

MONTANA-IDAHO

Interagency Smoke Management Coordination Strategy

- for the -

Mitigation of Public Health and Welfare Impacts Caused
by
Smoke From Wildfires

Approved
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PARTICIPANTS

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USDI, National Park Service
USDI, Fish and Wildlife Service
USDI, Bureau of Indian Affairs
USDA, Forest Service, Region One
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EXECUTIVE SUMMARY

This Coordination Strategy (Strategy) establishes a protocol for coordination and communications between the participating federal and state wildfire management agencies (FMAs), the Montana Department of Environmental Quality, and the Idaho Department of Environmental Quality (hereafter collectively referred to as DEQ). These partners agree to collaborate distributing public information regarding wildfires. This includes information about the natural role of wildfire in ecosystem maintenance, restoration, and the effects of smoke on public health and welfare.

Through this Strategy, FMAs and DEQ identify methods of coordination to facilitate actions that mitigate smoke impacts and provide information to assist the public in taking reasonable precautions during wildfires.

This Coordination Strategy is intended to:

- Clarify roles and responsibilities;
- Address public health and welfare considerations;
- Promote public education regarding the natural role of wildfire;
- Identify conditions which trigger coordination activities;
- Provide examples of potential management actions which mitigate smoke impacts;
- Provide for interagency information exchange for smoke management and air quality planning purposes; and
- Provide for evaluation and revision as necessary.

This Coordination Strategy is NOT intended to:

- Act as a legally-enforceable document;
- Constitute compliance with Best Available Control Technology (BACT);
- Require certain wildfire management response activities;
- Increase the burden of smoke management activities at the field level;
- Circumvent or otherwise invalidate activities of the MT/ID State Airshed Group;
or
- Substitute for any state or county air quality permit / authorizations.

Background

Smoke management concerns from wildfires have prompted FMAs and DEQ to develop this Strategy to annually assess and discuss potential management actions that may be used to mitigate smoke impacts. Due to the nature, location, and increased frequency of wildfires in the west, it is imperative that state and federal agencies work cooperatively to address smoke impacts for the protection of public health and welfare.

Purpose

The purpose of this Strategy is to assist in increasing public understanding of the complexity of wildfires and to establish a protocol for communicating between FMAs and DEQ. The Strategy outlines actions that should be used in sharing information to mitigate smoke impacts for the protection of public health and welfare.

The guiding principles of the 1995 Federal Fire Policy (reaffirmed in 2001 and 2009) adopted by the U.S. EPA, FMAs, and the National Association of State Foresters include: “Firefighter and public safety as the first priority in every fire management activity” and that “Fire management plans and activities incorporate public health and environmental quality considerations.”

Accordingly, the mutual goal of both FMAs and DEQ is to consider management actions that may be used when unhealthy air quality levels occur so that adverse public health effects caused by smoke from wildfires are mitigated.

Because smoke emissions from wildfires typically affect Montana and Idaho airsheds, DEQ believes consistency in FMA approach across states is critical to mitigate smoke impacts and to provide air quality protection and smoke management coordination activities.

This Strategy should be reviewed and, if necessary, revised no later than July 1 of each year.

Coordinated Strategy

During periods of poor atmospheric dispersion and deteriorating ambient air quality, FMAs and DEQ should regularly communicate to characterize current and future ambient air conditions. As appropriate, the partners should implement smoke impact avoidance strategies to any new or existing wildfires as quickly as practicable. Smoke impact avoidance strategies considered should be flexible to accommodate the changing needs and priorities of both FMAs and DEQ.

Specifically, FMAs and DEQ should implement a Strategy involving the following three Management Actions: as part of the procedures for managing smoke from wildfires:

- (1) FMAs and DEQ should contact each other when unhealthy air quality conditions exist or when periods of poor atmospheric dispersion are predicted **[Contact]**;
- (2) FMAs should reinforce existing federal guidance and applicable regulations in wildland fire planning and implementation documents e.g. Wildfire Situation Analysis (WFSAs) and the Wildland Fire Decision Support System (WFDSS) process to ensure that smoke management is addressed commensurate with wildfire activity and complexity **[Documentation]**; and
- (3) FMAs and DEQ should collaborate on public information and outreach efforts using new and existing information personnel and methods to inform the public and to offer instructions and ample advance warning so that individuals can choose to take actions to mitigate the effects of smoke on their health **[Information]**.

Management Actions

- (1) **Contact.** Information sharing and activity coordination among FMAs and DEQ should occur before, during, and after wildfires. Such coordination may include, but is not limited to the following:
 - FMAs may provide opportunities for DEQ to participate in the Northern Rockies Multi-Agency or Great Basin Coordination Group (MAC) calls.
 - FMAs may provide opportunities for aerial and/or field observations of wildfires available to DEQ, when reasonably available.
 - FMAs or DEQ may place portable ambient air monitors in smoke-sensitive areas as needed. FMAs should make monitoring data available to DEQ via satellite link on an hourly basis when reasonably available.
 - FMAs should incorporate smoke management information whenever possible as a routine feature of wildfire information offered by the unit or visiting PIO during the incidents to inform the public, incident management teams, and/or other land managers.
 - FMAs should, when feasible, provide DEQ opportunities to review and comment on WFSAs (used by state fire management agencies) or WFDSS (used by federal fire management agencies) planning documents.

- FMAs and DEQ should jointly and routinely track smoke plume locations and smoke distribution using satellite imagery and/or other sources of remote sensing.
- DEQ should disseminate smoke advisory information about current and predicted smoke concentrations to assist FMAs and the public in making informed decisions.

- (2) **Documentation.** FMAs should integrate smoke management activities into their normal procedures when developing responses to wildfires and long-term operational planning. Incident management teams should also be briefed to consider smoke management when developing plans and processes and conducting public information and outreach activities.

When developing a WFDSS or WFSA decision, FMAs should consider management actions to address potential consequences of smoke on air quality and impact to public health and welfare.

Examples of wildfire plans and / or processes to integrate smoke management activities:

- Delegations of Authority for incident management; and
- WFDSS and WFSA

- (3) **Information.** FMAs and DEQ should share the responsibility for proactively providing public information on smoke emissions from wildfires before, during and after it occurs. Using communication professionals at the local, state and regional level will ensure the information is clear, consistent and concise. Public information and outreach activities may include, but would not be limited to the following:

- Providing timely and clear information about health effects of smoke and potential smoke impacts from wildfires to Public Information Officers (PIOs), unit Public Affairs Officers (PAOs), Incident Safety Officers, fire prevention teams and others for dissemination to various audiences during wildfire events. Newsletters, websites and public service announcements are appropriate channels for information professionals to use.
- Identifying smoke sensitive areas before the fire season, such as communities, recreational areas, public highways, hospitals, schools, large planned outdoor events, and groups at high risk for health related problems. FMAs and DEQ should communicate those identified areas to PIOs, PAOs and others for targeting information on how to prepare for smoke impacts

when they may occur.

- Pre-season coordination to share policies and strategies for smoke mitigation with DEQ and interested partners.
- Ensuring emergency response plans and actions, including state emergency episode avoidance plans, natural events action plans, and real-time website information, are known, understood and available to communicators for effective public notification and recommendations.
- Providing PIOs, PAOs, and others with information regarding the natural role of wildfire, the effects of smoke on public health and welfare, and the actions an individual could take that might reduce personal health impacts. In collaborating with communications professionals, this public information and outreach may include maintaining and updating website information, holding informational meetings, or establishing hotlines based on a determination of the most effective strategy for the affected area.

Coordination Levels Between FMAs and DEQ

Coordination Levels are intended to provide a mechanism which triggers FMAs and DEQ to initiate potential Management Actions. These Coordination Levels do not preclude more restrictive agency-specific measures nor should they preclude alternative assessments of wildfires that may result in mitigating smoke impacts on public health and welfare. The establishment of a Coordination Level does not necessarily constrict the use of wildfire as a management tool nor should its initiation add any additional unreasonable workload.

The intent of the Coordination Levels is to facilitate and document on forms already in use, an acceptable, systematic, interagency review of smoke, and to furnish the public with appropriate air quality information. The following three Coordination Levels are based upon observed and predicted air quality impacts on public health and welfare through a collaborative discussion between FMAs and DEQ.

Level 1 - Minor Impacts:

Assessment. Smoke impact on public health and welfare is considered minor. Minor impacts may be characterized by the following indicators and may result in Level 1 Management Actions:

- Smoke is expected to be produced for a short period of time or is barely visible to the public;
- Smoke is not expected to exceed state or federal air quality standards;

- Decreases in visibility indicate only slight degradation of air quality that does not reach the category of “Unhealthy for Sensitive Groups” when using the visibility ranges in Table 1.
- Individual residents, county health officials, coaches, school representatives, etc. are expressing few or no concerns about smoke;
- Regional fire Preparedness Level is at a 1 or 2; and/or
- Minimal impacts are expected to sensitive features like communities, schools, parks, airports, roadways, summer camps, outfitter camps, etc.

Management Actions. IF Minor Impacts occur, THEN the following Management Actions may be considered:

- FMAs and DEQ should jointly evaluate wildfire incident reports to monitor smoke impacts and their current and predicted air quality impacts on public health and welfare.
- FMAs should brief DEQ on current wildfire activity and strategies based upon the best available information and assessments.
- FMAs should review emission avoidance strategies and routinely assess throughout the duration of wildfire activity.
- FMAs should alert their PIOs/PAOs to the existence of Level 1 smoke conditions

Level 2 - Moderate Impacts:

Assessment. Smoke impact on public health and welfare is considered moderate. Localized impacts may be characterized by the following indicators and may result in Level 2 Management Actions:

- Some public concerns for smoke impacts and health-related complaints are indicated by area residents, county health officials, coaches, school representatives through phone calls to local, state and federal agencies or media;
- Smoke is visible to the public over several days;
- Decreases in visibility indicate moderate degradation of air quality which reaches the category of “Unhealthy for Sensitive Groups” when using the

visibility ranges in Table 1.

- Scenic views, roads, and some residences experience short-term decreases in visibility;
- Regional fire Preparedness Level is at 3 or 4; and/or
- Smoke intrusions into sensitive features like communities, schools, parks, airports, roadways, summer camps, outfitter camps, etc. is occurring.

Management Actions. IF Moderate Impacts occur, THEN the following Management Actions may be considered:

- FMAs and DEQ should evaluate wildfire incident reports to monitor smoke impacts and begin considering possible strategies to protect public health and welfare now and into the future.
- FMAs should brief DEQ on current wildfire activity and strategies based upon the best available information and assessments.
- FMAs should review emission avoidance strategies and routinely assess throughout the duration of wildfire activity. This includes the full spectrum of Management Action responses.
- FMAs should assess the potential consequences of the smoke on air quality and the impact to public health and welfare should be considered in developing management alternatives in WFSA's or Management Action Points in WFDSS decisions. See 'Documentation' under the Management Action section.
- Strategies for smoke mitigation or related decisions should be communicated to unit or fire communicators for inclusion into responses to public concerns through outreach activities.
- Once air quality improves to below the category of "Unhealthy for Sensitive Groups" for 72 hours or more, FMAs and DEQ should re-evaluate and determine if Level 2 Management Actions should remain or if Level 1 Management Actions should be conducted.

Level 3 - Major Impacts:

Assessment. Smoke impact on public health and welfare is considered major. Major impacts may be characterized by the following indicators and may result in Level 3 Management Actions:

- Concern for public health and welfare impacts is raised regionally and large segments of the public are actively expressing their concerns about smoke through contacts to the agencies, elected officials and media
- Situations require special and sometimes difficult smoke mitigation actions such as near wildland urban interfaces, power lines, communication towers, roadways, etc;
- Smoke is readily visible to the public and is projected to remain several days to weeks;
- Major smoke intrusions are occurring in sensitive areas, such as hospitals and major airports, at “Unhealthy” category level and triggering adverse health effects.
- Decreases in visibility indicate considerable degradation of air quality which reaches the category of “Unhealthy” when using the visibility ranges in Table 1.
- Scenic vistas, roads, and residences experience long-term visibility impairment or significant, short-term visibility impairment;
- Regional fire Preparedness Level is at 4 or 5.

Management Actions. IF Major Impacts occur, THEN the following Management Actions may be considered:

- FMAs and DEQ should evaluate wildfire incident reports on a daily basis to monitor smoke impacts and consider possible strategies to protect current and future public health and welfare now and into the future.
- FMAs should brief DEQ on current wildfire activity and strategies when conditions or strategies change using the best available information and assessments.
- FLM and DEQ may conduct additional smoke modeling and monitoring to further evaluate potential effects of smoke impacts on specific sensitive features.
- FMAs should review emission avoidance strategies throughout the duration of wildfire activity. This would include the full spectrum of Management Action strategies.
- FMAs should assess the potential consequences of the smoke on air quality and the impact to public health and welfare should be considered in developing management alternatives in WFSAs or Management Actions Points

in WFDSS . See 'Documentation' under the Management Action section.

- Strategies for smoke mitigation or related decisions should be communicated to unit or fire communicators for inclusion into responses to public concerns through outreach activities. Outreach activities should be intensified.
- Once air quality improves to the category of "Unhealthy for Sensitive Groups for 72 hours or more, FMAs and DEQ should re-evaluate and determine if Level 3 Management Actions should remain or if Level 1 or 2 Management Actions should be conducted.

Web-Based Incident Information

DEQ employees may request "Viewer" access to the password-controlled Wildland Fire Decision Support System (WFDSS) at the following web site. Viewers can see all ongoing incidents, with analyses and management objectives.

http://wfdss.usgs.gov/wfdss/WFDSS_Home.shtml

Inciweb can also be used to find specific information about specific fires of interest, complete with regular fire status updates, maps, photographs, and can quickly update smoke and public health information that is automatically fed to Twitter (@inciweb).

<http://www.inciweb.org/>

The daily Incident Management Situation Report provided by the National Interagency Coordination Center provides a listing of all ongoing significant fires by geographic area.

<http://www.nifc.gov/nicc/sitreprt.pdf>

MODIS Large Incident Maps for the US and Canada are updated each Friday, or as frequently as conditions warrant.

<http://activefiremaps.fs.fed.us/>

Northern Rockies Coordination Center (NRCC) – for fire information in Montana and Northern Idaho:

<http://gacc.nifc.gov/nrcc/information/information.htm>

Eastern Great Basin Coordination Center (EGBC) – for fire information in southern Idaho:

<http://gacc.nifc.gov/egbc/>

TABLE 1
Visibility Ranges Used to Determine Health Effects Categories*

Visibility Range	Health Effect Category	Health Effect Explanation
13.4 Miles and Up	Good	No health impacts are expected when air quality is in this range.
13.3 Miles to 8.8 Miles	Moderate	Unusually sensitive people should consider limiting prolonged outdoor exertion.
8.7 Miles to 5.1 Miles	Unhealthy for Sensitive Groups	Active children and adults, and people with respiratory disease, including asthma, should limit prolonged outdoor exertion.
5.0 Miles to 2.2 Miles	Unhealthy	Active children and adults, and people with respiratory disease, including asthma, should avoid prolonged outdoor exertion; everyone else, including children, should limit prolonged outdoor exertion.
2.1 Miles to 1.3 Miles	Very Unhealthy	Active children and adults, and people with respiratory disease, including asthma, should avoid all outdoor exertion; everyone else, including children, should limit outdoor exertion.
Less than 1.3 Miles	Hazardous	All children and adults should avoid or limit all outdoor exertion.
<p>The Procedure for making personal observations to determine the health effects category in local areas without weather or ambient air monitors is:</p> <ol style="list-style-type: none"> Face away from the sun. Determine the limit of your visible range by looking for targets at known distances (miles). Visible range is that point at which even high contrast objects totally disappear. Use the values above to determine the local forest fire smoke category. 		

***NOTE:** Visibility ranges used to determine health effects are based upon short term impacts and are related to the hourly concentration break points. It is important to note that many hours at one level will usually result in a higher cumulative impact. If conditions have stayed more or less constant in the moderate or higher level for 8 hours the equivalent health category should be adjusted one category higher.

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