E. The boundary continues west along the Wallace /St. Maries RD boundary to Kellogg Saddle where it leaves the national forest approximately 1 mile west of Kellogg Saddle. The boundary follows the ridge west to the SW corner of Section 15 T47N R2E and then follows the ridge south and west crossing the Benewah/Shoshone county line in Section 27 T47N R1E. The line continues westerly to an unnamed peak in the NW corner of Sec. 29 T47N R1E where it turns south to Reeds Baldy and swings around, south of Crystal Lake, and then follows the ridge NW to Rochat Peak and Kootenai Peak. Continue NW along the ridge to an unnamed peak in the center of section 8 T47N R1W, NW to Eagle Peak and NW along the ridge to its intersection with Robinson Creek in Sec 23 T48N R2W. Follow Robinson Creek about 1/3 mile to its intersection with Hwy. 3. Follow Hwy 3 South and west to its intersection with the Benewah/Kootenai county line on the south line of Sec. 35 T47N R3W (begin insert from 12 A) Follow Hwy 3 SE through St. Maries, Santa, Fernwood, Clarkia to Mazie Cr. in section 24 T42 R1E. Follow Mazie Cr. a short distance east to the St. Maries river and follow it south and west to Keeler Cr. in section 27 T42N R1E. Follow the creek south till it forks in the south east of section 3 T41N R1E. Follow the ridge south till it crosses Bobs Creek then follow the ridge line east to Hemlock Butte in section 12 T42N R2E. Continue in a southeasterly direction along the ridge line till it passes just north of Stony Creek Meadows and continue northeast along the ridge to the junction of Stony Creek and Isabella creek in the SE of section 7 T41N R4E. Follow Stony Creek to the Dworshak Reservoir and the reservoir all the way to its outflow into the Clearwater River till it meets Big Canyon Creek and turns southeast till it intersects with Little Canyon Creek. At this intersection follow the ridge up to the south east till it meets at the Central ridge Road(??) and follow it all the way to Mohler where in meets Hwy

64 (Holes Creek). Follow the highway SE to Nez Perce and continue along the highway eastward approximately 7 miles to the NW quarter of section 33 T34N R3E where an unnamed stream flows north into the Clearwater River. Follow the river downstream to Tom Taha Creek NW of Kamiah. Follow the creek upstream to Caribel where it intersects with an unnamed road (rd 100 ?) in the center of section 27 T34N R4E. Follow the road east to its junction with Crocker Cr., approx ½ mile SW of Glenwood. Follow the stream SE to the corner of sections. 33 & 34 T34N R4E. Follow this township line E to the Pierce Ranger District Nat'l Forest Boundary. Go S along said boundary to the Pierce/ Lochsa Ranger District Boundary and follow it E and N to the intersection of the Powell / Lochsa ranger District Boundary where it follows the Pierce/ Powell ranger District Boundary 12 Mile Saddle in the NW of Sec. 36 T37N R10 E . It then turns E and follows rd no. 500 to Cayuse Junction here it picks up rd no. 581 for a short distance to Cayuse Cr. and goes upstream to Silver Cr. continues up Silver Cr. to its intersection with the North Fork / Powell Ranger District Boundary to its junction with the Idaho / Montana state Line and follows the state line to the point of beginning.

- 4) **Airshed 14** starts at Bald Mountain and heads northwest to Old Timer Mountain. Head NNW to Stormy Point, then 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.

- 5) **Airshed 15** starts at Bald Mountain and heads east to Riggins. Follow the Salmon River east to Blue Bird Bar, head south on the Krassel and McCall Ranger District boundary to Horse Heaven, follow Horse Heaven Ridge southeast to Mosquito Ridge, head south to the Mosquito Ridge Trail head, follow the Frank Church Wilderness boundary southwest to Wolf Fang Peak, head south on the McCall and Krassel Ranger District boundary thru Elk Summit and Greeley Mountain to Profile Peak, head southeast to Wilson Peak, follow Quartz Ridge south thru Bald Hill to the South Fork of the Salmon River, start where the current Airshed 15 boundary intersects the Payette National Forest boundary at T19N, R8E, Sec 26 NE/NE below Bald Hill on the South Fork of the Salmon River, follow the Payette National Forest Administration boundary west and south until T16N, R5E, Sec 2, 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, follow the T12N / T11N line west until it intersects the ridge west of and paralleling the Payette River to

Smiths Ferry, head north on the ridge to Collier 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, the starting point above.

- 6) **Airshed 16** : Starting at the junction of Airsheds 4, 16, 17 (near Tincan Spring at the head of Indian Creek) and going counterclockwise; go west along the Idaho/Montana State line until the junction of Airsheds 4, 13, and 16 on the Idaho/Montana State line which is also the junction of Ravilli, Idaho and Lemhi Counties; then go southwest along the Idaho/Lemhi County line to the Salmon River; then go west along the Salmon River between Airsheds 13 and 16 until Henry Moore Rapids at the junction of Airsheds 13, 15 and 16; then go south along the east boundary of Airshed 15 until the junction of Airsheds 15, 16 and 21A; then continue south along the east boundary of Airshed 21A until the junction of Airsheds 16, 17 and 21A; then turn east and northeast along the north boundary of Airshed 17 until junction of Airsheds 4, 16, and 17.

- 7) **Airshed 17**: Starting at the junction of Airsheds 16, 17, and 21A on Highway 21 on Banner Summit and going in a counterclockwise direction; go south/southeast along the east boundary of Airshed 21A until the junction of Airsheds 17, 21A and 21B; then continue in a south/southeast direction along the west boundary of Airshed 21B until the junction of Airsheds 17, 21B and 24; then go east along the north boundary of Airshed 24 until the junction of Airsheds 17, 19 and 24; then west along the north boundary of Airshed 19 until the junction of Airsheds 17, 18, and 19; then north along the west boundary of Airshed 18 until the junction of Airsheds 17 and 18 on the Idaho/Montana State line; then north to northwest along the Idaho/Montana State line to Lost Trail Pass, then southwest along the Idaho/Montana State line until the divide between Indian and Hughes Creeks; then south along the boundary of Airsheds 16 and 17 running along the divide between Indian and the North Fork of the Salmon River by Indian Peak until it reaches the Salmon River at North Fork; then continue south to the top of Napoleon Ridge, along the divide of Napoleon Ridge; continue south along mountain ridgeline; across Phelean Mountain, then south to Williams Creek Summit; then continue south to Lake Mountain; then south along the divide to Taylor Mountain; then continue south/southwest along the divide to Morgan Creek Summit and then along the Lemhi County Line to Twin Peaks; then along the divide south/southwest to White Goat Mountain; then south/southwest to Challis Creek Lake; then southeast to Juliette Basin; then generally south along the Poverty Flat Ridge to Clayton, Idaho; then generally follow Highway 75 and the Sawtooth/Challis National Forest boundaries west to just north of Stanley, Idaho; then generally follow the Sawtooth/Challis National Forest boundaries northwest until it crosses Highway 21; then follow Highway 21 to the Junction of Airsheds 16, 17 and 21A at Banner Summit.

- 8) **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.
- 9) **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.

- 10) **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.

- 44) **Airshed 21A** Clockwise description: - Start where the Airshed 15 boundary intersects the Airshed 21A boundary in the Northeast corner on the Payette National Forest boundary at T19N, R8E, Sec 26 NE/NE below Bald Hill on the South Fork of the Salmon River, head southeast thru Horse Heaven to Meadow Creek, follow the Frank Church Wilderness boundary south to Pistol Rock, head southeast to Chinook Mountain, head south thru Walkers Peak to Morehead Mountain, head southwest on the ridge separating Moonshine and Full Moon Creeks to the Frank Church Wilderness boundary, follow the Frank Church Wilderness boundary SSW and SE to Bernard Mountain, head south thru Deer Creek Pass to Whitehawk Mountain, head SSE to the Valley and Boise County boundary, follow the county boundary northeast to Bull Trout Point, follow the Challis and Boise National Forest boundary southeast to Banner Summit, continue on the forest boundary southeast, then northeast to the intersection of the Sawtooth National Recreation Area and the Challis and Boise National Forests, follow the Boise National Forest boundary to the Custer and Boise County boundary at Observation Peak, head ESE to Mt. Regan, head southeast to Thompson Peak, head southwest to Baron Peak, follow the Custer and Boise County boundary to Trail 482, follow Trail 482 to Trail 452, follow Trail 452 northwest thru Elk Lake and Fern Falls to Deadman Cabin, head northwest to Picket Mountain, follow the Frank Church Wilderness boundary to Lightning Creek, head southwest to Tye Mountain, follow the ridge northwest to Jackson Peak, head southwest to Pilot Peak, head west to Wilson Peak, head southwest to Warm Springs Point, head

southwest to Casner Mountain, head southwest to Clear Creek Summit, head WNW to Gardiner Peak, head NNW thru Safer Butte and Mores Mountain to Coyote Rock, head northwest to Horseshoe Bend, head NNE along the ridge west of and paralleling the Payette River to Banks, head N along the ridge west of and paralleling the Payette River to Smiths Ferry to the T12N / T11N line, follow the T12N / T11N line east until it intersects the Boise National Forest North Zone Wildland Protection boundary (North Fork of the Payette Range ridge), head north along the Boise National Forest North Zone Wildland Protection boundary (North Fork of the Payette Range ridge) until it intersects the Payette National Forest Administration boundary at T16N, R5E, Sec 2, follow the Payette National Forest Administration boundary east and north to T19N, R8E, Sec 26 NE/NE in the northeast corner of Airshed 21A below Bald Hill on the South Fork of the Salmon River, the starting point above.

Airshed 21B includes the northeast corner of the Boise Impact Zone. It proceeds north to the intersection of Airsheds 21A, 21B, and 22, where it continues northeast west of Mores Creek drainage. It continues north/northeast cross country to a point 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 21B boundary follows the Elmore County line south to the Blaine County line, then follows Blaine County line south to an unnamed peak (elevation 8200 feet). Here it proceeds west cross country west to Soldier Mountain, hop scotching across various mountain tops to the intersections of Airsheds 21B, 22 and 24. The boundary line between 21B and 22 proceeds west along Immigrant/Canyon Creek/Mayfield roads to the northwest to the Boise Impact Zone. Airshed 21B includes southern Boise County, northern Elmore County, and the north half of Camas County. It includes the southwest portion of the Sawtooth Class 1 airspace.

Airshed 22 - Southwest boundary ties in with Airshed 23. East boundary of Airshed 22 and Airshed 25 starts at the Nevada line, approximately two miles east of Highway 51, and 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 time 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 intersect 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 at the intersection with Airshed 23; then proceed southeast along the boundary of Airshed 23 until the Idaho/Nevada border; then east along the Idaho/Nevada border until the intersection of Airsheds 22 and 25. 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 Encompasses southwest corner of Idaho that borders SE Oregon and northern Nevada. Includes the region south of the Owyhee Mountains. Airshed 23 lies entirely in Owyhee County. It borders Airshed 22 entirely on the northeast side. The boundary between Airsheds 22 and 23 starts approximately seven miles south of Graveyard point on the Idaho/Oregon border and goes southeast across country, over Squaw Butte, then across Rooster Comb Pk, then across Glass Hill, then New York Summit, west of Toy Flat, along Antelope Ridge, across Ant Hill, southeast to Little Jacks Creek Basin, south to Turner Butte, then to Highway 51 at Summit Flat, then south to Otter Reservoir, then west three miles and generally parallels Highway 51 one to two miles to the east until the Idaho/Nevada state border and Duncan Pk. Between these peaks, the boundary cuts across open country.

Airshed 24: Starting at the junction with Airsheds 17 and 19 and going in a clockwise direction. Follow the boundary of Airshed 19 until the junction of Airsheds 19 and 25, then generally follow Highway 26/93 west to just north of Carey, then go across country to the west across the Picabo Hills, then across country southwest/west to just south of Magic Reservoir, then across country southwest/west just south of the Thorn Creek Reservoir, then across country to the west along the divide of the Bennett Hills until reaching the boundary of Airshed 22; then follow Airshed 22 boundary north until the junction of Airshed boundaries 21B, 22, and 24; then follow the boundary of Airshed 21B to the northeast until the junction of Airshed boundaries 17, 21B, and 24; then generally following the boundary of the Sawtooth National Forest, go northeast for approximately 5 miles, then north generally along the forest boundary to where it crosses Highway 75 north of Ketchum; then generally follow the forest boundary east to the top of the ridge between Lake and Trail Creeks, then follow the top of the ridge northeast to Trail Creek Summit; then follow the main divide along the Pioneer Mountains to the east/southeast the junction with Airsheds 17 and 19.

Airshed 25: Starting at the junction of Airsheds 19, 20 and 25 on Interstate 86 approximately 5 miles west of Massacre Rocks State Park going in clockwise direction; go south along the west boundary of Airshed 19 until the junction of Airsheds 19, 20 and 25; then continue south along the west boundary of Airshed 20 until the Idaho/Utah State line; then continue west along the Idaho/Utah State line until the Idaho/Nevada State line; then continue west along the Idaho/Nevada State line until the junction of Airsheds

22 and 25 on the Idaho/Nevada State line, which is just north of Elk Mountain; then follow Airshed 22 boundary north until the junction of Airsheds 22, 24 and 25; then follow the south boundary of Airshed 24 east until the junction of Airsheds 19, 24 and 25; then follow the west boundary of Airshed 19 south until the junction of Airsheds 19, 20 and 25 on Interstate 86.

Updated 5/10/2010		MASTER PHONE LIST								
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Wagner, Paul	N ID	Treasurer	Inland Empire Paper Co.	N 3320Argonne Rd	Spokane, WA	99212	(509)924-1911	pawagner@iepcoco.com	(509)927-8461	
Krueger, Dave	MT	Member Rep-W MT Industry	R-Y Timber, Inc.	P. O. Box 990	Livingston, MT	59047	(406) 563-7768	dvrkr10@rman.com	(406)222-8748	
Woolcott, Jerry	MT	Member Rep-E MT Industry	Plum Creek Timber	138 Pipe Creek Rd	Libby, MT	59923	(406)293-1991	jwoolcott@plumcreek.com		
Spocima, Tim	MT	Member Rep-DNRC	MT DNRC	2705 Spurgin Road	Missoula, MT	59804	(406)542-4343	tspocima@mt.gov	(406)542-4274	
Rebarchik, Bob	MT	Member Rep-DOI USFWS	U.S. Fish & Wildlife Service	5765 W. Broadway	Missoula, MT	59808	(406) 329-4749	bob_rebarchik@fs.fed.us	(406)329-4922	
Anderson, Mary	ID		ID DEQ	2110 Ironwood Pkwy.	CoA, ID	83814	(208)373-0202	mary.anderson@deq.idaho.gov	(208)373-0340	
Burkhardt, Glen	S ID	Member Rep-ID BLM	BLM	1387 S. Vinnell Way	Boise, ID	83709	(208)373-4047	glen_burkhardt@blm.gov	(208)373-3850	
Phillips, Gary	S ID	Member Rep-USFS R4	U.S.F.S. Payette NF	800 W Lakeside Ave	McCall, ID	83638	(208)634-0831	gphilips@fs.fed.us	(208)382-7480	
Member Representatives										
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Roberts, Lance	S ID		U.S. Fish and Wildlife Service			97232		lance_roberts@fas.gov	(503)231-2364	
Stowe, Kevin	MT	MT State Fee Manager	Sitmon Lumber	400 Expressway Ste E	Missoula, MT	59808	(406) 549-2893	kstowe@sitmonlumber.com	(406) 549-2893	
Crawford, Dwight	MT		Sun Mountain Lumber	P O Box 389	Deerfodge, MT	59722	(406)846-1600	Dwight.Crawford@SunMtnLumber.com	(406)846-3714	
McCrea, Bob	MT		BVA-Flathead, CS&KT	104 Main SE	Ronan, MT	59864				
Knapp, Steve	MT		MT Fish Wildlife and Parks	1420 East 6th Street	Helena, MT	59620	(406)444-4717	sknapp@state.mt.us	(406)444-4952	
Soleim, Dave	MT	FMO	Glacier NP		W Glacier, MT	59933	(406) 888-5803	dave_soleim@nps.gov	(406) 888-5810	
McClintock, Kennon	ID		Forest Capital Partners		Coeur d'Alene, ID		(208)292-2462 114	kmcclintock@forestcap.com		
Schwartz, Jeff	N ID	Orofino Unit Mgr	Potlatch	HC 64 Box 1009	Headquarters, ID	83546	(208) 464-1228	jeff.schwartz@potlatchcorp.com	(208) 464-2785	
Rasmussen, Dan	MT		BVA -State Rep	316 N 26 St	Billings, MT	59101	(406)347-7949		(406)347-7921	
Sanders, Gordie	MT		Pyramid Mtn. Lumber	P O Box 549	Beeley Lake, MT	59868	(406)677-2201 ext. 27	gsanders@pyramidlumber.com		
Darrow, Chris	MT		Stoltze Land and Lumber Co.	P O Box 1429	Columbia Falls, MT	59912	(406)892-7005	cdarrow@stoltzelumber.com	(406)892-1612	
Woods, Mark	S ID		SITPA	555 Dienhard Lane	McCall, ID	83638	(208) 634-2268	mwoods@sitpa.state.id.us	(208)634-5117	
Airshed Coordinators										
LeFever, Steve	MT	Airshed 1	U.S.F.S. Kootenai NF	1101 US HWY 2 West	Libby, MT	59923	(406) 283-7740	slefever@fs.fed.us	(406)283-7710	
Blenhold, Carol	MT	Airshed 2	U.S.F.S. Flathead NF	1935 3rd Avenue East	Kalispell, MT	59901	(406) 758-6486	cblenhold@fs.fed.us	(406)758-5393	
Kemsley, Kit	MT	Airshed 3A, 3B	U.S.F.S. Lolo NF	Missoula Dispatch Cntr.	Missoula, MT	59804	(406) 829-7050	kemsley@fs.fed.us	(406)829-7050	
Lubke, Tony	MT	Airshed 4	Bitterroot Dispatch Center Mgr	Bitterroot Dispatch Cntr.	Hamilton, MT		(406)363-7133	tlubke@fs.fed.us		
Speer, Ann	MT	Airshed 5	U.S.F.S. Helena NF	3425 Skyway Drive	Helena, MT	59601	(406)449-5475	aspeer@fs.fed.us	(406)457-0764	
Heintz, Judy	MT	Airshed 5, 7	U.S.F.S. Beaverhead NF	420 Barrett St.	Dillon, MT	59725	(406)683-3991	jheintz@fs.fed.us	(406)683-3925	
Yeates, Gaylen	MT	Airshed 8A, 8B	Bozeman Interagency Dispatch	P O Box 130, Fed. Building	Bozeman, MT	59771	(406) 587-6921	gyeates@fs.fed.us	(406)587-6977	
Knox, Steve	MT	Airshed 9	BLM - Lewistown	920 NE Main St	Lewistown, MT	59457	(406)538-1976	sknox@blm.gov	(406)538-8200	
Gunther, Gloria	MT	Airshed 10	BLM-Miles City District	111 Gamowen Rd.	Miles City, MT	59301	(406)233-2905	gunther@blm.gov	(406)233-2945	
Estes, Sally	N ID	Airshed 11	U.S.F.S. Idaho Panhandle NF	3815 Schreiber Way	Coeur d'Alene, ID	83814	(208)772-3283	sestes@fs.fed.us	(208)762-6909	
Crew, Dennis	N ID	Airsheds 12A, 12B, 13	U.S.F.S. Nez Perce NF	104 Airport Rd	Grangeville, ID	83530	(208)983-6801	dcrew@fs.fed.us	(208)983-4065	
Murphy, Gary	S ID	Airsheds 14, 15	U.S.F.S., Payette NF	P. O. Box 1026	McCall, ID	83638	(208)634-0391	gmurphy@fs.fed.us	(208)634-5782	
Sever, Paul	S ID	Airsheds 16, 17	Central Idaho Fire Center				(208)756-5448	psever@fs.fed.us	(208)756-5426	
Pipkin, Kathy	S ID	Airsheds 18, 19, 20	U.S.F.S. Caribou/Targhee	1405 Hollpark Drive	Idaho Falls, ID	83401	(208)524-7615	kathy_pipkin@blm.gov	(208)524-7614	
Hsiop, Leigh Ann	S ID	Airsheds 21A, 21B, 22, 23	U.S.F.S. Boise NF	3948 Development Avenue	Boise, ID	83705	(208)384-3446	lhsiop@fs.fed.us	(208)384-3405	
Leyguineche, Jill	S ID	Airsheds 24, 25	BLM-Shoshone	P.O. Box 2B	Shoshone, ID	83352	(208)732-7237	amanda_leyguineche@blm.gov	(208)732-7316	
Advisors										
Walsh, Vicki	MT	Permitting and Compliance	MT DEQ				(406) 444-9741	vwalsh@mt.gov		
Coefield, John	MT		MT DEQ				(406) 444-5272	jcoefield@mt.gov		
Whitmore, Marty	MT		National Weather Service	P.O. Box 9350	Missoula, MT	59807	(406)329-4841	marty.whitmore@noaa.gov	(406)444-1499	
Jordan, Lea	MT	Director	Ravalli County Env. Health	215 S 4th St, Ste D	Hamilton, MT	59840	(406) 375-6565	lordan@ravallcounty.mt.gov	(406) 375-6566	
York, Anthony	MT	Env. Health Specialist	Ravalli County Env. Health	215 S 4th St, Ste D	Hamilton, MT	59840	(406)375-6573	ayork@ravallcounty.mt.gov	(406) 375-6566	

Appendix 7

Montana/Idaho Airshed Group - Smoke Complaint/Intrusion Form

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)

Appendix 8

AMS Burn Data Fields and Definitions

To be developed

