



Montana Department of
ENVIRONMENTAL QUALITY

Brian Schweitzer, Governor

P.O. Box 200901 • Helena, MT 59620-0901 • (406) 444-2544 • www.deq.mt.gov

December 14, 2007

Callie Videtich
USEPA, Region VIII
1595 Wynkoop St.
Denver, Colorado 80202-1129

Dear Ms. Videtich:

Montana hereby submits: (1) 2007 Flagged PM-10 and PM-2.5 Monitoring Data (Data); (2) 2007 Flagged Data Exclusion Demonstration (Demonstration); and (3) revisions to the Natural Events Action Plan (NEAP) to fulfill requirements pursuant to 40 CFR 50.14 and 40 CFR Part 50, Appendix N.

The documents contain information regarding the PM-10 and PM-2.5 monitoring data "flagged" to indicate values affected by smoke from 2007 wildfires. Inclusion of flagged data in the computation of exceedances or averages would result in inappropriate estimates for determining attainment status. These documents were approved by the Department following public hearing. This submittal also contains a brief description of the Department's demonstration and a proof of public hearing for the flagged data documents.

The Missoula County monitor measured two 24-hour PM-2.5 values influenced by wildfires: $34.3 \mu/m^3$ on August 30, 2006 and $31.5 \mu/m^3$ on September 5, 2006. Montana flagged these values as exceptional events in the AIRS database and submitted the same for exclusion on March 30, 2007. On May 15, 2007, EPA excluded only those flagged values exceeding the 24-hour PM-2.5 standard. For purposes of comparing the data with the standard, these wildfire-influenced values affect the 98th percentile value. Montana requests EPA exclude these values in whole or part pursuant to 40 CFR Part 50, Appendix N(1)(b), as it will result in an inappropriate design value when compared to the 24-hour PM-2.5 standard.

If you have any questions concerning the contents of this submittal, please direct them to Deb Wolfe at (406) 444-7916.

Sincerely,

Charles Homer
Air Resources Management Bureau

Enc.

STATE OF MONTANA

EVIDENCE THAT 2007 WILDFIRES INFLUENCED MONITORED AIR QUALITY DATA

For purposes of justifying Montana's request for data exclusion as a result of wildfire smoke adversely affecting ambient air quality monitoring data collected June through September 2007, the following evidence demonstrates the satisfaction of requirements of 40 CFR §51.14 (c)(3)(iii)(A)(B)(C) and (D):

(A): [As set forth in §50.1(j)], the event is an event that affects air quality, is not reasonably controllable or preventable, is an event caused by human activity that is unlikely to recur at a particular location or a natural event, and is determined by the Administrator in accordance with 40 CFR 50.14 to be an exceptional event. It does not include stagnation of air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or air pollution relating to source noncompliance.

To prove natural events were the causative factor for the anomalous PM-10 and PM-2.5 values represented by each flagged data day and location, Montana relies on its forest fire smoke update reports. During June, July, August, and September, Montana's meteorologist issued daily forest fire smoke update reports for the duration of any wildfire event. The reports were generally posted before noon each day during which a wildfire occurred that affected Montana's air quality.

Each report also contains

- satellite images from the National Oceanic and Atmospheric Administration showing the active fires in Montana and areas upwind and the associated smoke plume activity;
- graphics from the National Environmental Satellite, Data, and Information Service;
- analyses of current meteorological conditions;
- advisories and precautionary statements;
- links to further information; and
- smoke activity forecasts.

The reports also reference the the USDA Forest Service's Remote Sensing Application Center used for wildland fire definition and tracking. Wildland fires are considered natural events as human activity plays little or no direct causal role in their origin or maintenance. By their nature, as contrasted with managed fires, wildland fires are not reasonably controllable or preventable.

Many factors influenced Montana's 2007 wildfire events. In part, the severity of any fire season may be a function of warm, dry weather but the relationship is not direct. In past summers, Montana experienced similar meteorological conditions and less fire activity because other, more significant factors were absent. Several areas of the state this summer did not experience wildfires or associated smoke effects even though the weather regimes were similar. The events were primarily a function of the source activity (hourly/daily fire intensity and amount), wind direction, and local dispersion patterns and not the direct result of high temperatures or lack of precipitation. Additionally, while the smoke effects of any wildfire event may be exacerbated by air stagnation or meteorological inversion, particularly on a diurnal basis as winds decrease during the night and smoke settles into cooler, low-elevation airsheds, these air stagnation or meteorological inversions are not influencing the occurrence of the events themselves.

While the administrator may not, a priori, make a determination regarding the characterization of the events submitted as exceptional events, Montana asserts this evidence satisfies the requirement of 40 CFR §51.14(c)(3)(iii)(A), despite the defect in the rule's logic.

(B): There is a clear causal relationship between the measurement under consideration and the event that is claimed to have affected the air quality in the area.

For each event shown in the reports and spreadsheets for each monitoring location and as referenced in the daily forest fire smoke update reports, the cause of any flagged higher-than-average air quality monitoring measurement is a wildfire event.

(C): The event is associated with a measured concentration in excess of normal historical fluctuations, including background.

The spreadsheets for each monitoring day and location compare the measured value with both the historical monthly maxima and mean for that day as averaged for 2004, 2005, and 2006 data. The historical comparison shows wildfire events described in the forest fire smoke update reports are associated with values in excess of normal historical fluctuations.

(D): There would have been no exceedance or violation but for the event.

Montana is not aware of any evidence implicating any other agent or event as a cause of or significant contributor to the higher-than-average values represented by the flagged data presented in the spreadsheets. But for the occurrence of wildfire events, it is more likely than not that the higher-than-average values would not have been recorded. One may reasonably conclude wildfire events were the cause in fact of the higher-than-average values.

RECORD OF ADOPTION

Regulatory Actions

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- ✓ (1) Public notice statement.
- ✓ (2) Notice to Interested Parties, including address list.
- ✓ (3) Notice on the DEQ website.
- ✓ (4) Department testimony.
- ✓ (5) Hearings officer report.
- ✓ (6) Transcript from public hearing.
- ✓ (7) Flagged data and documentation.
- ✓ (8) Natural Events Action Plan.

Oline Bartas

Prepared by:

12/14/07

Date:



**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
NOTICE OF PUBLIC HEARING**

1. On December 7, 2007 at 10:00 p.m., or as soon thereafter as can be heard, the Department of Environmental Quality shall hold a public hearing in Room 111 of the Metcalf Building, 1520 E. 6th Avenue, Helena, Montana, to take public comment regarding the following documents: (1) 2007 Flagged PM-10 and PM-2.5 Monitoring Data (Data); (2) 2007 Flagged Data Exclusion Demonstration (Demonstration); and (3) Natural Events Action Plan (NEAP). The Department proposes submitting all documents to EPA for purposes of excluding wildfire influenced monitoring data from determinations of violation or exceedance of federal air quality standards.
2. The Data and Demonstration contain information regarding monitoring data "flagged" to indicate those anomalous monitored values influenced by smoke from the 2007 wildfires.
3. The NEAP provides for prompt public notification; describes actions to reduce smoke exposure; and implements measures to protect public health whenever air quality concentrations exceed or are expected to exceed federal air quality standards.
4. Interested persons may view the Data and NEAP on the Department's website at <http://www.deq.mt.gov/meetings.asp> or may call the Department at 406-444-7916 to have a copy made available for their inspection. Interested persons may view or obtain a copy of the Demonstration by calling the Department at 406-444-7916.
5. The State of Montana makes reasonable accommodations for any known disability that may interfere with a person's ability to participate in state government proceedings. Persons needing accommodation must notify Debra Wolfe by calling 406-444-7916 no later than 5:00 p.m., November 30, 2007 to allow adequate time to arrange reasonable accommodation.
6. Interested persons may submit their data, views, or arguments regarding these documents at the hearing. Written data, views, or arguments may also be submitted to Debra Wolfe by mail at: P.O. Box 200901, Helena, Montana 59620-0901, by fax at: 406-444-1499, or by e-mail at dwolfe@mt.gov. All written comments must be received no later than close of business, December 7, 2007.

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FIRST NA.	LAST NAME	COMPANY	ASSOCIATES	ADDRESS	ADDRESS 2	CITY	ST	ZI.
GAIL	ABERCROMBIE	GAILA CONSULTING		140 WOODLAND HILLS ROAD		HELENA	MT	59601
LAURA	ACKERMANN	DECKER COAL COMPANY		PO BOX 12		DECKER	MT	59025-0012
JOE	ALINE	SHUMAKER TRUCKING	& EXCAVATING	PO BOX 1279		GREAT FALLS	MT	59403
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TINA	ANDERSON	DEQ AIR QUALITY DIVISION		1866 S SHERIDAN AVE		SHERIDAN	WY	82801
RON	ANDERSON	LINCOLN CTY HEALTH DEPT		418 MINERAL AVE		LIBBY	MT	59923
MICHAEL	BARTON	APCAC BOARD MEMBER		825 RONALD		MISSOULA	MT	59801
MARTIN	BASTA	CITY OF GT FALLS PUBLIC WORKS		PO BOX 5021		GREAT FALLS	MT	59403-5021
LEONARD	BAUER	ASHLAND COMMUNITY HEALTH CTR	APCAC BOARD MEMBER	PO BOX 47		ASHLAND	MT	59003
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TIM	BLUME	US ARMY ENVIRONMENTAL	CTR	729-19TH ST 4TH FLR RM 427		DENVER	CO	80202-2500
RUSS	BOSCHEE	YELLOWSTONE COUNTY APC		PO BOX 35052		BILLINGS	MT	59107
JOAN	BOWSHER	CITY COUNTY HEALTH DEPT		PO BOX 1723		HELENA	MT	59624
JEFF	BRIGGS	SMURFIT-STONE CONTAINER CORP		PO BOX 4707		MISSOULA	MT	59806
GREG	BROWN	CHS INC - LAUREL REFINERY		PO BOX 909		LAUREL	MT	59044-0909
JOHN	BRUEGGEMAN	STATE REPRESENTATIVE		321 LAKEVIEW DR		POLSON	MT	59860-9317
LEE	BRUNER			PO BOX 2000		BUTTE	MT	59702
ROBIN	BULLOCK	ARCO		317 ANACONDA ROAD		BUTTE	MT	59701
WANDA	BURGET	POWDER RIVER COAL CO		CALLER BOX 3034		GILLETTE	WY	82717
DEXTER	BUSBY	MONTANA REFINING CO		1900 10TH ST NE		GREAT FALLS	MT	59404-1955
JACKIE	CALLISON	TOWN OF ALBERTON	TOWN CLERK	PO BOX 115		ALBERTON	MT	59820
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BRUCE	CLARK	GENESIS INC		PO BOX 1660		TROY	MT	59935
LORI	CLARK	FOREST SERVICE AIR QUALITY PROGRAM		PO BOX 7669		MISSOULA	MT	59807
BRIAN K	CLIFTON M.S. R.S.	CITY COUNTY HEALTH DEPT		115 4TH ST SO		GREAT FALLS	MT	59405
DALE	COCKRELL	CHRISTENSEN MOORE COCKRELL	CUMMINGS & AXELBERG PC	PO BOX 7370		KALISPELL	MT	59904-0370
CYNTHIA	CODY	US EPA REGION VIII-8P AR		1595 WYNKOOP STREET		DENVER	CO	80202-1129
DAN	CORTI	U OF M ENVIRONMENTAL HEALTH		BLDG 32 MS 9144		MISSOULA	MT	59812
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BARB	DOWSKI	REG MANAGER QWEST EH & S		1855 S FLATIRON COURT		BOULDER	CO	80301
RALPH	DRIEAR	HYDROMETRICS INC		1116 HELENA FLATS RD		KALISPELL	MT	59901
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RONALD	GEHRKE	BIG SKY MINING CO		PO BOX 97		COLSTRIP	MT	59323
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ALAN	GLUECKERT	MILES CITY LAUNDRY		PO BOX 1409		MILES CITY	MT	59301
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	LION TECHNOLOGIES IN	ATTN LIBRARY		PO BOX 700	LAFAYETTE	NJ	07848
CARRIE	LLOYD	VETERANS AFFAIRS	SAFETY MANAGER/ENV COO	WILLIAMS ST	FORT HARRISON	MT	59636
CHERRY	LONEY	CASCADE CO HEALTH DEPT -- REPOSITORY		115 4TH ST S	GREAT FALLS	MT	59401-3618
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WALTER L	MCNUTT	AG EQUIPMENT SALES	STATE SENATOR	110 12TH AVE SW	SIDNEY	MT	59270
ARNIE A	MOHL	JTL GROUP INC		PO BOX 147	KALISPELL	MT	59903-0147
BOB	MONTGOMERY	WESTERN ENERGY CO		PO BOX 99	COLSTRIP	MT	59323
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TODD	O'HAIR	MONTANA GOVERNMENT AFFAIRS RTEA		1910 5TH AVE	HELENA	MT	59601-4718
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TRACY	OPP	STONE ENERGY CORP		950 17TH ST STE 2600	DENVER	CO	80238
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ELLEN	PORTER	ROSEBURG FOREST PRODUCTS		PO BOX 4007	MISSOULA	MT	59806
DAN	POWERS	BUTTE/SB HEALTH DEPT		25 W FRONT ST	BUTTE	MT	59701
DON	QUANDER	HOLLAND AND HART		401 N 31ST ST STE 1500	BILLINGS	MT	59101
TIM	QUARLES	THE RETEC GROUP INC		2048 OVERLAND AVE STE 101	BILLINGS	MT	59102
JIM	RAMAKER			PO BOX 760	CHOTEAU	MT	59422
JEREMY	RHODES	341ST CES/CEV		39 78TH ST N	MALMSTRM AFB	MT	59402-7536
RANDALL	RICHERT	CONOCO		PO BOX 30198	BILLINGS	MT	59101-0198
MIKE	RINALDI RS	ROSEBUD COUNTY SANITARIAN	PO BOX 1254		FORSYTH	MT	59327
HAL	ROBBINS	BISON ENGINEERING INC		1400 11TH AVE	HELENA	MT	59601-4516
CORRINE A	ROSE RS	TETON/PONDEROSA COUNTY	SANITARIAN	BOX 610	CHOTEAU	MT	59422
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PAT	SAINDON	PLANNING DIVISION		MT DOT - ENVIRONMENTAL - DEADHEAD	HELENA	MT	
BOB	SCHLEICHER	CITIZEN'S ADVOCATE OFFICE		GOVERNOR'S OFFICE - STATE CAPITOL - DEADHEAD	HELENA	MT	
GERALD	SCHLOSSER	SUPR OF PLANT SERVICES	& GROUNDS/BENEFIT HEALT	1101 26TH ST S	GREAT FALLS	MT	59405
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SAM	STEPHENSON	ARCO			317 ANACONDA AVE	BUTTE	MT	59701
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FRED	STIERS	CONOCO INC			PO BOX 30198	BILLINGS	MT	59107-0198
LILA	TAYLOR				BOX 595 KIRLEY RT	BUSBY	MT	59016
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NEIL	TURNBULL	APCAC BOARD MEMBER			PO BOX 404	BROCKTON	MT	59213
BARRI	TWARDOSKI	MAXIM TECHNOLOGIES INC			PO BOX 2730	MISSOULA	MT	59806
TONY	TWEEDALE	MT CHEER			404 E SPRUCE ST APT 2	MISSOULA	MT	59802-4655
DARYL	URAN	WILLISTON BASIN INST PIPEL			PO BOX 131	GLENDALE	MT	59330
CALLIE	VIDETICH	US EPA REGION VIII-8P AR			1595 WYNKOOP STREET	DENVER	CO	80202-1129
STEVE	WADE	BROWNING KALECZYC BERRY & HOVEN			PO BOX 1697	HELENA	MT	59624
GERALD	WAGNER	BLACKFEET TRIBAL	ENVIRONMENTAL OFFICE		PO BOX 2029	BROWNING	MT	59417
BETSY	WAHL	EPA			EPA - DEADHEAD			
SCOTT	WALKER	YELLOWSTONE CITY COUNTY	PLANNING		510 N BROADWAY	BILLINGS	MT	59101
KEVIN K.	WALSH	ENVIRONMENTAL CONSULTING	SERVICES LLP		451 FREEDOM AVE	BILLINGS	MT	59105
JOHN	WARDELL	EPA			EPA - DEADHEAD			
LINDA	WIEGERT	MERIDIAN OIL INC			801 CHERRY ST STE 700	FORT WORTH	TX	76102
STEVE D	WRIGHT	COLUMBIA FALLS ALUMINUM			2000 ALUMINUM DR	COLUMBIA FALLS	MT	59912
JIM	ZABROCKI	CUSTER CO SANITARIAN'S OFFICE -- REPOSITORY			COURTHOUSE	MILES CITY	MT	59301
LARRY	ZINK	MT SULPHUR & CHEMICAL CO			PO BOX 31118	BILLINGS	MT	59107
		CARBON COUNTY HEALTH DEPT	SANITARIAN		BOX 466	RED LODGE	MT	59068
		CENTRAL MT HEALTH DISTRICT			507 W MAIN ST	LEWISTOWN	MT	59457-2603
		CENTURY COMPANIES INC			BOX 739	LEWISTOWN	MT	59457
		FARMERS UNION OIL CO			1000 SMELTER AVE	BLACK EAGLE	MT	59414
		MONTANA AUDUBON			PO BOX 595	HELENA	MT	59624
		MONTANA MOTOR CARRIERS			501 N SANDERS ST #201	HELENA	MT	59601-4552
		MONTANA POWER CO			PO BOX 38	COLSTRIP	MT	59323
		NORTHERN PLAINS RESOURCE COUNCIL			220 S 27TH ST STE A	BILLINGS	MT	59101-4106
		PACK & COMPANY CONST			PO BOX 8150	KALISPELL	MT	59904-1150



Montana's Official State Website

DEPARTMENT OF ENVIRONMENTAL QUALITY

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Public Meetings

By Subject or Program:

- [Board of Environmental Review - 2006 Calendar Schedule](#)
- [Petroleum Tank Release Compensation Board Meeting Schedule](#)
- [Public Hearings for Notices of Proposed Rulemaking](#)
- [Statewide TMDL Advisory Group Meetings](#)
- [TMDL and Nonpoint Source Public Meetings](#)

The meetings listed in the links above are not included in the list below.

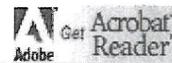
DEQ will make reasonable accommodations for persons with disabilities who wish to participate in these meetings. If you require an accommodation, please contact DEQ several days prior to the meeting to advise us of the needed accommodation.

When	Where	Contacts	Purpose	Additional Info
January 8, 2008, from 7:00 to 8:30 p.m.	Helmille Community Center Building Helmville, MT	Tim Byron - 444-5341	A public informational meeting regarding the Draft Middle Blackfoot-Nevada Creek TMDL and Water Quality Restoration Plan plan.	Press Release
December 12, 2007, 1:00-3:00 p.m.	1100 North Last Chance Gulch, Room 112	Scott Gestring - 841-5051	Consultants Meeting	Agenda
December 19, 2007, 7:00 p.m.	Cafeteria/gymnasium of the Evergreen School, 18 West Evergreen Drive, Evergreen	Moriah Bucy - 841-5064	To discuss the DEQ's preferred cleanup alternative for the Kalispell, Reliance, Yale CECRA Facility	Public Notice Feasibility Study (FS) FS Figures FS Addendum Proposed Plan

				Proposed Plan Figures
December 7, 2007	1100 North Last Chance Gulch, Room 112	<u>Paul Hicks</u> - 841-5095 <u>Terry Wadsworth</u> - 841-5092	<i>Conference Call</i> To conduct the business of the Petroleum Tank Release Compensation Board	<u>Agenda</u>
November 28, 2007, 7:00 p.m.	Community Room of the Livingston Public Library, 228 West Callender St., Livingston	<u>Aimee Reynolds</u>	Discuss remedial activities at the Burlington Northern Livingston Shop Complex.	<u>Fact Sheet</u>
December 4, 2007, 7:00 p.m.	USFS Ranger Station in Troy, MT	<u>Pete Schade</u>	A public informational meeting regarding the <u>Draft Yaak River Watershed TMDL plan.</u>	<u>Press Release</u>
December 7, 2007, 10:00 a.m.	<u>Metcalf Building,</u> <u>Room 111, 1520</u> East 6th Ave, Helena, MT	<u>Deb Wolfe</u>	A public meeting to flag wildfire- affected data for exclusion from violations of EPA NAAQS standards.	<u>Public Notice</u> <u>NEAP</u> <u>County Flagged Data</u>
November 19, 2007, 10:00 a.m.	Metcalf Building, Room 111, 1520 East 6th Ave, Helena, MT	<u>Paul Hicks</u> - 841-5095 <u>Terry Wadsworth</u> - 841-5092	To conduct the business of the Petroleum Tank Release Compensation Board	<u>Agenda</u>
October 29, 2007, 1 p.m. to 5 p.m.	North Last Chance Gulch Building Room 112	<u>Paul Hicks</u> - 841-5095 <u>Terry Wadsworth</u> - 841-5092	Legislative Workshop for the Petroleum Tank Release Compensation Board	<u>PTRCB's meetings Website</u>
Sept 17, 2007, 10:00 a.m.	Metcalf Building, Room 111, 1520 East 6th Ave, Helena, MT	<u>Paul Hicks</u> - 841-5095 <u>Terry Wadsworth</u> - 841-5092	To conduct the business of the Petroleum Tank Release Compensation Board	<u>Agenda</u>
July 23, 2007, 10:00 a.m.	Metcalf Building, Room 111, 1520 East 6th Ave, Helena, MT	<u>Paul Hicks</u> - 841-5095 <u>Terry Wadsworth</u>	To conduct the business of the Petroleum Tank Release Compensation	<u>Agenda</u>

		- 841-5092	Board	
May 21, 2007, 10:00 a.m.	Metcalf Building, Room 111, 1520 East 6th Ave, Helena, MT	Paul Hicks - 841-5095 Terry Wadsworth - 841-5092	To conduct the business of the Petroleum Tank Release Compensation Board	<u>Agenda</u>
Thursday May 17, 2007 7:00 - 9:00 PM	Bethany Lutheran Church in Big Fork MT	Lake County Health Department 406-883- 7236	This workshop will cover how to manage domestic Septic and Water Well Systems. The 2 hour sessions are provided by DEQ Source Water Protection staff and sanitarians in the various counties where the training is held.	<u>Additional Information</u>
Wednesday May 16, 2007 7:00 - 9:00 PM	Ronan Community Center in Ronan MT	Lake County Health Department 406-883- 7236	This workshop will cover how to manage domestic Septic and Water Well Systems. The 2 hour sessions are provided by DEQ Source Water Protection staff and sanitarians in the various counties where the training is held.	<u>Additional Information</u>

Please download the free Acrobat Reader to view pdf documents.



Updated: 12 Dec 2007 Privacy & Security Accessibility Contact Us

BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY
Testimony of Debra Wolfe

In the matter of the Flagged PM-10 and PM-2.5 Monitoring Data - 2007 Wildfires.

My name is Debra Wolfe. I am an air quality specialist with the Air Quality Policy & Planning Section of the Air Resources Management Bureau, Department of Environmental Quality. I am here today to present testimony on behalf of the Department in this matter.

From July to September 2007, wildfires burned several thousand acres in Montana and Idaho and produced abnormally high concentrations of particulate matter having an aerodynamic diameter of 10 microns and less (PM-10) and particles of 2.5 microns and less (PM-2.5). PM-10 and PM-2.5 air quality monitors in many western Montana communities recorded levels that exceeded or nearly exceeded the 24-hour state and federal air quality standards. Inclusion of monitored air quality data affected by wildfire smoke into an area's ambient air quality record may cause inappropriate estimates of expected historical daily and annual values.

Environmental Protection Agency characterizes smoke from wildfires as a natural source of PM-10 and PM-2.5. Accordingly, in order to avoid imposing potentially unreasonable and ineffective State Implementation Plan requirements on smoke-generating wildfire, federal rules provide for exempting certain monitoring data for planning purposes and when making nonattainment determinations. Regulations at 40 CFR §50.14 (Exceptional Events Rule) establish the treatment of measured concentrations of particulate matter when the data is shown to be influenced by particulate matter emitted as a result of an exceptional event, such as wildfire.

Air monitoring data may be excluded to avoid inappropriate estimates of expected annual values for purposes of air quality planning and nonattainment determinations. Following the Exceptional Events Rule and pursuant to the Montana Natural Events Action Plan, the Department flagged monitoring data influenced by smoke from wildfires and intends to submit the following to EPA: (1) 2007 Flagged PM-10 and PM-2.5 Monitoring Data (Data); (2) 2007 Flagged Data Exclusion Demonstration (Demonstration); and (3) Natural Events Action Plan (NEAP).

The Department also solicited public comment regarding the Department's intention to submit the Flagged Data to EPA.

BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY

In the matter of the Flagged)
PM-10 & PM-2.5)
Monitoring Data - 2007 Wildfires)
)

HEARINGS OFFICER
REPORT

On December 7, 2007, at 10:00 a.m., I, Robert J. Habeck, presided over a public hearing in Room 111 of the Metcalf Building, located at 1520 East 6th Avenue, Helena, Montana to receive public comment regarding (1) the 2007 Flagged PM-10 and PM-2.5 Monitoring Data (Data); (2) the 2007 Flagged Data Exclusion Demonstration (Demonstration); and (3) revisions to Natural Events Action Plan (NEAP). The Department proposed to submit the documents to EPA.

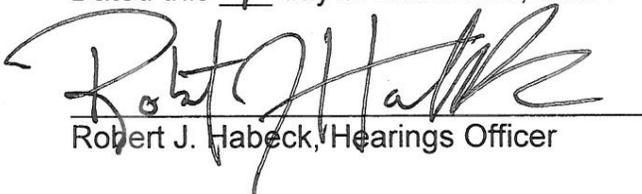
The hearing began at 10:00 a.m. with a court reporter making a stenographic record of the hearing for the Department of Environmental Quality (Department), a copy of which is attached to this report. The hearing was not attended by any member of the public. A copy of the sign-up sheet is also attached.

At the beginning of the hearing, I stated the date and location of the hearing as advertised in the public notice. I also stated that interested parties were notified of the hearing. A copy of the hearings officer statement and public notice is attached.

Debra Wolfe represented the Department and testified at the hearing in support of the documents referenced above and the submission of the same to EPA. No other comments were submitted either prior to the hearing or at the hearing. As set forth in the public notice, the comment period ended at the conclusion of the hearing.

The hearing concluded at 10:10 a.m., December 7, 2007.

Dated this 7th day of December, 2007.


Robert J. Habeck, Hearings Officer

1 BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY
2 STATE OF MONTANA
3
4 2007 FLAGGED PM-10 AND PM-2.5)
5 MONITORING DATA(DATA); 2007)
6 FLAGGED DATA EXCLUSION)
7 DEMONSTRATION(DEMONSTRATION);)
8 AND NATURAL EVENTS ACTION)
9 PLAN.)

10
11 TRANSCRIPT OF PROCEEDINGS
12

13 Heard at Room 111 of the Metcalf Building
14 1520 East Sixth Avenue
15 Helena, Montana
16 December 7, 2007
17 10:00 a.m.

18
19 BEFORE HEARINGS OFFICER BOB HABECK
20

21 PREPARED BY: LAURIE CRUTCHER, RPR
22 COURT REPORTER, NOTARY PUBLIC
23 P.O. BOX 1192
24 HELENA, MT 59624
25 (406) 442-8262

1 hearing.
2 The Department will receive written or
3 oral comments until, but no later than, the
4 closing of this hearing as set forth in the public
5 notice. Copies of all documents and the hearing
6 notice are available at the door. Anyone wishing
7 to testify must register on the sign-up sheet.
8 For transcription purposes, please identify
9 yourself before testifying.

10 (Discussion off the record)

11 HEARINGS OFFICER HABECK: Back on the
12 record. As a correction notice to the
13 transcripts, the Department will receive written
14 and/or oral comments until, but no later than, the
15 close of business today, December 7th, 2007.

16 Therefore, at this time, does anyone
17 wish to comment in support of the action set forth
18 in the notice? Yes, ma'am.

19 MS. WOLFE: Good morning. My name is
20 Debra Wolfe. I'm an Air Quality Specialist with
21 the Air Quality Policy and Planning Section of the
22 Air Resources Management Bureau, Department of
23 Environmental Quality. I'm here today to present
24 testimony on behalf of the Department in this
25 matter.

1 Whereupon, the following proceedings were
2 had and testimony taken, to-wit:
3 * * * * *
4 HEARINGS OFFICER HABECK: Good morning.
5 My name is Bob Habeck, and I'm the acting Hearings
6 Officer for the Montana Department of
7 Environmental Quality. The time is 10:02,
8 December 7, 2007. We are presently in Room 111 of
9 the Metcalf Building, located at 1520 East Sixth
10 Avenue in Helena, Montana.

11 This is the time and place set forth in
12 the public notice for receiving comments
13 regarding, one, the 2007 Flagged PM-10 and PM-2.5
14 monitoring data, hereafter referred to as data;
15 two, the 2007 Flagged Data Exclusion
16 Demonstration, hereafter referred to as
17 demonstration; and three, the Natural Events
18 Action Plan, hereafter referred to as NEAP. The
19 Department proposes submitting these documents to
20 EPA.

21 The Department posted notice of today's
22 hearing on its website and notified persons on its
23 interested parties list. The Department notified
24 interested persons and members of the Air
25 Pollution Control Advisory Council of this

1 From July to September 2007, wildfires
2 burned several thousand acres in Montana and
3 Idaho, and produced abnormally high concentrations
4 of particulate matter having an aerodynamic
5 diameter of ten microns and less, PM-10, and
6 particles of 2.5 microns and less, PM-2.5.
7 PM-10 and PM-2.5 air quality monitors in
8 many western Montana communities recorded levels
9 that exceeded or nearly exceeded the 24 hour state
10 and federal air quality standards. Inclusion of
11 monitored air quality data affected by wildfire
12 smoke into an area's ambient air quality record
13 may cause inappropriate estimates of expected
14 historical daily and annual values.

15 The Environmental Protection Agency
16 characterizes smoke from wildfires as a natural
17 source of PM-10 and PM-2.5. Accordingly, in order
18 to avoid imposing potentially unreasonable and
19 ineffective State Implementation Plan requirements
20 on smoke generating wildfire, federal rules
21 provide for exempting certain monitoring data for
22 planning purposes and when making non-attainment
23 determinations.

24 Regulations at 40 CFR 50.14, the
25 Exceptional Events Rule, and 40 CFR Part 50

1 Appendix N, establish the treatment of measured
2 concentrations of particulate matter when the data
3 is shown to be influenced by particulate matter
4 emitted as a result of an exceptional event such
5 as a wildfire.

6 The Department expects EPA will consider
7 exempting exceedences, and discounting otherwise
8 anomalous data for purposes of avoiding
9 inappropriate design values. Air monitoring data
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14 Following the Exceptional Events Rule,
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20 2007 flagged data exclusion demonstration; and
21 three, the revisions to the Natural Events Action
22 Plan. The Department also solicited public
23 comment regarding the Department's intention to
24 submit the flagged data to EPA.

25 HEARINGS OFFICER HABECK: Does anyone

1 reflect there were none. Seeing no other persons
2 wishing to speak, I declare this hearing in this
3 matter closed at 10:10.

4 (The proceedings were concluded
5 at 10:10 a.m.)

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1 wish to comment in opposition of the action set
2 forth in this notice?

3 (No response)

4 HEARINGS OFFICER HABECK: Let the record
5 reflect there were none. Does anyone wish to
6 comment in support of the Department's proposed
7 submission of the documents to EPA?

8 MS. WOLFE: Yes. The Department does
9 support the submission of the documents to EPA.

10 HEARINGS OFFICER HABECK: Does anyone
11 wish to comment in opposition of the Department's
12 proposed submission of the documents to EPA?

13 (No response)

14 HEARINGS OFFICER HABECK: Let the record
15 reflect there were none. Did the Department of
16 Environmental Quality receive any comments
17 regarding this matter?

18 MS. WOLFE: We received no comments
19 regarding this matter.

20 HEARINGS OFFICER HABECK: All comments
21 received will be made part of the public record.
22 Are there any other witnesses who wish to testify
23 regarding the subject matter of this hearing?

24 (No response)

25 HEARINGS OFFICER HABECK: Let the record

1 C E R T I F I C A T E

2 STATE OF MONTANA)
3 : SS.
4 COUNTY OF LEWIS & CLARK)

5 I, LAURIE CRUTCHER, RPR, Court Reporter,
6 Notary Public in and for the County of Lewis &
7 Clark, State of Montana, do hereby certify:

8 That the proceedings were taken before me at
9 the time and place herein named; that the
10 proceedings were reported by me in shorthand and
11 transcribed using computer-aided transcription,
12 and that the foregoing -7- pages contain a true
13 record of the proceedings to the best of my
14 ability.

15 IN WITNESS WHEREOF, I have hereunto set my
16 hand and affixed my notarial seal
17 this _____ day of _____, 2007.

18 _____
19 LAURIE CRUTCHER, RPR
20 Court Reporter - Notary Public
21 My commission expires
22 March 9, 2008.
23
24
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3 (No response)

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13 (No response)

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C E R T I F I C A T E

STATE OF MONTANA)
: SS.
COUNTY OF LEWIS & CLARK)

I, LAURIE CRUTCHER, RPR, Court Reporter,
Notary Public in and for the County of Lewis &
Clark, State of Montana, do hereby certify:

That the proceedings were taken before me at
the time and place herein named; that the
proceedings were reported by me in shorthand and
transcribed using computer-aided transcription,
and that the foregoing -7- pages contain a true
record of the proceedings to the best of my
ability.

IN WITNESS WHEREOF, I have hereunto set my
hand and affixed my notarial seal
this 10th day of December, 2007.

Laurie Crutcher

LAURIE CRUTCHER, RPR
Court Reporter - Notary Public
My commission expires
March 9, 2008.

Montana DEQ Forest Fire Smoke Advisory

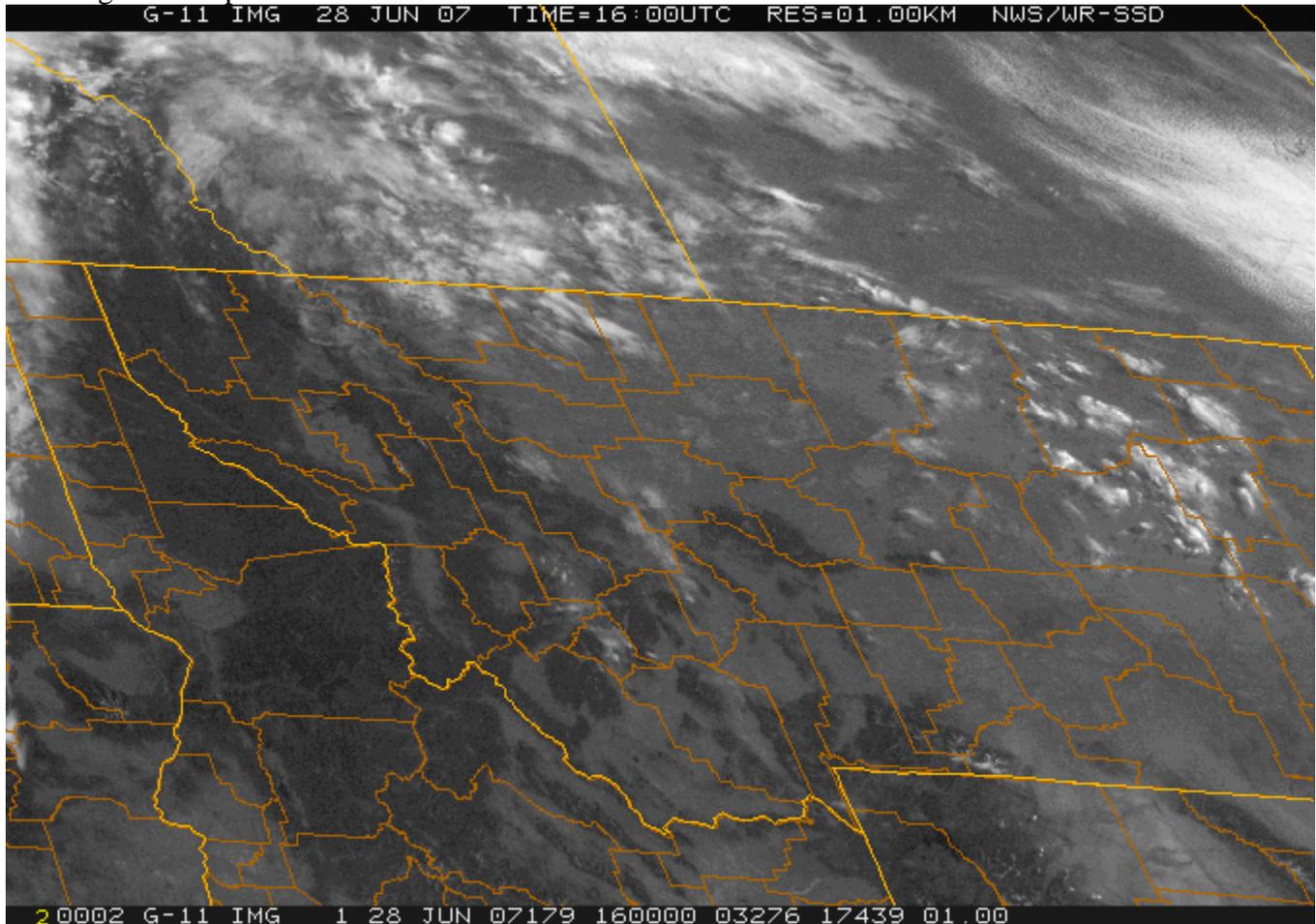
June 28, 2007

10:00 AM

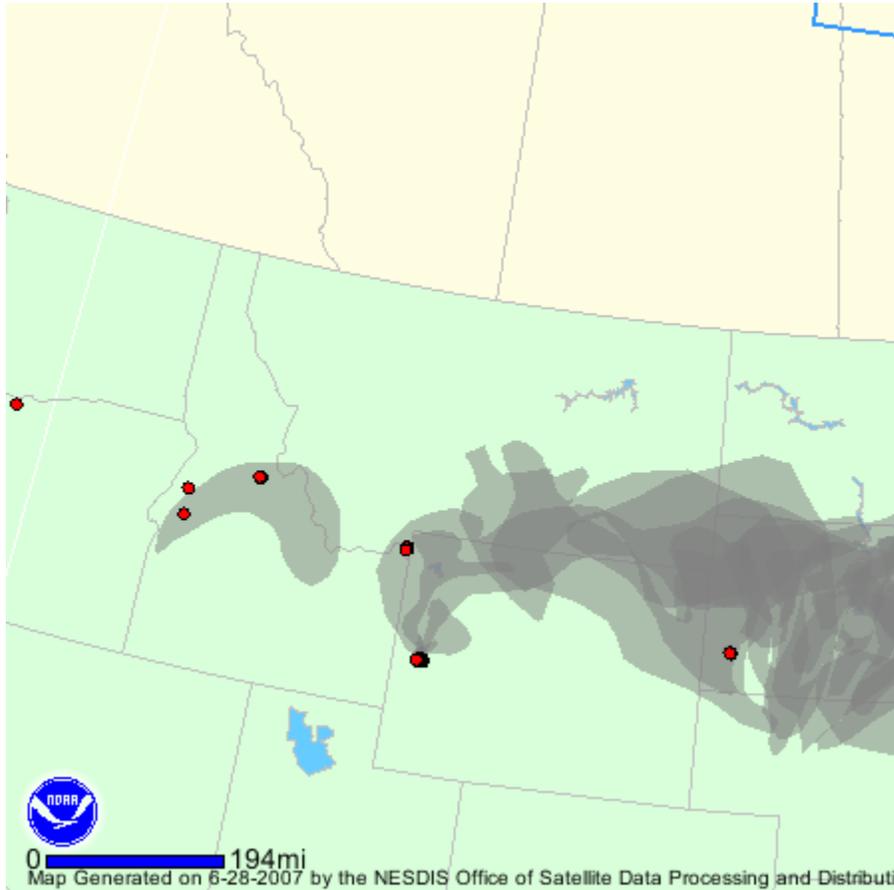
Current Situation

Smoke from the Madison Arm fire just outside of West Yellowstone is severely impacting the city this morning. Smoke levels started to build about midnight and have reached [VERY UNHEALTHY](#) levels as of 11 am this morning. Smoke impacts at this level are associated with significant aggravation of heart and lung disease and premature mortality in persons in a challenged health status. People with respiratory or heart problems, the very young and the elderly should avoid any outdoor activity until conditions improve and the general public should avoid prolonged exertion. The smoke level in West Yellowstone is expected to improve later today but rebuild again overnight. See the forecast below for details. Residents in areas with nearby fires should pay attention to current conditions and use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 10:00 AM June 28, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	West Yellowstone T1, T8
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	

- T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines (<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>) to evaluate possible health risks and make informed activity decisions.

Forecast

Winds are expected to increase from the southwest later today in the West Yellowstone area. The increasing winds and higher mixing heights as the day heats up should provide significant improvement in the smoke level for areas that are not immediately downwind of the active fire this afternoon. Visibility impacts along highways in the area could be a problem for traffic as far north as Big Sky. Conditions could become poor again tonight as an inversion traps the smoke and holds it close to the ground. The actual levels tonight

will be a function of the fire activity levels later this afternoon and evening during the active phase of this fire. Residents near active fires need to remain aware of current conditions and use the visibility guidelines (<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>) to guide their activity decisions as the situation changes.

John Coefield
Meteorologist
Montana Department of Environmental Quality

Forest Fire Smoke Impacts West Yellowstone Thursday June 28, 2007 11am

Smoke from the Madison Arm fire just outside of West Yellowstone is severely impacting the city this morning. Smoke levels started to build about midnight and have reached VERY UNHEALTHY levels as of 11 am this morning. Smoke impacts at this level are associated with significant aggravation of heart and lung disease and premature mortality in persons in a challenged health status. People with respiratory or heart problems, the very young and the elderly should avoid any outdoor activity until conditions improve and the general public should avoid prolonged exertion. Residents of the West Yellowstone area can check current conditions at the MDEQ website:

Winds are expected to increase from the southwest later today in the West Yellowstone area. The increasing winds and higher mixing heights as the day heats up should provide significant improvement in the smoke level for areas that are not immediately downwind of the active fire this afternoon. Conditions could become poor again tonight as an inversion traps the smoke and holds it close to the ground. The actual levels tonight will be a function of the fire activity levels later this afternoon and evening during the active phase of this fire. Residents of the area that do not have access to the DEQ website should use the visibility guide below to assess their situation.

Visibility Ranges Used to Determine Health Effect Categories	
Visibility Range	Health Effect Category
10 miles and up	<u>Good</u>
6 miles to 9 miles	<u>Moderate</u>
3 miles to 5 miles	<u>Unhealthy For Sensitive Groups</u>
1.5 to 2.5 miles	<u>Unhealthy</u>
0.9 to 1.4 miles	<u>Very Unhealthy</u>
0.8 miles or less	<u>Hazardous</u>

The procedure for making personal observation to determine the forest fire smoke index value for local areas without National Weather Station (NWS) or Department of Environmental Quality (DEQ) monitors is:

1. Face away from the sun.
2. Determine the limit of your visible range by looking for targets at known distances (miles).
3. Visible range is that point at which even high contrast objects totally disappear.
4. Use the values above to determine the local forest fire smoke category.

More information is available at the DEQ Fire and Smoke website:
<http://www.deq.mt.gov/FireUpdates/index.asp>

John Coefield
Meteorologist
MDEQ

Montana DEQ Forest Fire Smoke Advisory

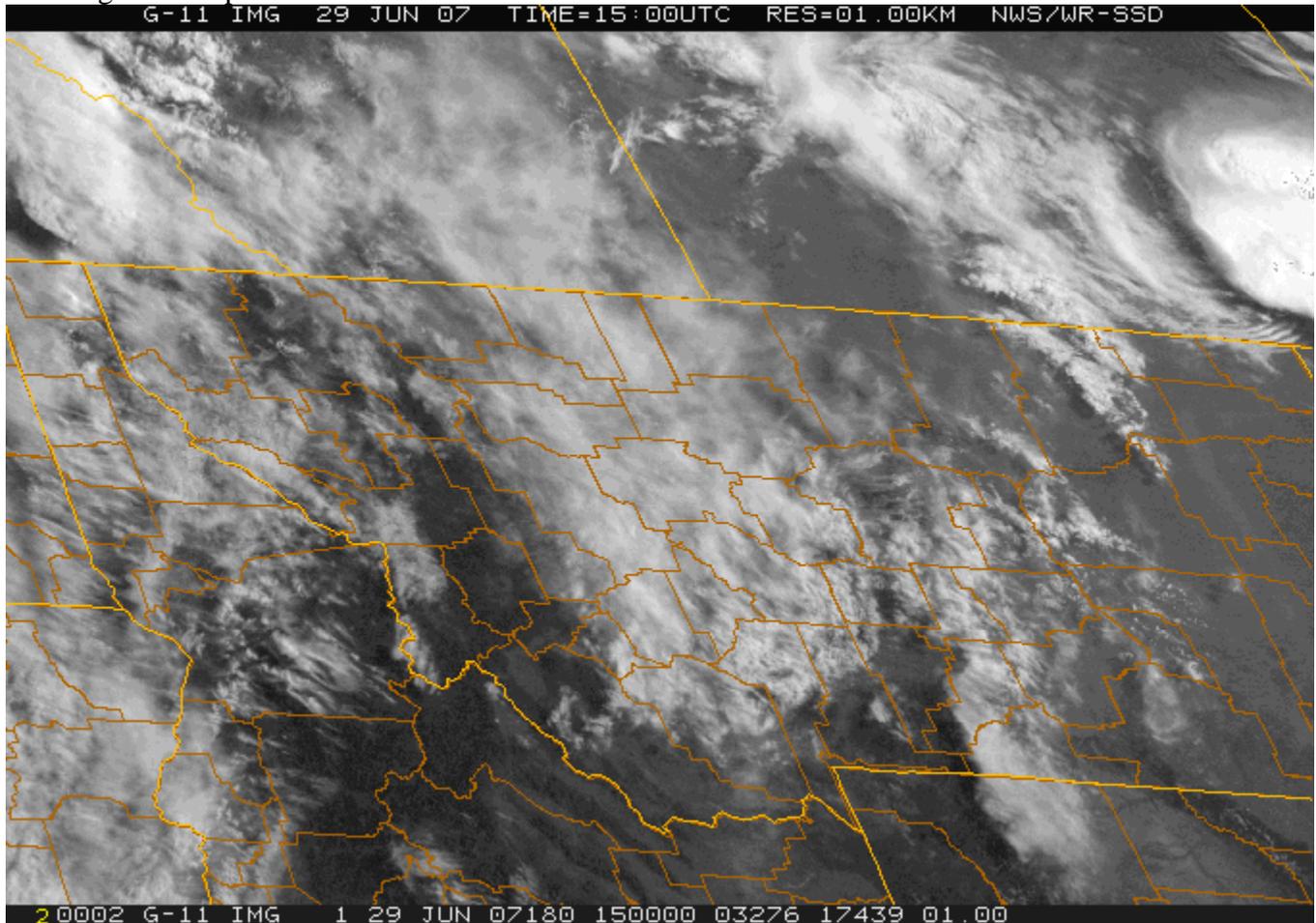
June 29, 2007

10:00 AM

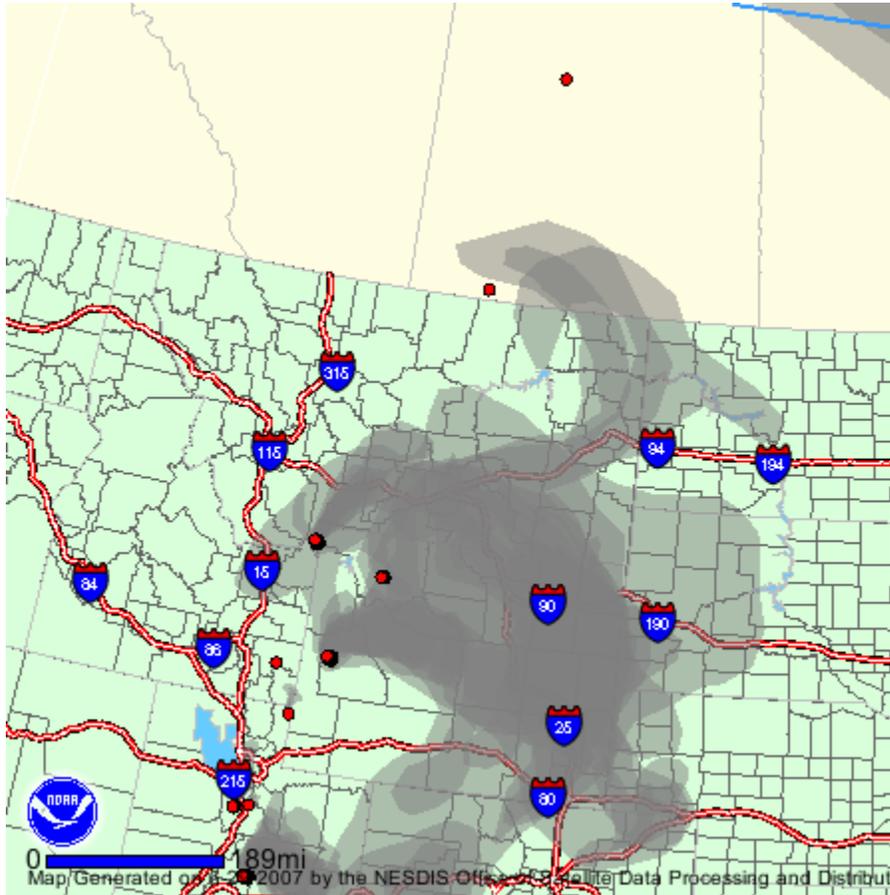
Current Situation

Smoke from the Madison Arm fire just outside of West Yellowstone has re-entered the city this morning but is not as bad as yesterday. Currently, West Yellowstone is at the UNHEALTHY FOR SENSITIVE level. This is expected to reach UNHEALTHY for an hour or so before higher mixing heights and increased winds move the smoke out of town again this afternoon. Smoke levels downwind of the fire are expected to stay at UNHEALTHY or worse throughout the day. See the forecast below for details. There is quite a lot of general haze over the rest of the state and visual ranges are down to 20 to 30 miles in many areas but health effects are not a problem under those conditions. Residents in areas with nearby fires should pay attention to current conditions and use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 10:00 AM June 29, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	West Yellowstone T1, T8
MODERATE	

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

Forecast

Southwest winds are expected again today and tonight in the West Yellowstone area. This will keep most of the smoke out of town and levels there should improve greatly by early afternoon. Visibility impacts along highways in the area could be a problem for traffic as far north as Big Sky. Conditions could become poor again tomorrow morning as an inversion traps the smoke and holds it close to the ground. The actual levels will be a function of the fire activity levels later this afternoon and evening during the active phase of this fire. A weak frontal passage is forecast through the area Saturday afternoon and wind from the north could drive substantial amounts of smoke into town when that occurs. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

John Coefield
Meteorologist
Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

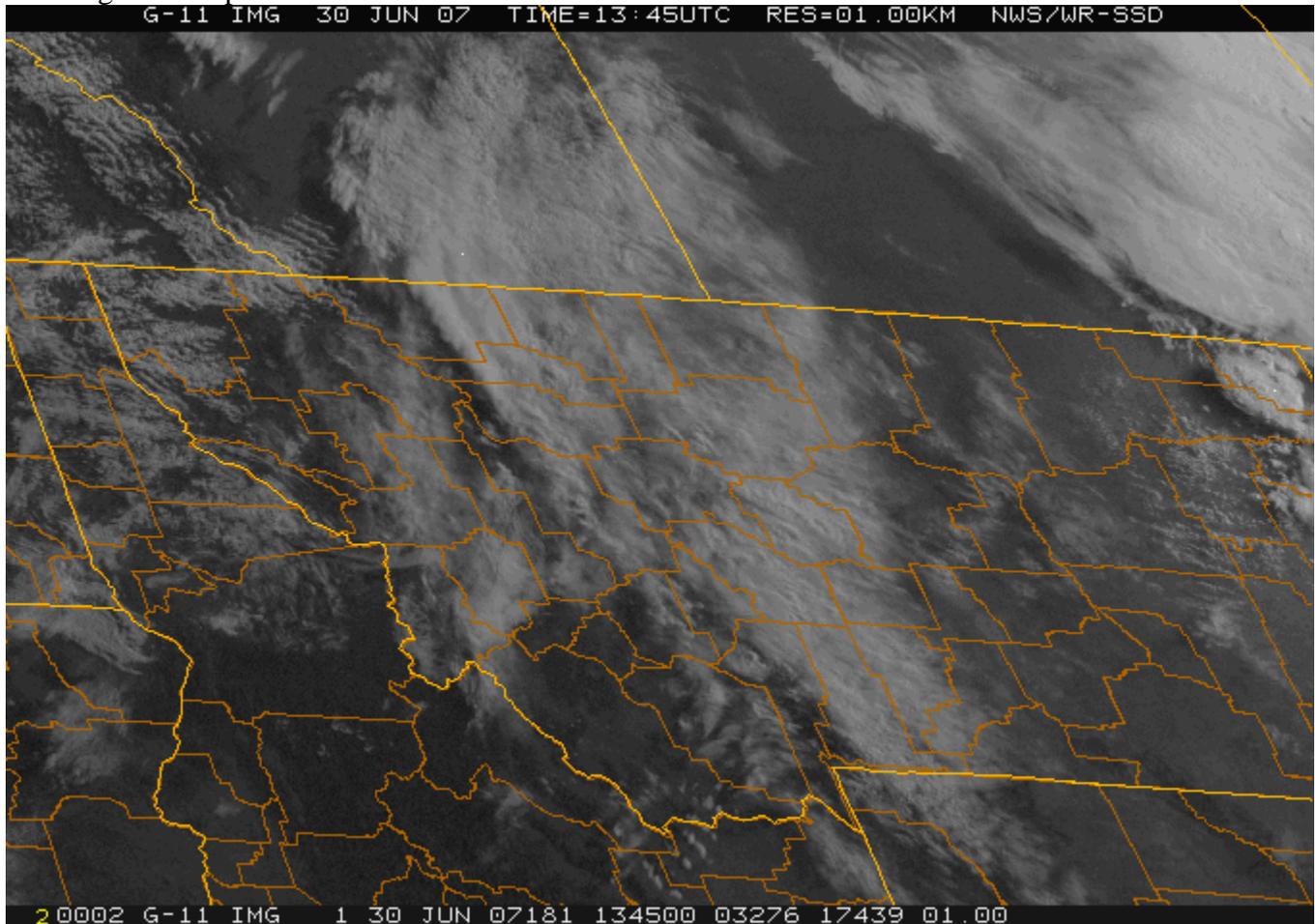
June 30, 2007

9:00 AM

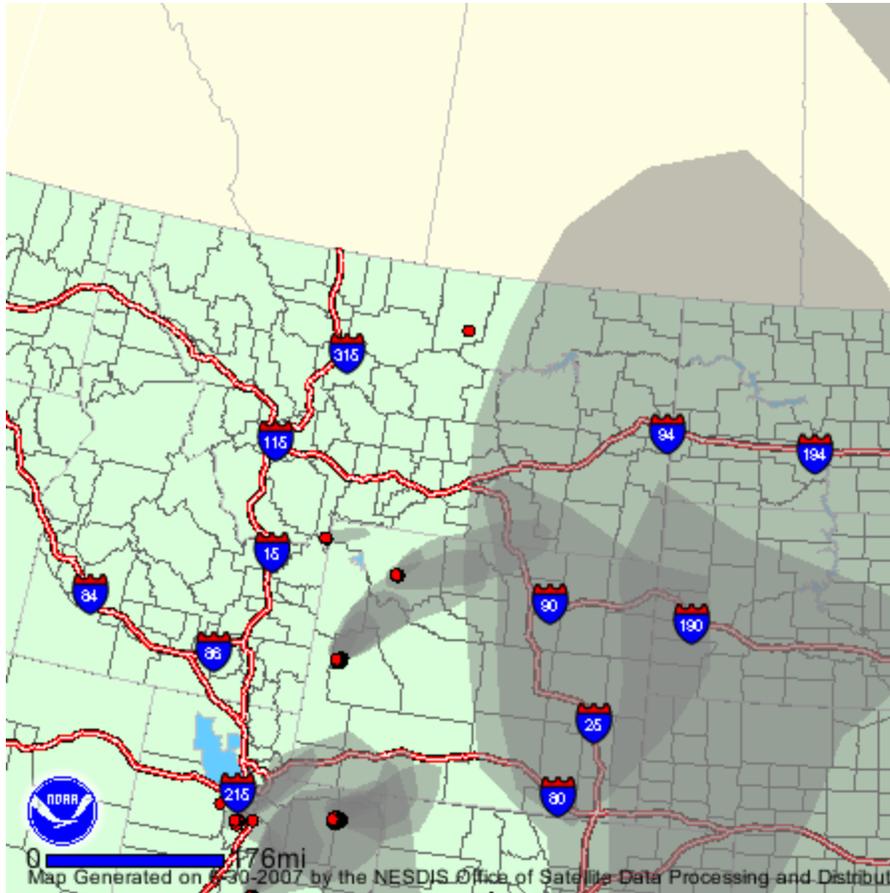
Current Situation

Smoke levels in West Yellowstone are at [GOOD](#) conditions so far this morning as light southwest winds have kept the smoke out of town. Substantially reduced fire activity yesterday due to favorable weather conditions and aggressive suppression has limited the smoke production as well. North winds and potentially severe thunderstorm conditions are still on tap for today and that will challenge the suppression crews and potentially drive smoke in town later today. Smoke levels downwind of the fire are expected to stay at [UNHEALTHY](#) or worse today. See the forecast below for details. Residents in areas with nearby fires should pay attention to current conditions and use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

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Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 9:00 AM June 30, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines <http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to evaluate possible health risks and make informed activity decisions.

Forecast

North winds are still forecast into the West Yellowstone area later today. This could result in very intense smoke conditions south of the Madison Arm fire for a few hours before the overall southwest flow reestablishes itself later tonight. There is a potential for severe thunderstorms in the area which could produce strong and erratic wind conditions for a few hours. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to guide their activity decisions as the situation changes.

John Coefield
Meteorologist
Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

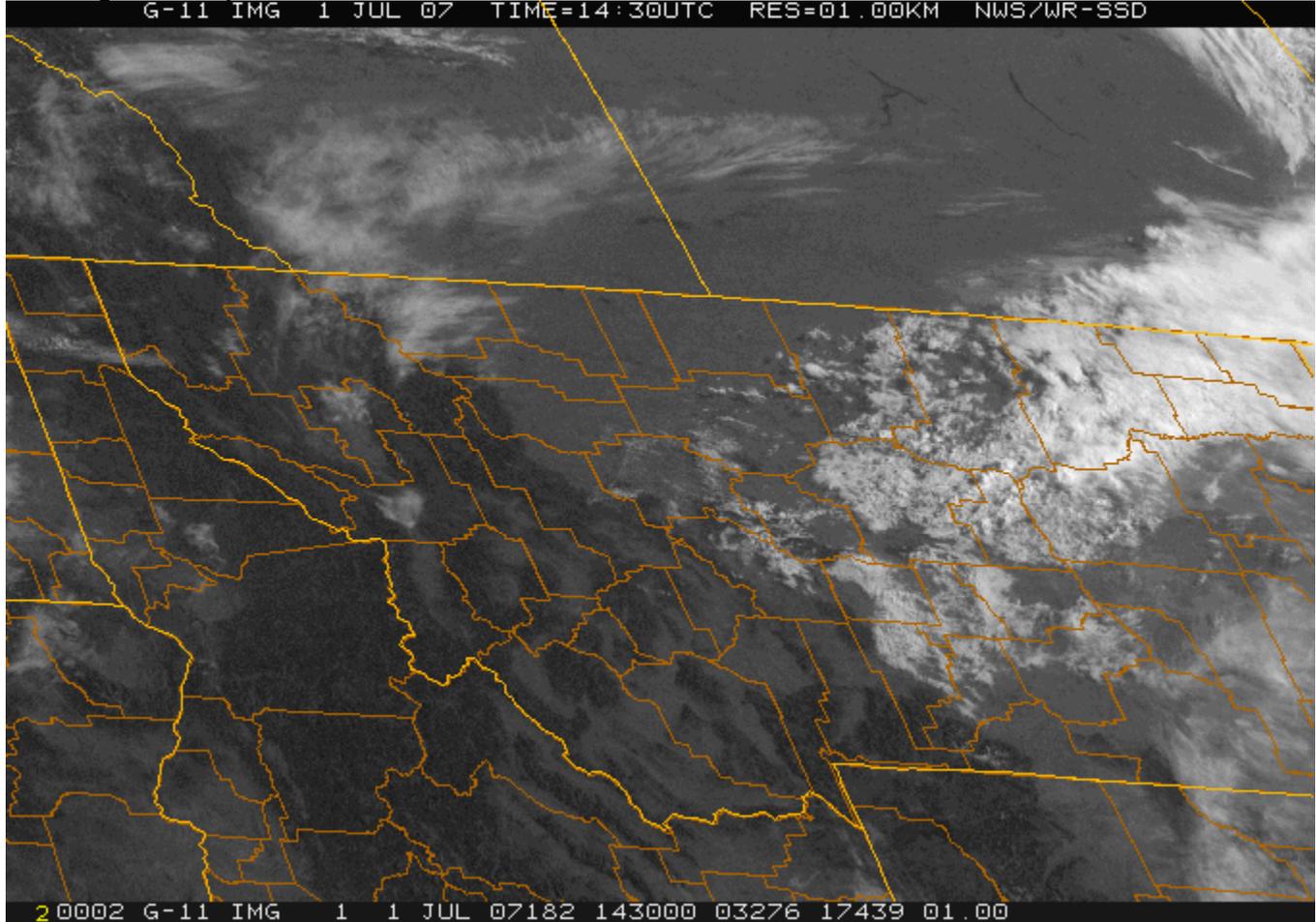
July 1, 2007

9:00 AM

Current Situation

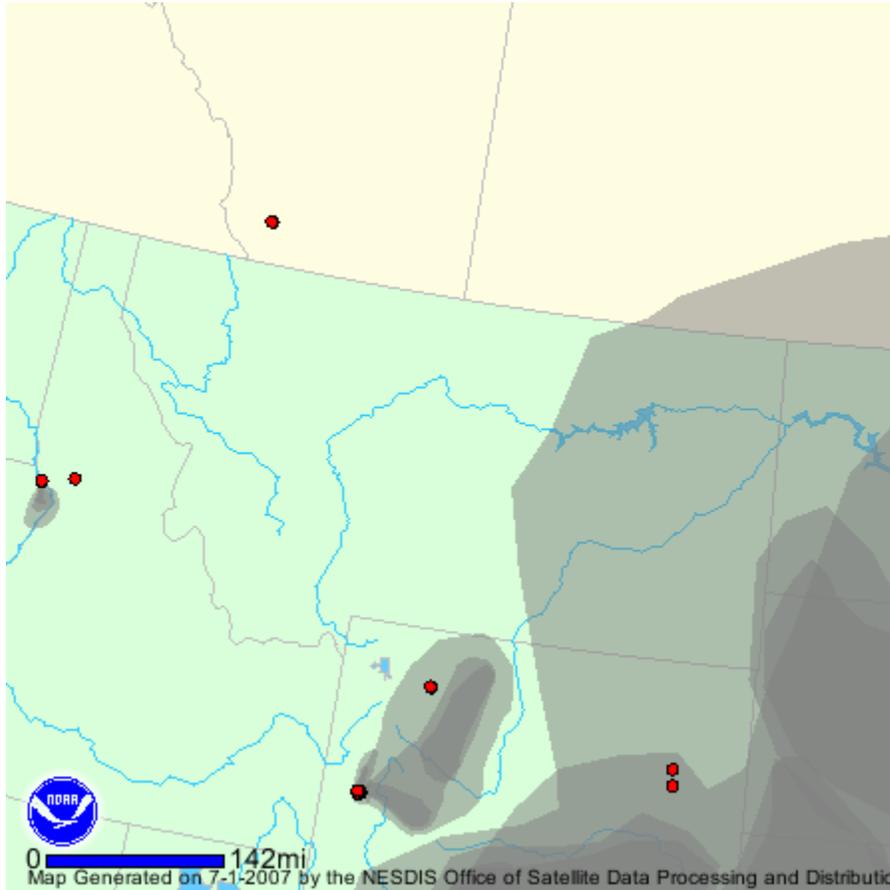
Smoke levels in West Yellowstone are at [GOOD](#) conditions this morning as crews continue to keep the fire contained and smoke production is minimal. The rest of the state looks clear as well. Hot and dry weather and a chance of thunderstorms will continue to produce scattered fire starts but with no large fires, smoke conditions are not expected to be more than a local problem today. See the forecast below for details. Residents in areas with nearby fires should pay attention to current conditions and use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke

is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

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This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.
<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 9:00 AM July 1, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines <http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to evaluate possible health risks and make informed activity decisions.

Forecast

Clear skies are expected today. Southwest winds aloft will continue to produce a few scattered thunderstorms that will likely result in local fire starts due to lightning. There are no big fires upwind of most of Montana and smoke problems are only expected in very localized areas. Residents near active fires need to remain aware of current conditions and use the visibility guidelines: <http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to guide their activity decisions as the situation changes.

John Coefield
Meteorologist, Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

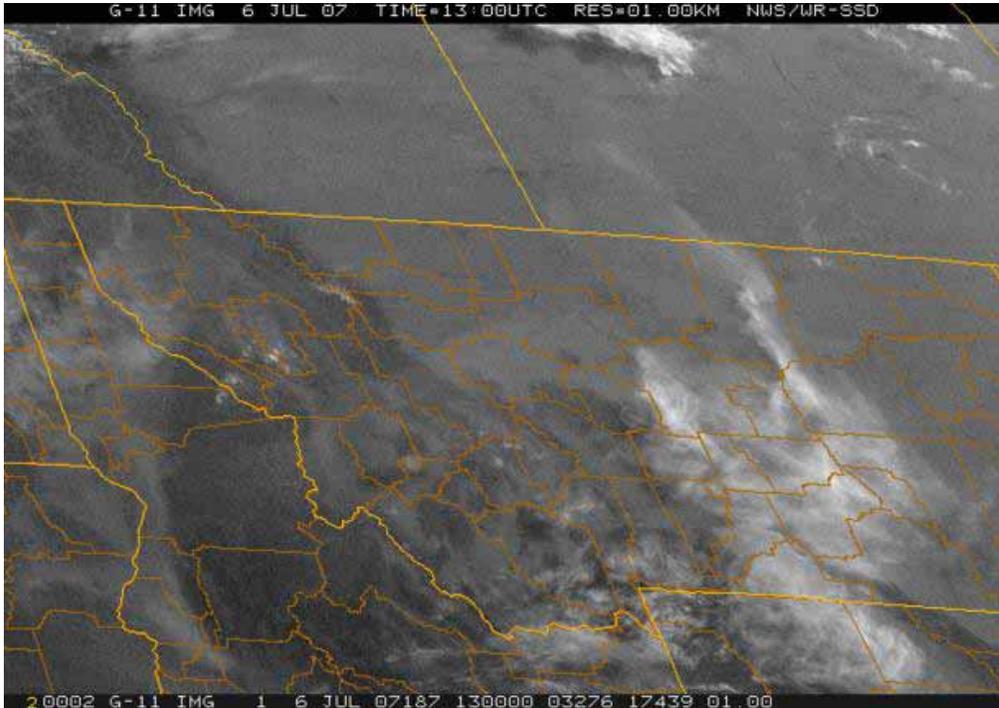
July 6,7,8 2007

2:00 PM Friday July 6

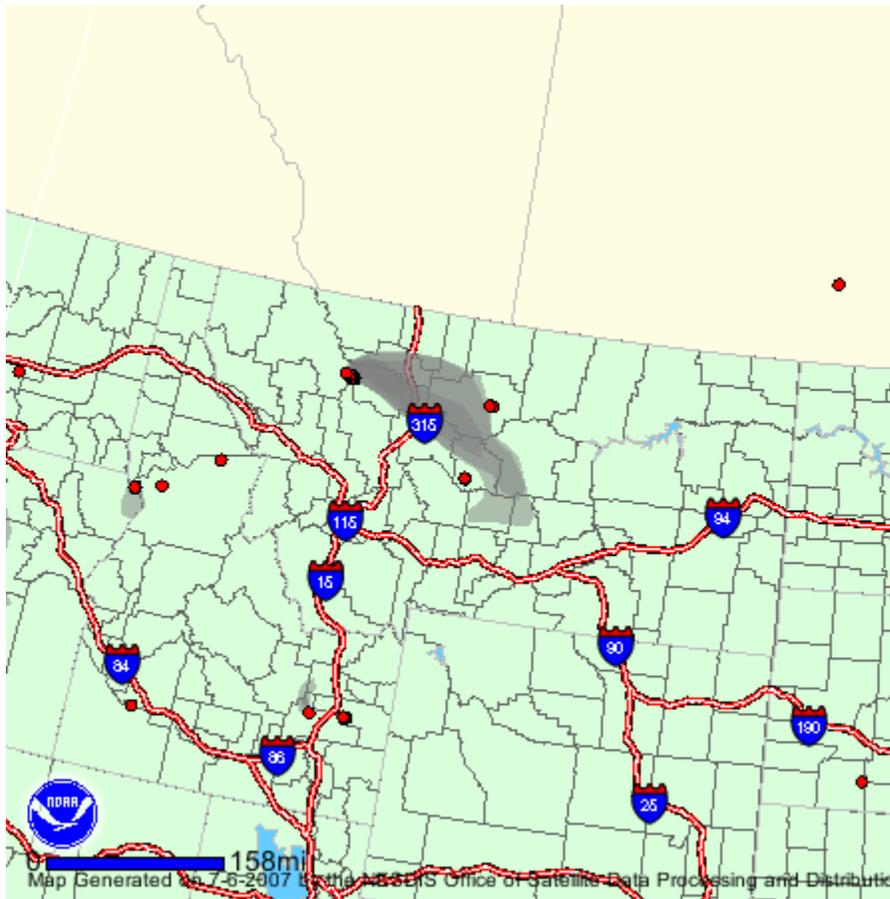
Current Situation

There is a lot of residual smoke aloft today from the big plume the Fool Creek fire in the Bob Marshall Wilderness west of Choteau put up last night. The smoke came late enough in the day that it stayed aloft by the time it reached the edge of the Wilderness and surface level impacts outside of the Wilderness have not been a problem today. There was a lot of smoke trapped in the valley of the North Fork of the Sun River this morning and conditions there were likely UNHEALTHY or worse. Some smoke will likely mix down over central and eastern Montana this afternoon and be noticeable but mostly the only impact will be the hazy sky. This fire has the potential to put up a lot of smoke the next few days, depending on what the weather conditions dictate. See the forecast below for likely areas of impact over the weekend. This web site will not be updated until Monday July 9. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

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This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 2 PM July 6, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

Forecast

Hot, mostly dry and windy conditions are expected today along with some scattered thunderstorms. Plumes from fires this afternoon will likely head northeast and then switch around to the east and then southeast Saturday afternoon. Some east winds are forecast during the Sunday time period and that has historically produced big buildups of

smoke against the front range when fire activity levels are high. Right now there are no big fires upwind of Montana and most smoke problems are expected to be local. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

John Coefield
Meteorologist
Montana Department of Environmental Quality

Jcoefield@mt.gov

Montana DEQ Forest Fire Smoke Advisory

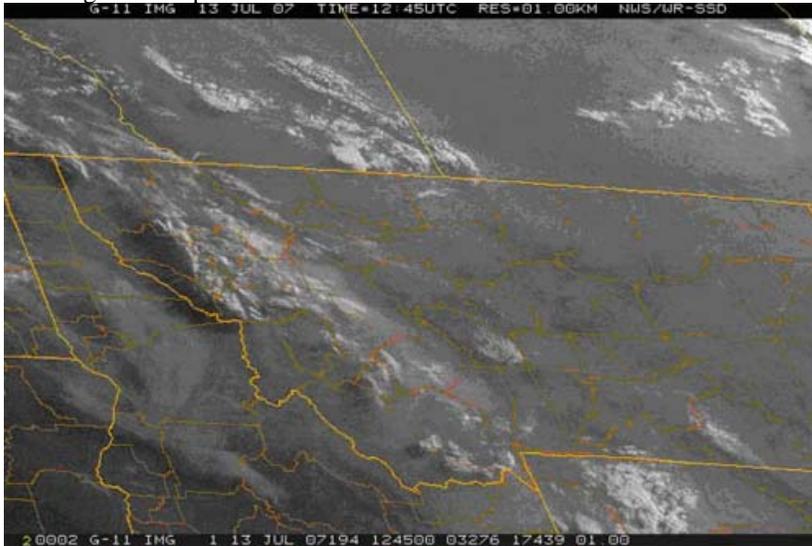
July 13, 2007

10:00 AM Friday, July 13

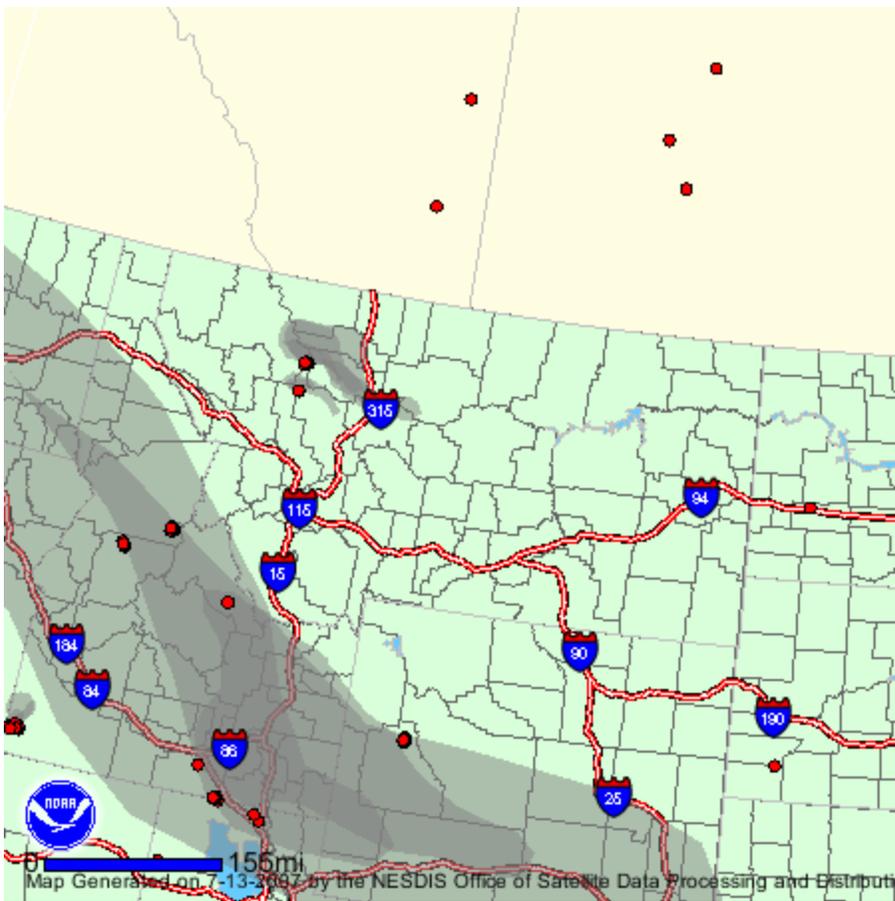
Current Situation

Hazy sky is the rule over much of the state today as smoke aloft from fires in Washington, Oregon, and Idaho has started to work its way across the Treasure State. There are some local impacts from the fires in the Bob Marshall Wilderness but so far impacts have been limited to the areas immediately adjacent to the fires. Some of the smoke aloft may mix down later this morning for some temporary [MODERATE](#) conditions but unless the fire activity ramps up Montana should be OK for the next few days. See the forecast below for details. This web site will not be updated before Monday July 16 unless condition warrant. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



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This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 2 PM July 13, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	

UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to evaluate possible health risks and make informed activity decisions.

Forecast

The weekend will be hot and mostly dry with a few scattered thunderstorms. The high pressure ridge will be just about centered over the state which will limit dispersion and transport winds. The smoke should mostly remain aloft with some temporary surface impacts in the late mornings as the mixing height reaches the smoke level aloft. Smoke from the areas west and southwest of Montana will be impacting the state through the weekend. If we get some substantial fire activity locally, smoke conditions could become a problem quickly with the elevated background conditions. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to guide their activity decisions as the situation changes.

John Coefield
Meteorologist
Montana Department of Environmental Quality

jcoefield@mt.gov

Montana DEQ Forest Fire Smoke Advisory

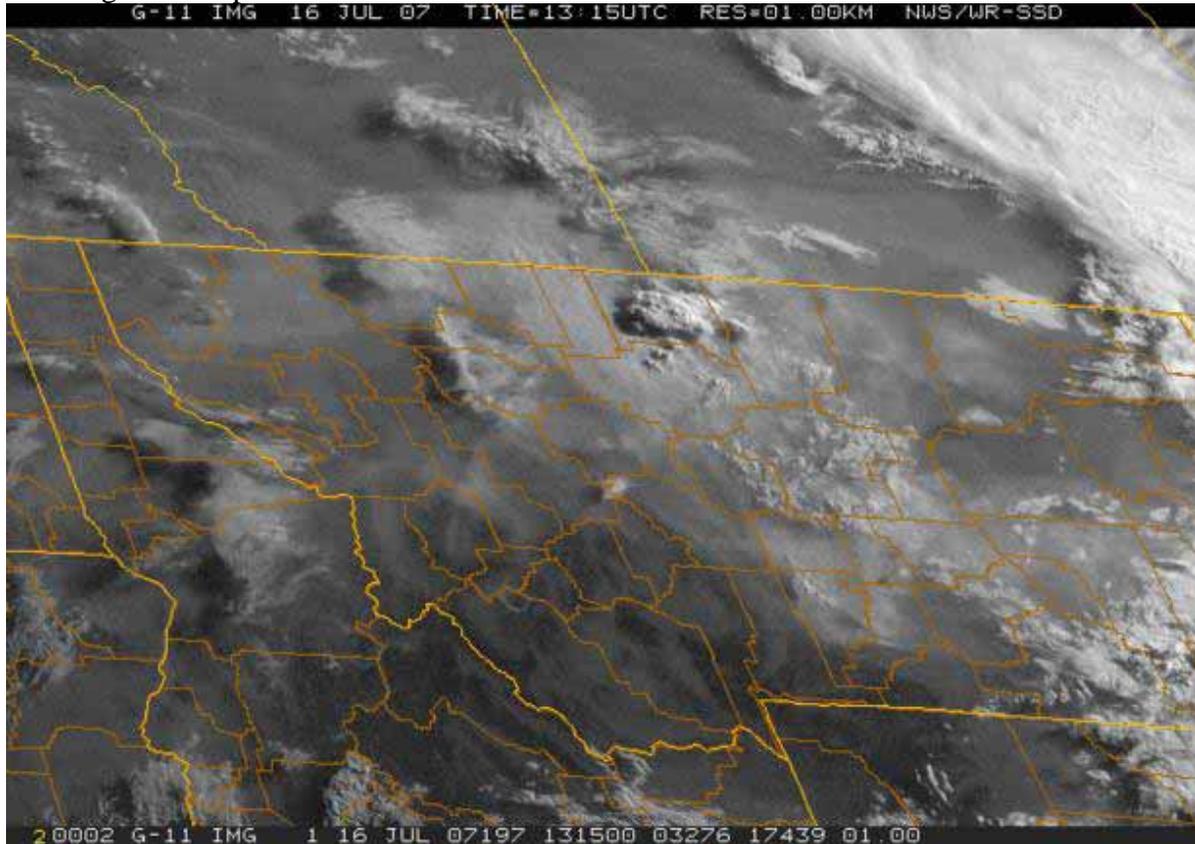
July 16 2007

10:00 AM Monday July 16

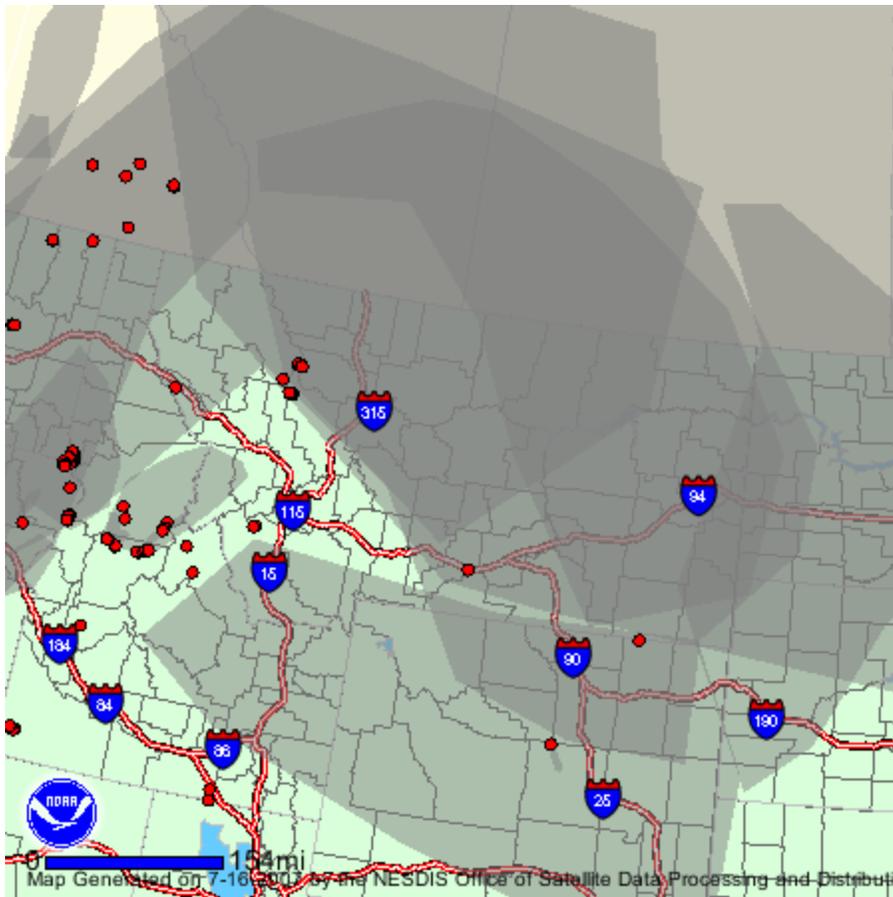
Current Situation

MODERATE levels of smoke are impacting much of western Montana. Kalispell, Missoula, Hamilton Butte, and Choueau are all currently seeing smoke at that level. The smoke levels should improve later this morning but will likely creep up again late in the afternoon or evening. Other areas that only have haze to deal with could see increased levels of smoke at the surface for a few hours. See the forecast below for details. Smoke conditions near the active fires in Montana are expected to be UNHEALTHY or worse. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



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<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 10 AM July 16, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Kalispell T24 Missoula T24 Hamilton T24 Butte T24 Choteau T8

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
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Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

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to evaluate possible health risks and make informed activity decisions.

Forecast

Smoke will continue to drift up into western Montana along with a southerly flow aloft today. Winds should remain pretty light today so dispersion will be limited and little net transport of smoke out of the state will occur under the high pressure ridge aloft. Smoke levels in western Montana will likely increase for the next 24 hours after a brief improvement this afternoon as the mixing height grows. The smoke aloft will mix down to the surface for few hours later this morning and some areas will see a temporary increase in particulate levels for a few hours then. Smoke impacts in the areas downwind of local fires are expected to be UNHEALTHY or worse. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

John Coefield
Meteorologist
Montana Department of Environmental Quality

Jcoefield@mt.gov

Montana DEQ Forest Fire Smoke Advisory

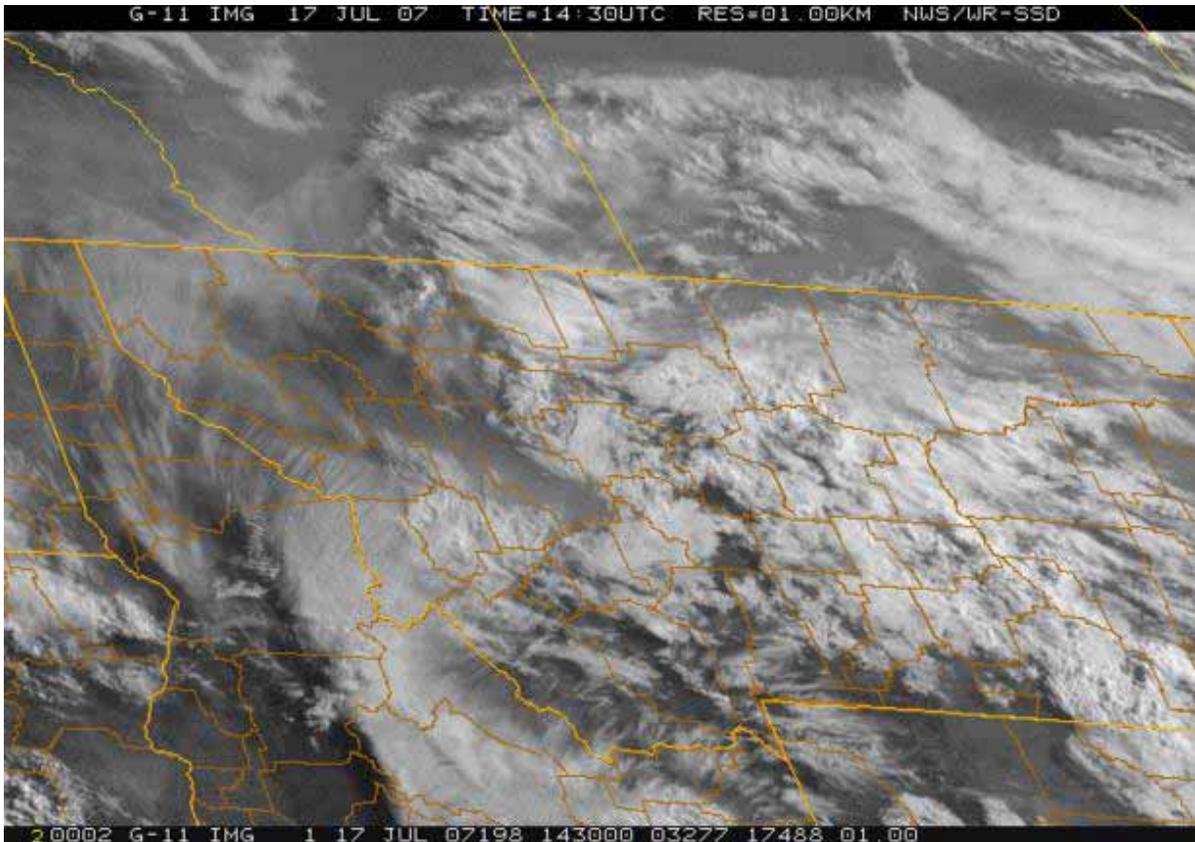
July 17 2007

10:00 AM Tuesday July 17

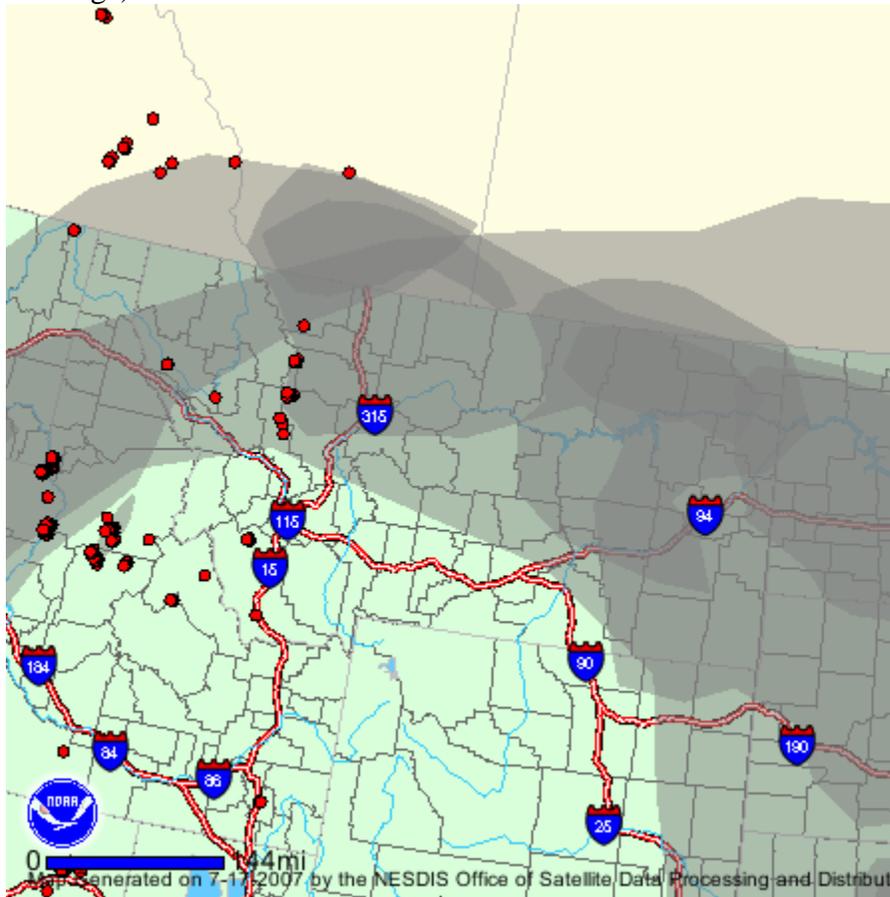
Current Situation

There is a lot of smoke visible between the clouds on this morning's Satellite photo. Smoke from Oregon, Idaho and Washington has rounded the ridge to the west and pushed into western Montana yesterday. East winds are keeping the smoke in the area and for the day and Whitefish, Kalispell, Polson and Ronan are all listed at UNHEALTHY FOR SENSITIVE on this morning's report as persistent haze has raised the 24 hour averages into the first health advisory range. MODERATE smoke conditions are being reported in Libby, Missoula and Cut Bank at this time. The rest of the state will be seeing hazy sky for the rest of the day and may experience noticeable smoke at the surface for a few hours later in the day as the smoke mixes down. See the forecast below for details. Smoke conditions near the active fires in Montana are expected to be UNHEALTHY or worse. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



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<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 10 AM July 17, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	Whitefish T24 Kalispell T24 Polson (est) Ronan T24
MODERATE	Libby T24 Missoula T24 Cut Bank Vis(1)

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

Forecast

There will very little overall transport of smoke today as light easterly winds in many areas will keep the smoke anchored over the mountains today. Mixing heights will be very high this afternoon with good instability and scattered thunderstorms providing excellent dispersion and most areas in the smoke today should see substantially lower particulate levels this afternoon unless they happen to be downwind of any local significant fire activity. The smoke aloft will mix down to the surface for few hours later this morning and some areas will see a temporary increase in particulate levels for a few hours then. Stronger winds from the south are forecast for tomorrow and that will bring warmer temperatures and increased fire activity. Areas to the north of the active fires zones in the state could see high levels of smoke tomorrow. This would include the Butte and Helena areas and the Rocky Mountain Front from Chouteau north to the Canadian border. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

John Coefield
Meteorologist
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Montana DEQ Forest Fire Smoke Advisory

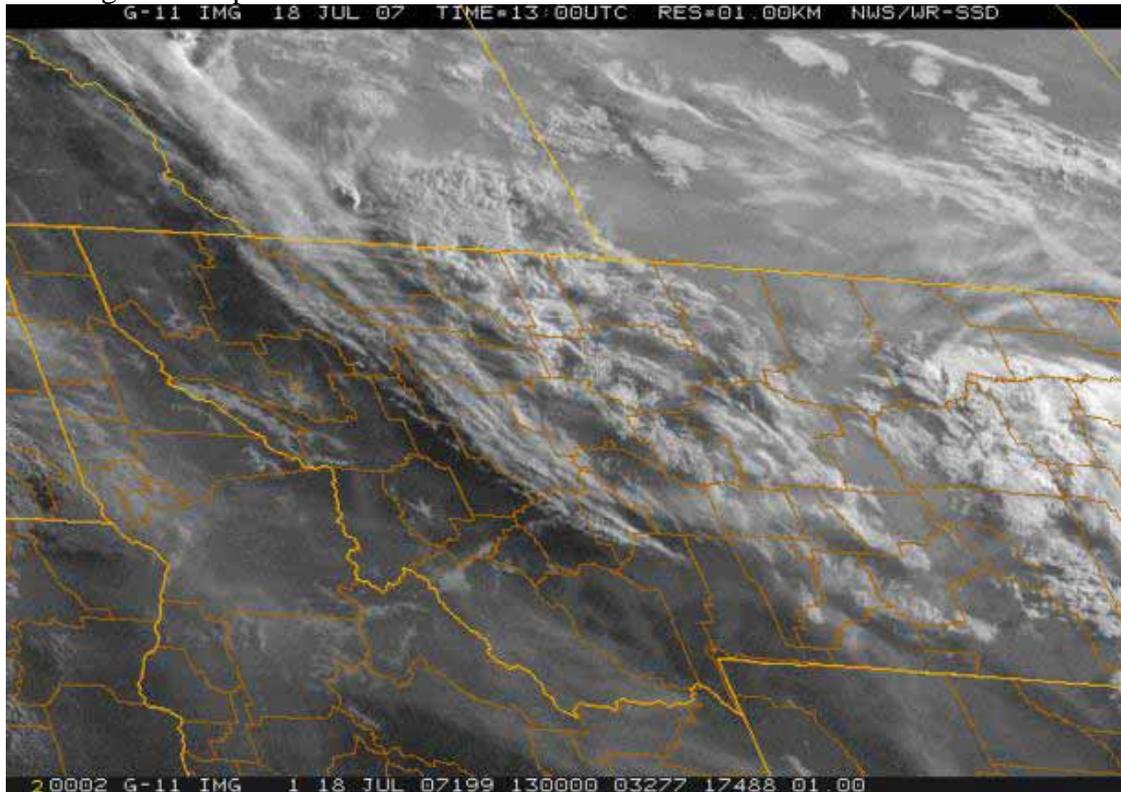
July 18 2007

10:00 AM Wednesday July 18

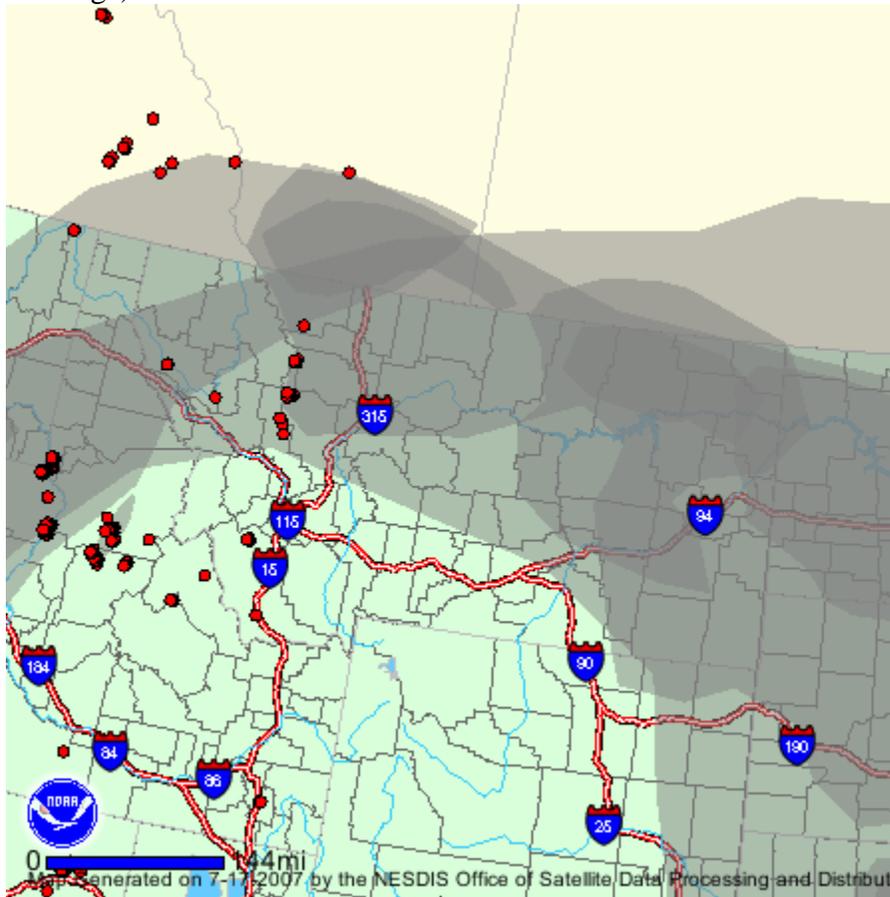
Current Situation

There is still a lot of smoke visible aloft over western Montana on this morning's Satellite photo but the sky is clearer many areas than it was yesterday thanks to widespread thunderstorms that are still working there way out of the state at this time. Southerly flow aloft has continued to push smoke from fires in Idaho and Oregon into western Montana and MODERATE smoke levels are still present in Libby, Whitefish, and Kalispell. These areas should see improved conditions later this morning as the mixing height rises. Hot dry winds from the south will start this afternoon and continue through Thursday, this will continue to push smoke into western Montana and may increase fire activity levels enough to transport smoke into other areas. See the forecast below for details. Smoke conditions near the active fires in Montana are expected to be UNHEALTHY or worse. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 10 AM July 18, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Libby T24 Whitefish T8 Kalispell T8

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

Forecast

Southerly winds aloft and at the surface will continue to push smoke into western Montana today. Smoke from the Pattengail Creek fire northeast of Wisdom could impact the Anaconda-Butte-Helena area later this afternoon and evening if the fire there takes off this afternoon. Smoke from the fires in the Bob Marshall Wilderness could impact communities along the Front Range from Choteau to Browning. Dispersion this afternoon should be excellent with high mixing heights and moderate to strong winds. This will improve conditions at the surface in those areas currently seeing MODERATE levels of residual smoke but may mix some of the smoke aloft down to other areas for some temporary impacts there. Areas downwind of active fires could see significant impacts if fire levels increase dramatically. With the excellent mixing the plumes will mix down to the surface miles downwind of the fires. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

John Coefield
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Montana DEQ Forest Fire Smoke Advisory

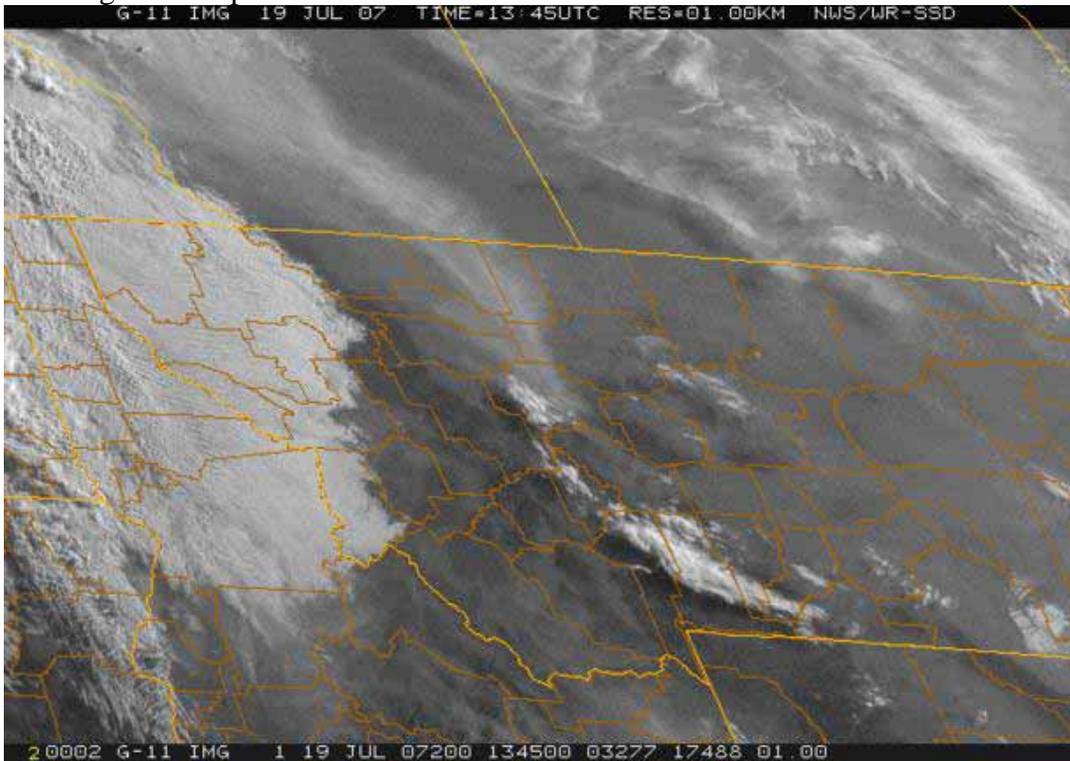
July 19 2007

10:00 AM Thursday

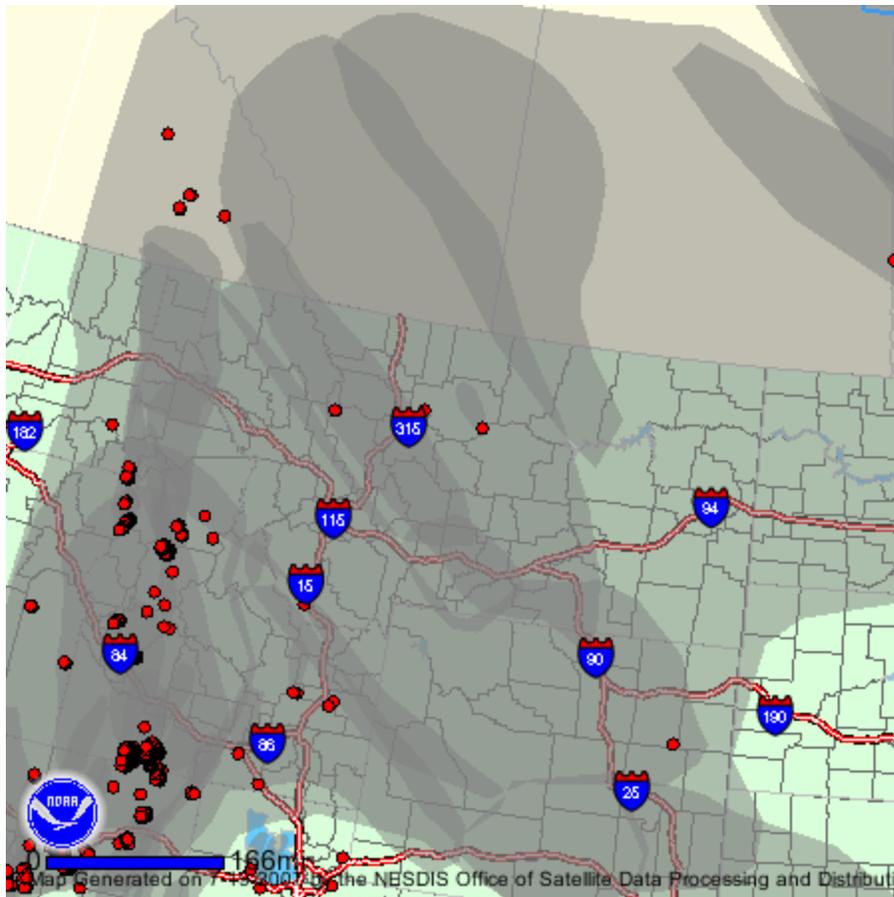
Current Situation

Smoke aloft continues to stream into the western half of Montana this morning from the south. There is also a noticeable band of smoke across north central Montana that is pushing north into Canada. This has produced a lot of haze but with the exception of MODERATE condition in Butte, surface impacts have not been a problem so far. Some impacts are expected later today as a hot dry air mass pushes into the state from the southwest. See the forecast below for details. Smoke conditions near the active fires in Montana are expected to be UNHEALTHY or worse. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 10 AM July 19, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Butte T8

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

Forecast

Hot and dry air will continue to push into the state from the southwest for the next couple of days. This will keep the state downwind of many of the fires in southern Idaho, Nevada and Utah. It is also likely to increase local impacts from the fires in the state as the low humidity and winds may cause some fires to increase dramatically. Red Flag warnings for hot, dry, and windy conditions have been posted for parts of southwest Montana today. Smoke from the Pattengail Creek fire northeast of Wisdom could impact the Anaconda-Butte-Helena area later this afternoon and evening if the fire there takes off this afternoon. Smoke from the fires in the Bob Marshall Wilderness could impact communities along the Front Range from Choteau to Browning. Dispersion this afternoon should be excellent with high mixing heights and moderate to strong winds. This may mix some of the smoke aloft down for some temporary impacts under the thickest part of the plume. Areas downwind of active fires could see significant impacts if fire levels increase dramatically. With the excellent mixing the plumes will mix down to the surface miles downwind of the fires. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

John Coefield
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Montana DEQ Forest Fire Smoke Advisory

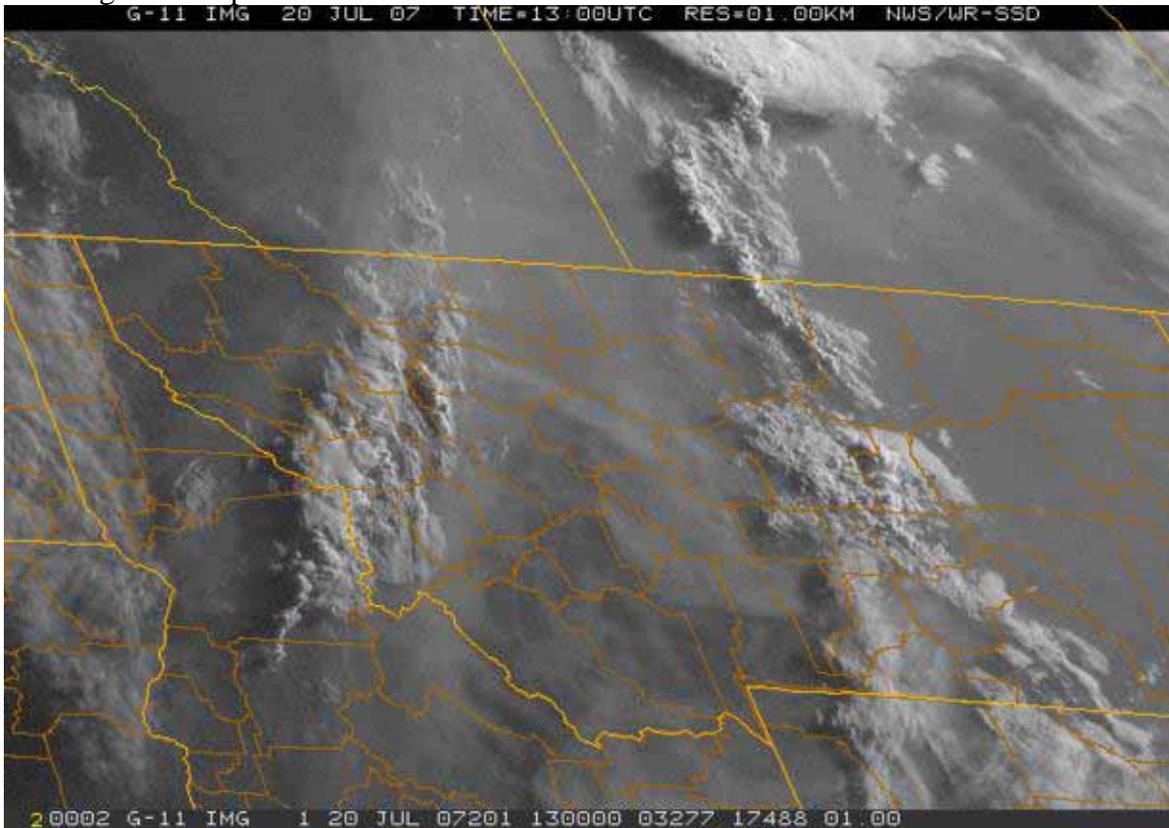
July 20 2007

10:00 AM Friday

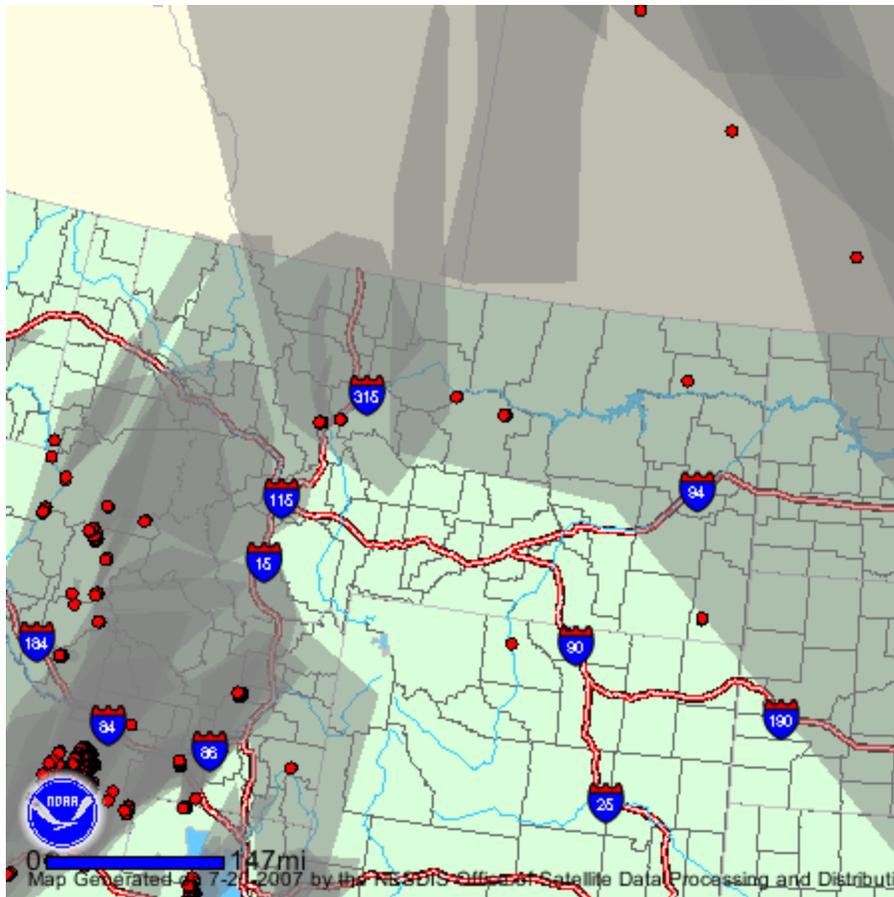
Current Situation

Smoky skies are the rule this morning with smoke streaming north from fires in Oregon, Idaho and Utah across the Big Sky state and into Canada. MODERATE levels are present at the surface at several reporting stations including Missoula, Hamilton, Helena and Butte. UNHEALTHY levels are worse are expected in the vicinity of the active fires this morning. More smoke will mix down to the surface later this morning and increase fire activity this afternoon will drive smoke into communities downwind of the local fires as well. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last nights satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 10 AM July 20, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Missoula T24 Hamilton T24 Helena T24 Butte T8

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

Forecast

More hot and dry air from the south will continue to push into the state today. Overall upper transport winds will stay from the south-southwest throughout the day and smoke from Idaho, Oregon and Utah will continue to provide hazy skies and smoke aloft throughout the state for the rest of the day. Some of that smoke will mix down to the surface later this morning for some temporarily noticeable surface impacts under the thickest parts of the plume aloft. Local impacts from the active fires in the state will also be of concern today. Low speed lower level winds will start out from the north early this morning, sending smoke in Helena from the Wolf Creek fires and the fires in the Bob Marshall wilderness. These winds will switch to the west in North Central Montana this afternoon sending smoke out into the Front Range area and into Great Falls. Winds in Helena should switch around to the south this afternoon and surface impacts there should improve after noon. Dispersion this afternoon will be excellent with high mixing heights and moderate to strong winds. This should prevent any buildup of smoke but local impacts are still likely. Smoke from the Pattengail Creek fire northeast of Wisdom could impact the Anaconda-Butte-Helena area later this afternoon and evening if the fire there takes off this afternoon. Areas downwind of active fires could see significant impacts if fire levels increase dramatically. With the excellent mixing the plumes will mix down to the surface miles downwind of the fires. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

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Montana DEQ Forest Fire Smoke Advisory

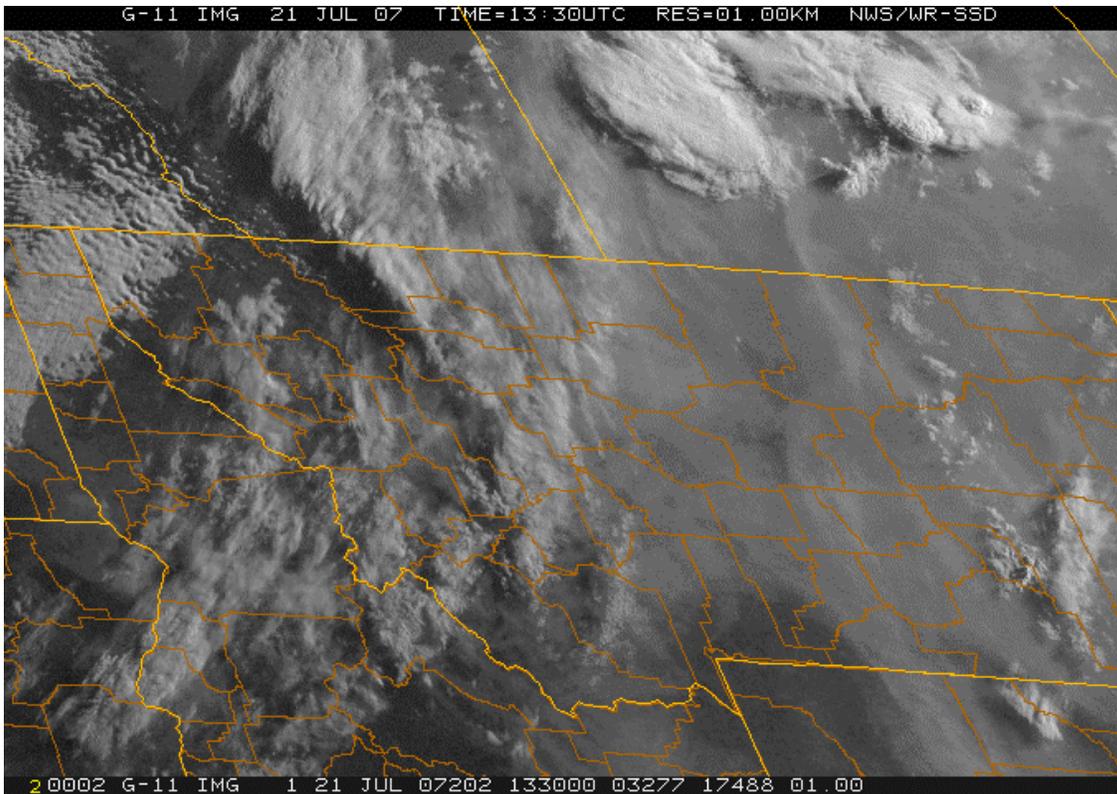
July 21 2007

10:00 AM Saturday

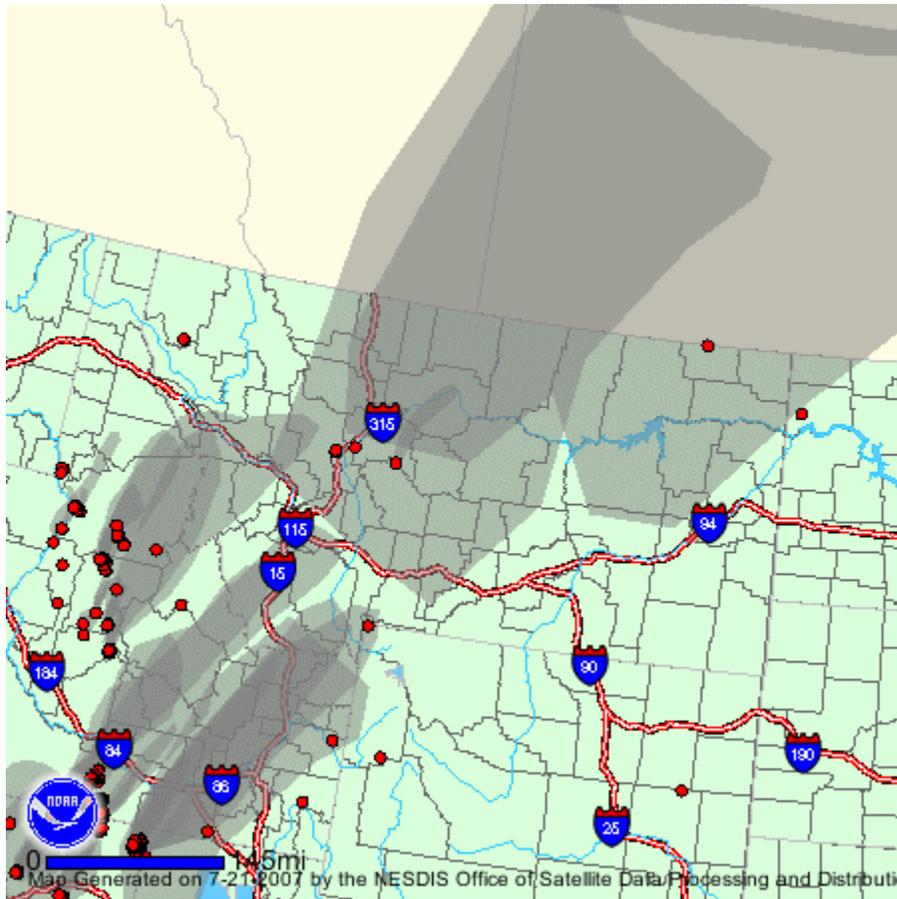
Current Situation

Smoke from fires in Idaho continues to impact Montana under a southwest flow aloft. MODERATE levels are present at the surface at several reporting stations including Missoula, Hamilton, Helena and Butte. Hamilton was at UNHEALTHY FOR SENSITIVE for several last evening. UNHEALTHY levels are worse are expected in the vicinity of the active fires this morning. More smoke will mix down to the surface later this morning and increased fire activity this afternoon will drive smoke into communities downwind of the local fires as well. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 10 AM July 21, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Missoula T24 Hamilton T8 Helena T24 Butte T8

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

Forecast

Transport winds are switching around to the southwest today and strong surface winds from west are forecast in most areas. This will continue to push smoke into the Bitterroot Valley and southwestern Montana. Smoke from the fires in Idaho will be pouring into that area this evening as the fires heat up and the plumes head this way. There will be a lot of hazy sky for the rest of the state as well as residual smoke aloft blankets most of the area. Some of that smoke will mix down to the surface later this morning for some temporarily noticeable surface impacts under the thickest parts of the plume aloft. Local impacts from the active fires in the state will also be of concern today. Strong westerly winds at the surface are forecast over most of the fires in the state and that will likely push smoke into an area from Wolf Creek north to Shelby including all of the Front Range area and Great Falls. Gershwin fans attending the Symphony Under the Stars in Helena tonight should see a dramatic sunset with a few scattered thunderstorms as the music begins. Dispersion this afternoon will be excellent with high mixing heights and moderate to strong winds. This should prevent any buildup of smoke but local impacts are still likely. Smoke from the Pattengail Creek fire northeast of Wisdom could impact the Anaconda-Butte-Helena area later this afternoon and evening if the fire there takes off this afternoon. Areas downwind of active fires could see significant impacts if fire levels increase dramatically. With the excellent mixing the plumes will mix down to the surface miles downwind of the fires. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

John Coefield
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Montana DEQ Forest Fire Smoke Advisory

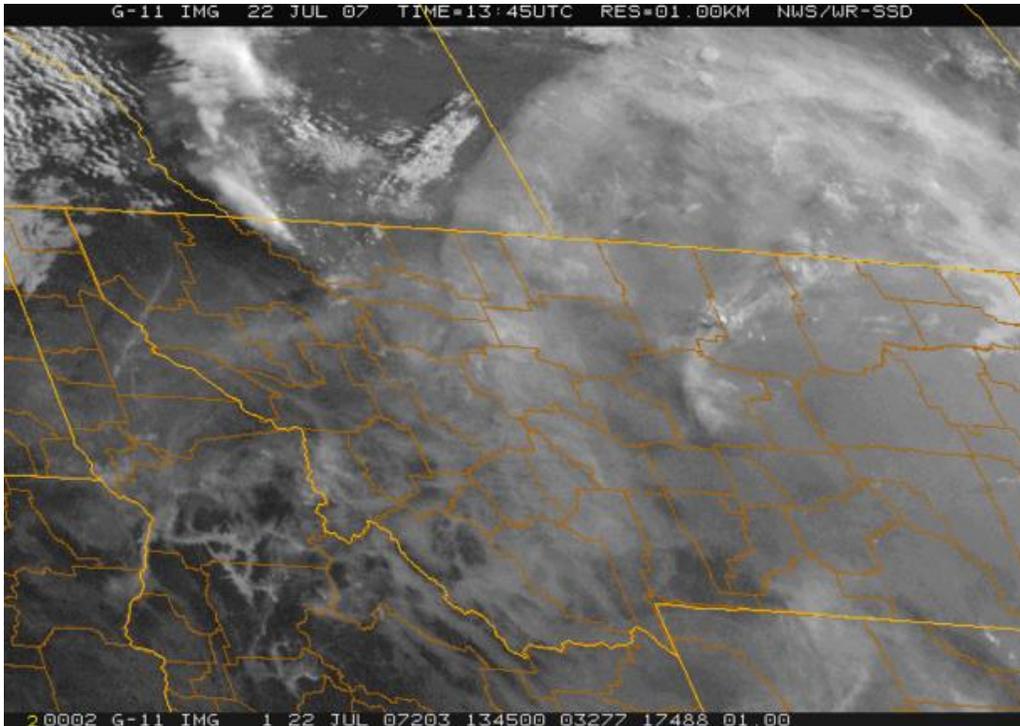
July 22 2007

10:00 AM Sunday

Current Situation

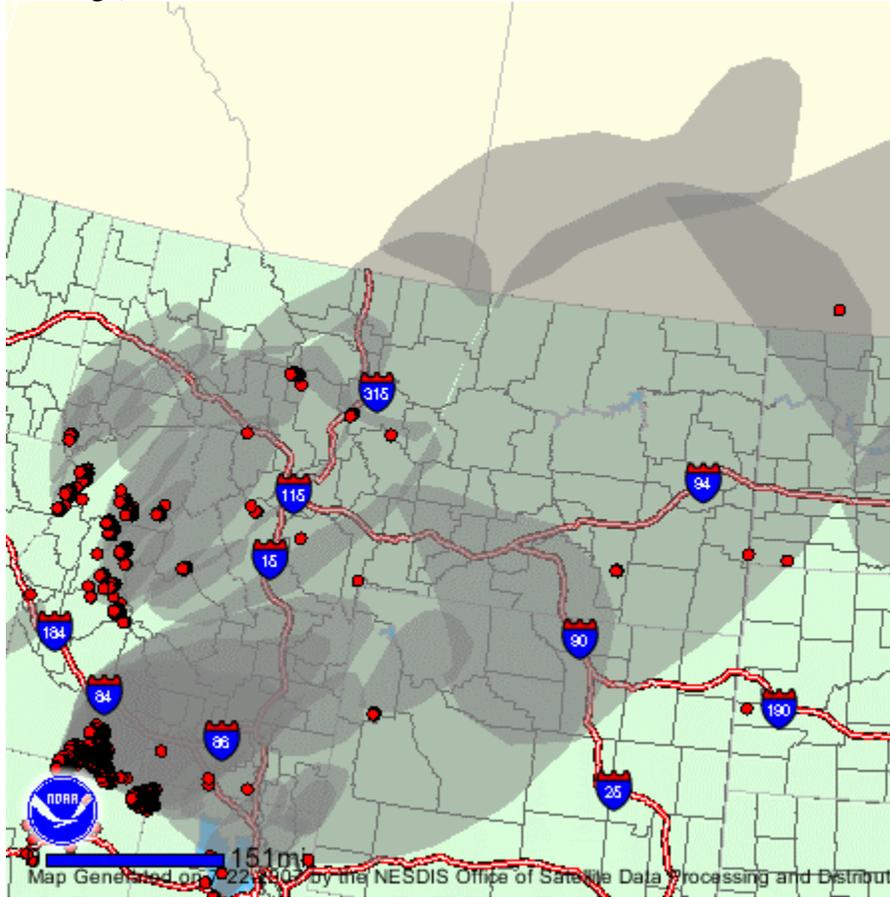
There is a huge plume of smoke aloft easily visible on this morning's satellite photo. The smoke was produced yesterday afternoon and evening in Idaho where well over 10,000 acres were burned yesterday. The plume is slowly moving up into Canada and North Dakota as it rotates over the top of a massive ridge of high pressure centered over the state. Residual smoke from the passage of the smoke aloft is lingering in the valleys of western and southwestern Montana. UNHEALTHY FOR SENSITIVE conditions are currently impacting Hamilton and Butte while MODERATE conditions are currently impacting Missoula, Helena, Dillon, Great Falls and the surrounding areas. There is also some local smoke near the active fires in the state and UNHEALTHY levels are worse are expected there. More smoke will mix down to the surface later this morning, and increased fire activity this afternoon will drive smoke into communities downwind of the local fires as well. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke

is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 10 AM July 22, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	Butte T8 Hamilton T8
MODERATE	Missoula T8 Helena T8 Great Falls Vis(1) Dillon Vis(4)

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

Forecast

The plume aloft will be very slowly moving off throughout the day and areas of Eastern and Northeastern Montana will see noticeable impacts at the surface under the plume as the day heats up and the mixing height reaches the smoke layer. Intense but temporary impacts are likely under the thickest parts of the smoke aloft. Southwest flow along the western border of the state will continue to feed smoke into western and southwestern Montana today and this afternoon. Conditions there will continue to degrade for a few hours this morning but should improve significantly by this afternoon as the dispersion will be pretty good with high mixing heights for a few hours. Later this afternoon and into the evening, more smoke is expected and smoke levels will rise again. Hazy sky conditions will impact all of the state except for the northwestern corner of the state. Local impacts from the active fires in the state will also be of concern today. Poor dispersion for most of the day and light winds will keep the smoke impacts limited to the immediate vicinity of the active fires and conditions in those areas could be very poor. Areas downwind of active fires could see significant impacts if fire levels increase dramatically. Residents near active fires need to remain aware of current conditions and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

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Montana DEQ Forest Fire Smoke Advisory

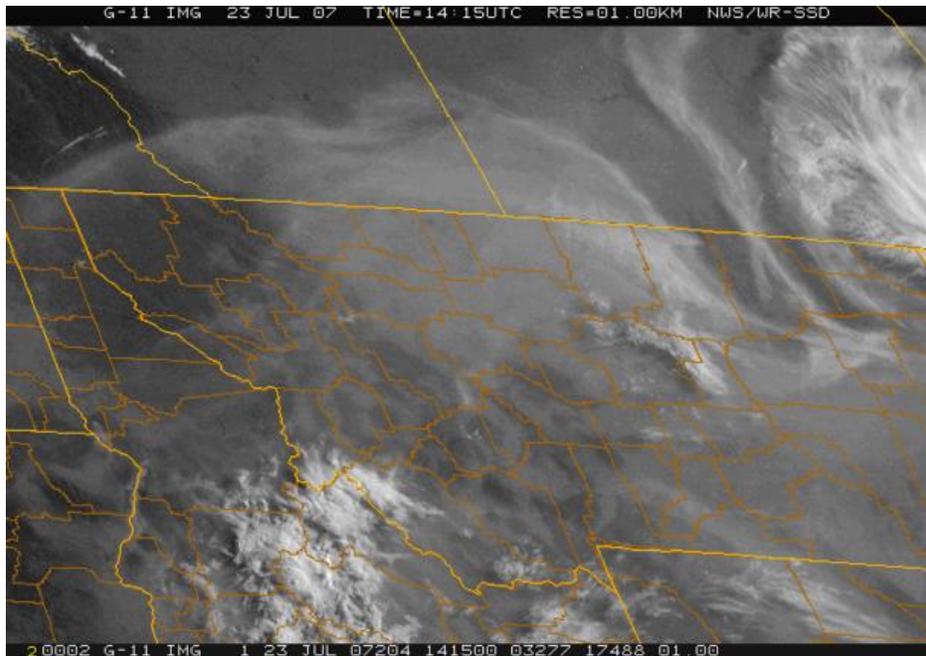
July 23 2007

10:00 AM Monday

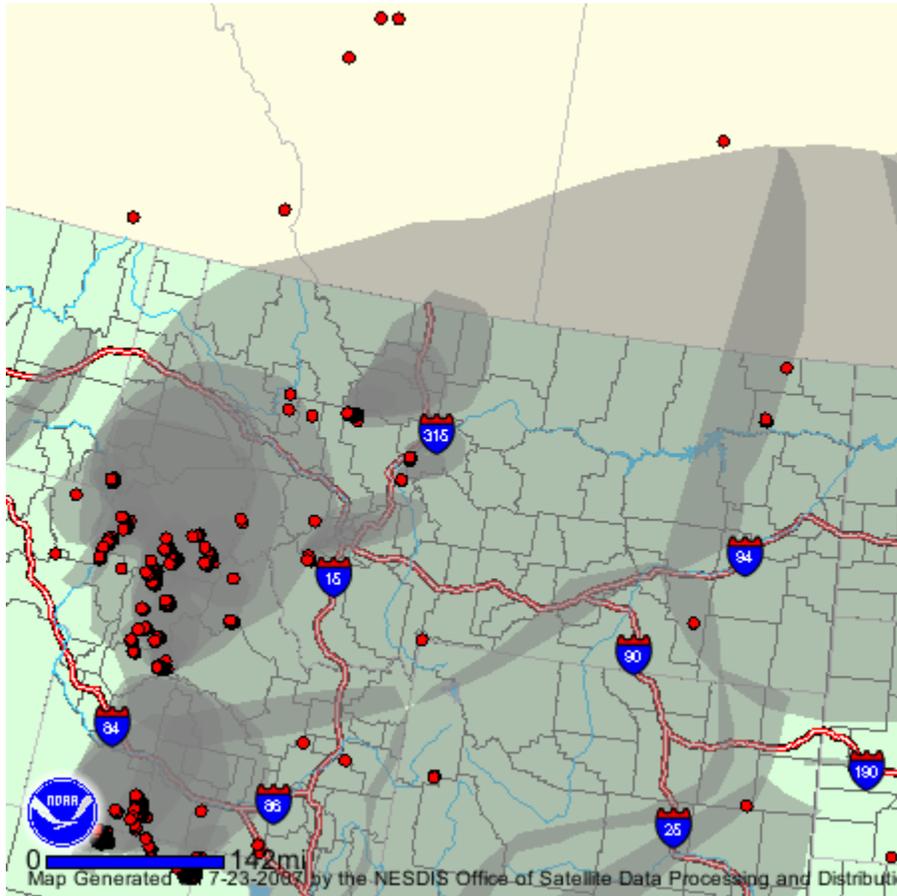
Current Situation

There is another large plume of smoke aloft easily visible on this morning's satellite photo. The smoke was produced yesterday afternoon and evening in Idaho and Montana where when well over 30,000 acres were burned. The plume is slowly moving up into Canada and North Dakota as it rotates over the top of a massive ridge of high pressure centered over the state. Residual smoke from the passage of the smoke aloft is lingering in the valleys of western and southwestern Montana. [UNHEALTHY](#) conditions are currently impacting Butte while [MODERATE](#) conditions are present in Kalispell, Missoula, Hamilton, Helen and Bozeman. Hamilton slipped into the [UNHEALTHY FOR SENSITIVE](#) range for several hours last evening. Smoke from the Ahorn fire west of Augusta has settled into the valleys of the upper part of the Sun River, Gibson Reservoir, and Benchmark areas this morning and conditions there are expected to be [UNHEALTHY](#) or worse. It also looks very smoky in the Gates of the Mountains area due to smoke from the Meriwether fire. More smoke will mix down to the surface later this morning, and increased fire activity this afternoon will drive smoke into communities downwind of the local fires as well. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

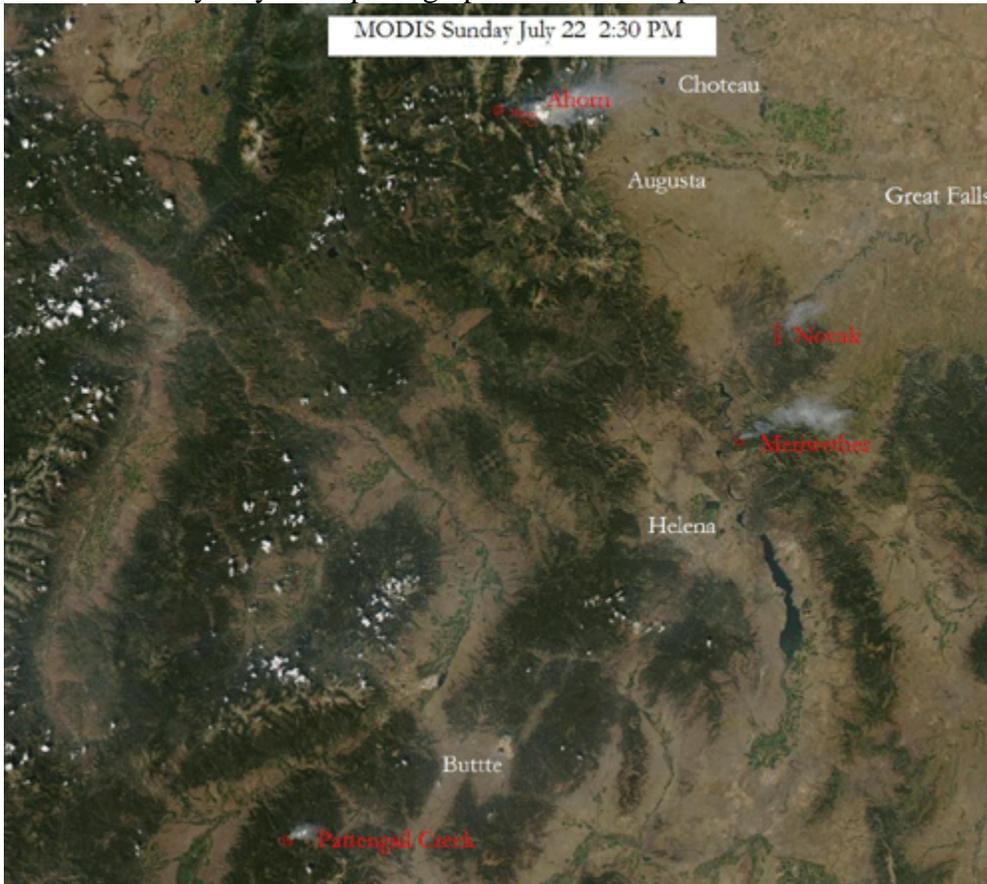
To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

Visible Satellite Photo July 23, 2007 8PM MDT

This photo from last night shows the dramatic plumes from the fires in Montana and Idaho that have left all of the smoke aloft this morning.



MODIS Sunday July 22nd photograph at about 2:30 p.m.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM July 23, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	Butte T24
MODERATE	Kalispell T8 Missoula T8 Hamilton T8 Helena T8 Bozeman Vis(1) West Yellowstone T24

- T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

The plume aloft will be very slowly moving off throughout the day and areas of eastern and northeastern Montana will see noticeable impacts at the surface under the plume as the day heats up and the mixing height reaches the smoke layer. Intense but temporary impacts are likely under the thickest parts of the smoke aloft. Clouds are starting to move into southwest Montana along with the smoke as more moisture become available for convective activity. This may help clear the Bitterroot and Missoula valleys somewhat later this afternoon. There will still be lots of smoke but we should get some particulate

scavenging in the cloud layer. It will be another hot day with very high mixing heights so most areas will see lower particulate levels during the hottest part of the day. Smoke will settle in again this evening in many areas of western and central Montana. The rest of the state will see very hazy sky for the rest of the day. Local impacts from the active fires in the state will be of concern today. The Front Range area and Butte will likely see a lot of smoke again today. Areas downwind of active fires could see significant impacts if fire levels increase dramatically. Residents near active fires need to remain aware of current conditions and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

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Montana DEQ Forest Fire Smoke Advisory

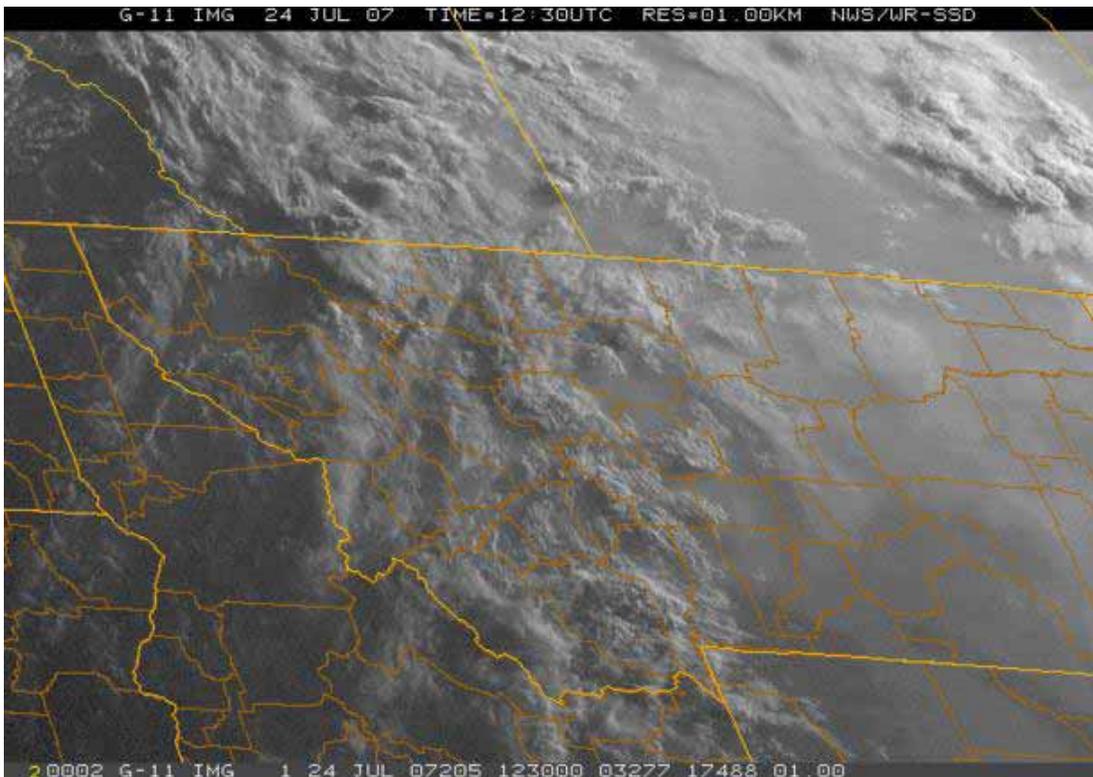
July 24 2007

2:00 PM Tuesday

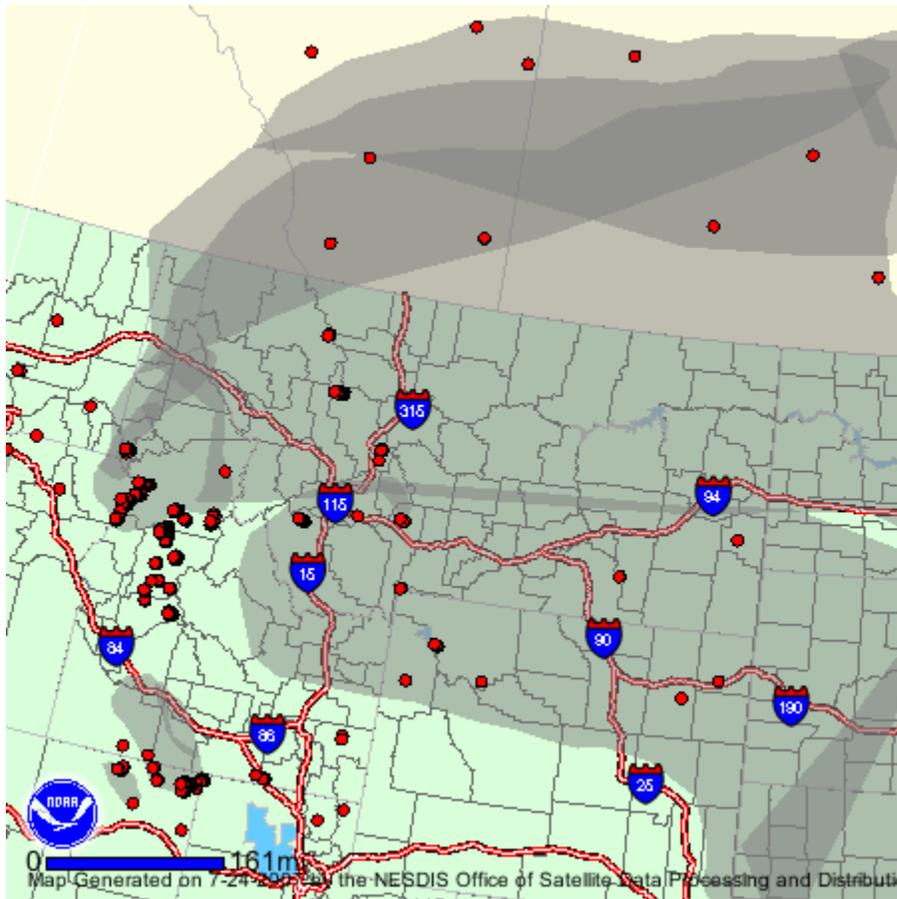
Current Situation

The sky over Montana is filled with smoke today with MODERATE conditions reported at all stations except the northwest corner. Although the visibility is limited and the sky is grey, UNHEALTHY conditions are only expected in local areas immediately adjacent to the active fires. I visited the Ahorn and Fools Creek fires this morning and the entire Front Range area was at MODERATE with visibility between 8 and 15 miles. A brief respite is on the way as a weak cold front is moving into the state with the potential to move the residual smoke aloft out. Winds with this system may cause local problems. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Updated 2 PM July 24, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Missoula T8 Hamilton T8 Helena T8 Bozeman Vis(3) Butte T8 West Yellowstone T24

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to evaluate possible health risks and make informed activity decisions.

Forecast

A weak cold front will be sweeping through the state today bringing some more clouds and a chance of wetting rains to some areas. The cooler air aloft will help disperse the smoke at the surface and we will get some cleaner air as well. Southwest winds aloft ahead of the front will keep overall transport of elevated plume to the northeast. Local winds will be very erratic and resident near active fire need to pay attention to conditions in their area and use the visibility guidelines:

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp>

to guide their activity decisions as the situation changes.

John Coefield
Meteorologist
Montana Department of Environmental Quality

Jcoefield@mt.gov

Montana DEQ Forest Fire Smoke Advisory

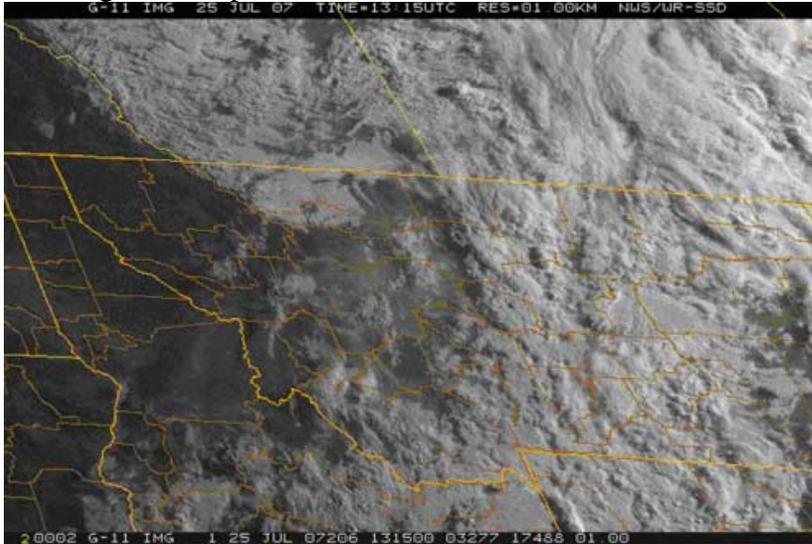
July 25 2007

10:00 AM Wednesday

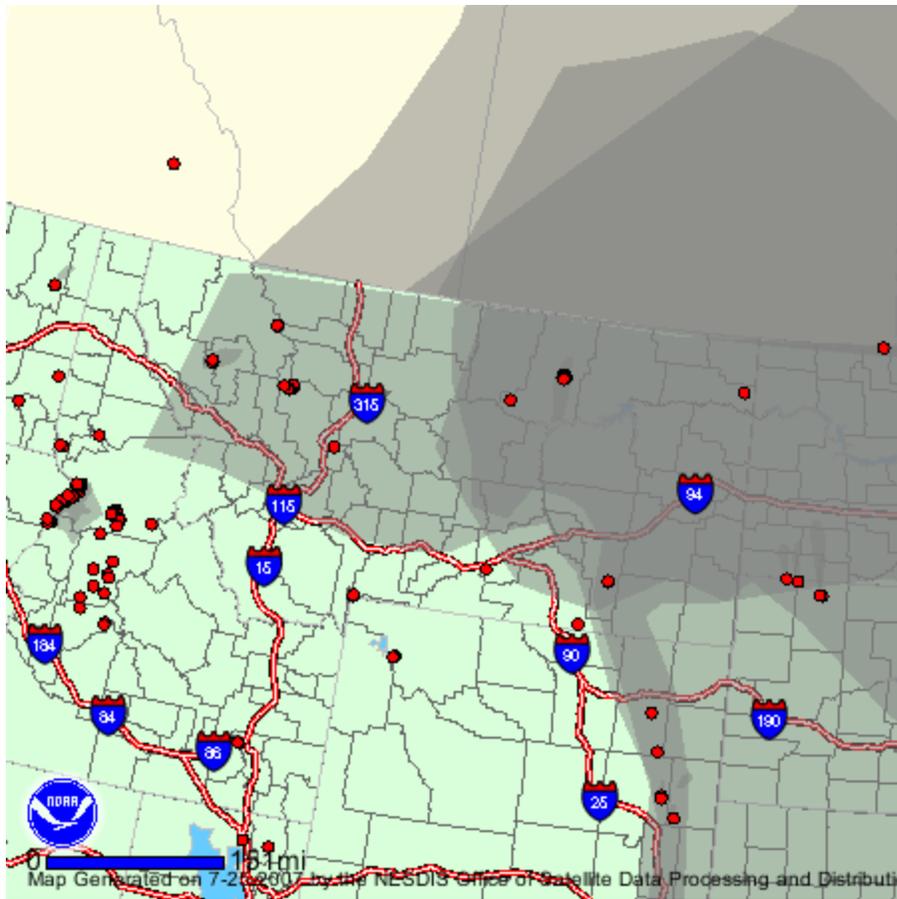
Current Situation

A frontal passage is bringing in breath of cleaner air to many parts of Montana this morning. [MODERATE](#) conditions are still present in the areas around Missoula, Hamilton, Butte, and Helena but the actual levels are substantially better than they were at this time yesterday. [UNHEALTHY](#) levels or worse are still expected locally near the active fires. Hazy sky will still be present in many areas today as the smoke from the fires in Montana yesterday moves out of the state. There is still plenty of smoke in Idaho and the fire activity levels in Montana are trending up so the respite will be short lived. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM July 25, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	

UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Missoula T24 Hamilton T24 Helena T24 Butte T24

T1(x)	One-hour TEOM or BAM value (number of values)
T8(x)	Eight-hour average TEOM or BAM value(number of values)
T24	24 hour average TEOM or BAM value
Vis(x)	Visibility value(number of hours)
Vis(am/pm)	Visibility value from twice/day reporting stations
(est)	estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

The residual smoke aloft under the cloud deck in eastern Montana and the smoke over the area from Missoula to Choteau south to Butte will all be moving off to the northeast today. Some impacts at the surface will occur later this morning as the plume mixes down for some temporary impacts. East winds at the surface near the Front Range will keep smoke in that area through the morning. Southwest winds will start pushing smoke back into western and southwestern Montana today. Local impacts are starting to be more of an issue as the number and acres of fire in Montana continues to rise daily. After a brief respite today we will be back to “Hot and Smoky” for a forecast tomorrow. Smoke will settle in this evening in many areas of western and central Montana. With the exception of the northwestern corner of the state hazy sky will be noticeable for the rest of the day. Local impacts from the active fires in the state will be a problem. Areas downwind of active fires could see significant impacts if fire levels increase dramatically. Residents near active fires need to remain aware of current conditions and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#), Meteorologist
Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

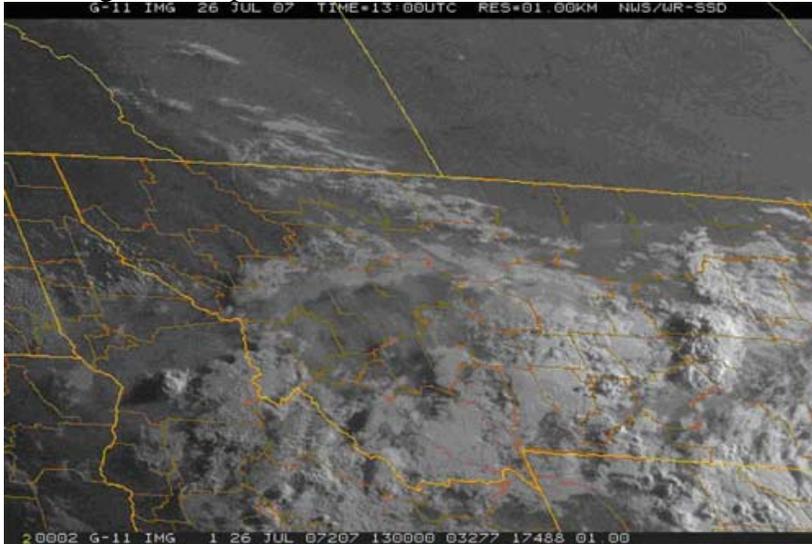
July 26 2007

10:00 AM Thursday

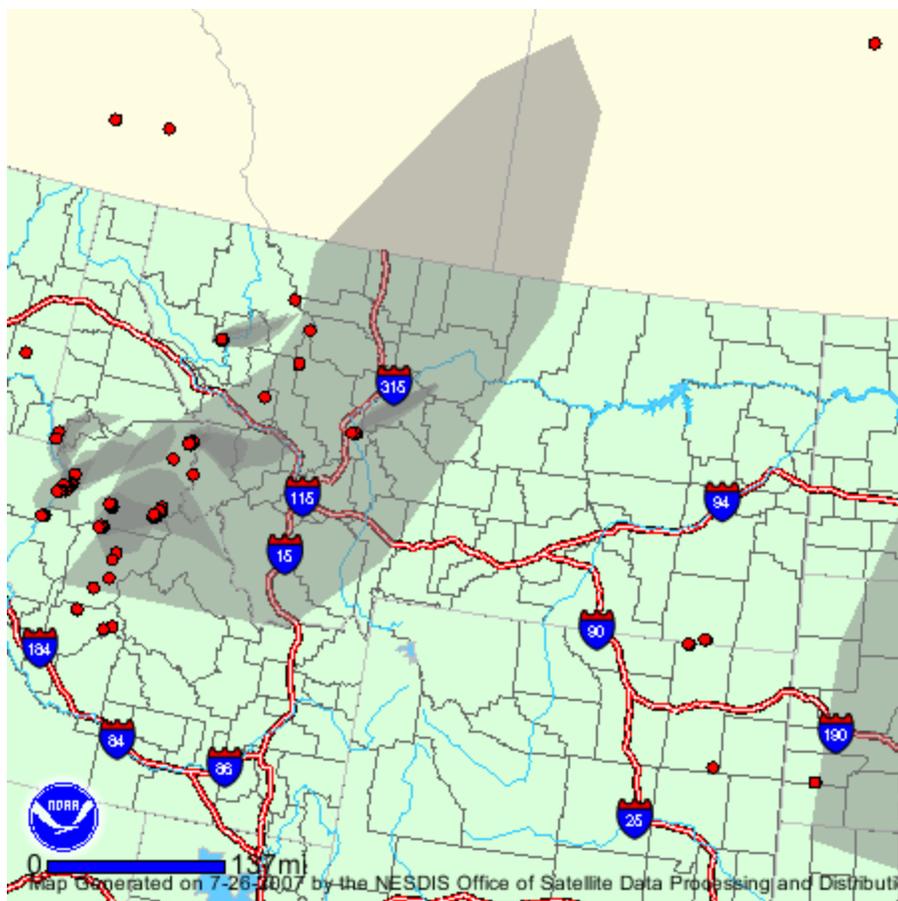
Current Situation

There is a broad band of smoke aloft over western and southwestern Montana this morning. The smoke aloft has not mixed down to the surface in significant quantities yet this morning but surface impacts in the Missoula, Hamilton, Butte, and Helena areas are expected to rise for several hours later this morning as the smoke from the fires in Idaho crosses overhead. All of this area is currently at [MODERATE](#) this morning. The Helena area will also be subject to severe smoke impacts from local smoke produced by the Meriwether fire last night. Thick bands of smoke are drifting around the valley less than 1000 feet overhead and when this smoke comes down conditions could take a strong turn for the worse. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

A thick layer of elevated smoke is visible from the MDT web cam looking west from the top of MacDonald pass this morning.



The Meriwether fire tops the ridge above the American Bar subdivision at 11 PM Wednesday night as it burns out of Fields Gulch. (Picture by Candace Coefield)





Photo of the pyrocumulus cloud from the Meriwether fire taken from the North Hills of Helena Wednesday evening, July 25th. (Picture by Cindy Swank)

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM July 26, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	Missoula T24 Hamilton T24 Helena T24 Butte T24

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)

T24	24 hour average TEOM or BAM value
Vis(x)	Visibility value(number of hours)
Vis(am/pm) (est)	Visibility value from twice/day reporting stations estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

Smoke from the Idaho fires will mix down later this morning in the Missoula, Hamilton, Butte and Helena area producing several hours of elevated smoke concentrations. Conditions are expected to be very bad in parts of Helena and Townsend valleys later this morning. The Meriwether fire in the Gates of the Mountains area put up a very large convective column last evening and into early morning. Most of the smoke was released high enough to head out over the plains where it can not be seen under the cloud deck. Thick bands of residual smoke are drifting directly overhead at this time and surface concentrations under the thickest parts of the plume will likely be very high for a few hours today. Surface winds from the east and northeast are expected to persist through tomorrow in the Helena area and little relief is expected until southwest winds start up tomorrow. Residents of the Helena and Townsend areas need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes. Strong local impacts are also a possibility in the Polson area and along the Front Range depending on the activity levels of the fires in those areas.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

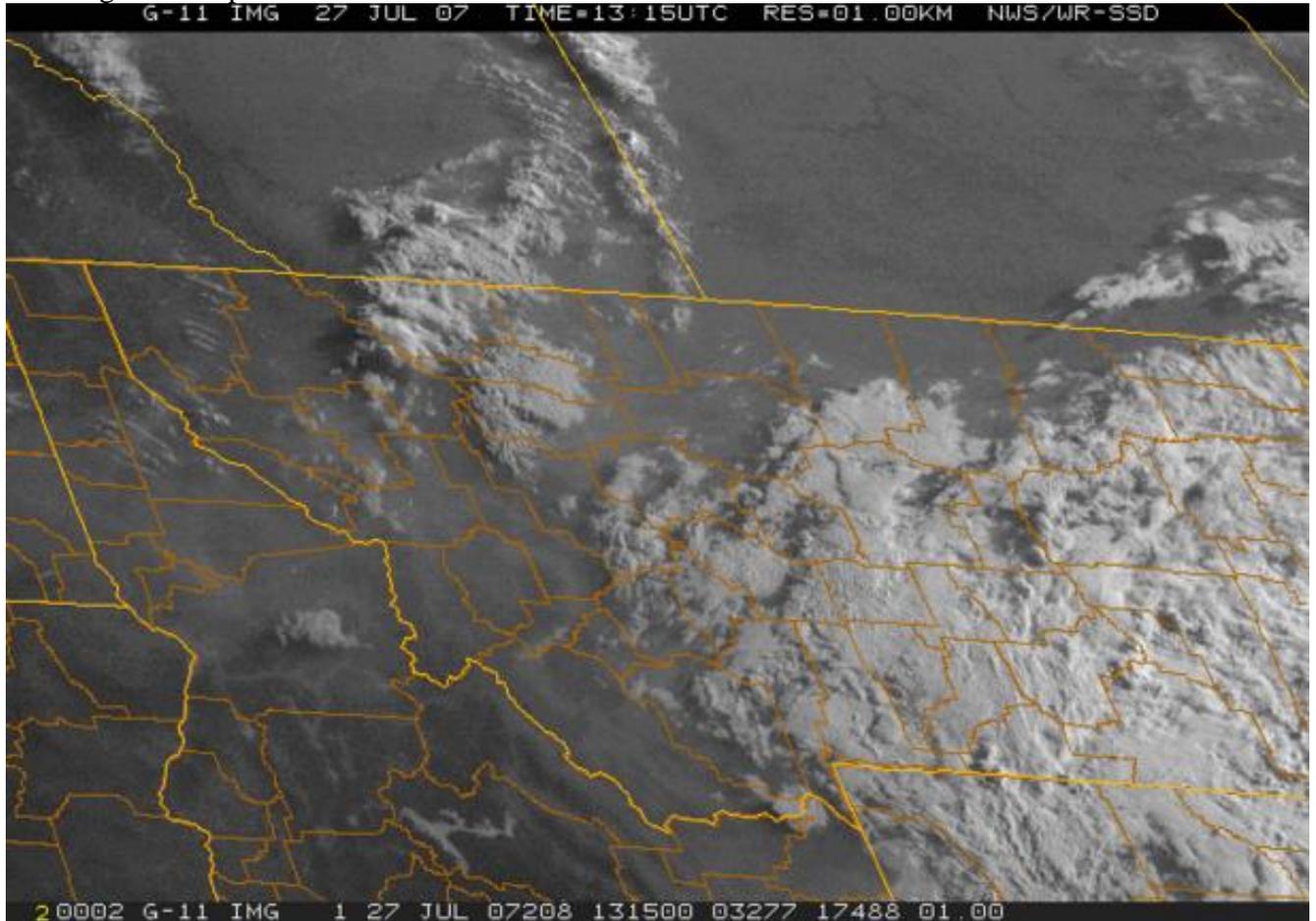
July 27 2007

10:00 AM Friday

Current Situation

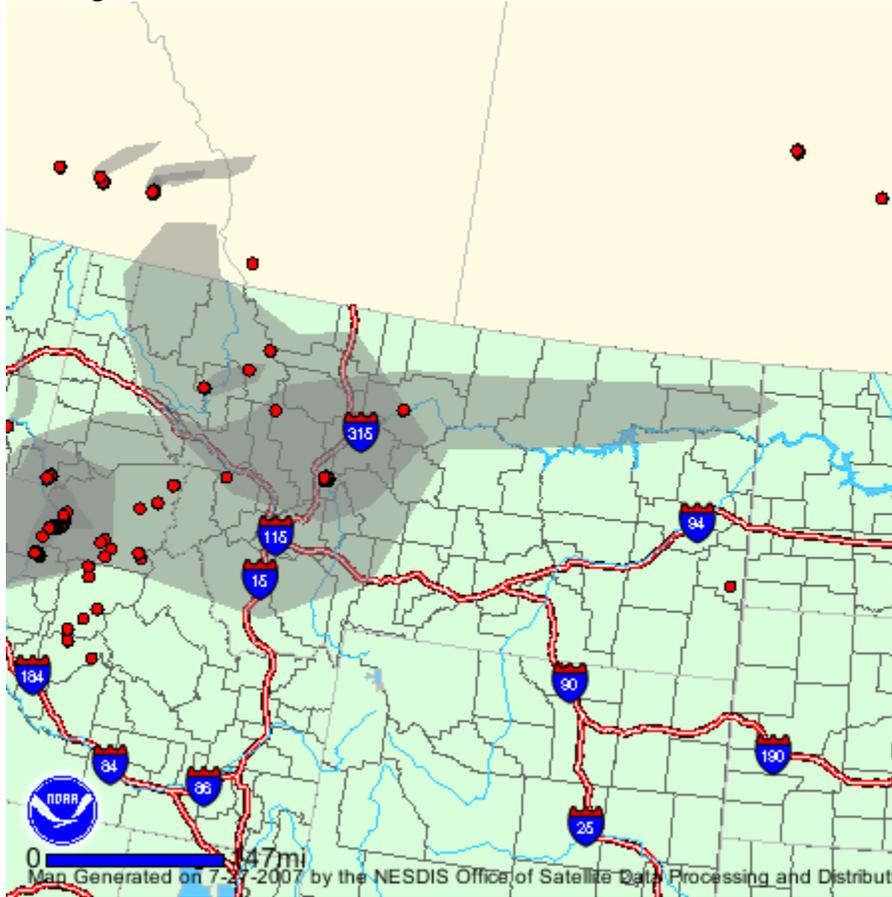
Smoke aloft is clearly visible over western Montana on this morning's satellite photo. [MODERATE](#) smoke conditions due to persistent haze levels are currently impacting areas around Whitefish, Kalispell, Polson, Ronan, Missoula, Hamilton, Helena, and Butte. Current hourly readings are not too high but 24 hour average values are indicating there is a concern for very sensitive individuals. Smoke levels are expected to rise later this morning into the afternoon as the smoke aloft mixes down. See the forecast below for details. Direct smoke impacts from local fires will also be of concern. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke

is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM July 27, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	Whitefish T24 Kalispell T24 Polson T24 Ronan T24 Missoula T24 Hamilton T24 Helena T24 Butte T24

- T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

The smoke aloft will mix down and produce some large scale, intermittent impacts at the surface later today. Overall transport is from the west right now but southwest winds will be on tap for tomorrow. This will help clear the residual smoke from the Meriwether fire out of the Helena Valley but it will also bring a lot of smoke from the fires in Idaho and Oregon into the state. Local smoke impacts will continue to be of concern for the areas in the state near active fires. Fire Activity levels may ramp up today and tomorrow producing UNHEALTHY smoke impacts in areas near large fires. Residents in those areas need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

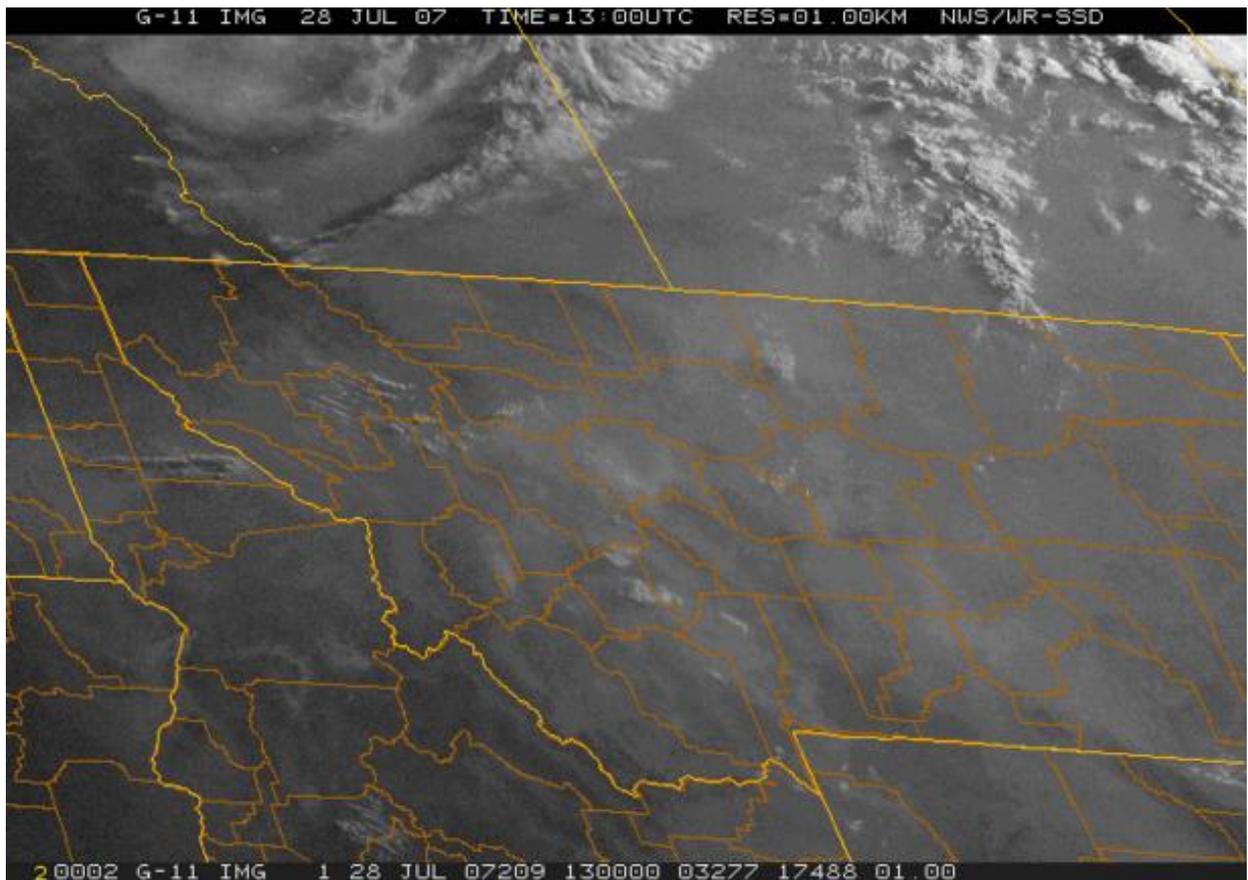
July 28 2007

10:00 AM Saturday

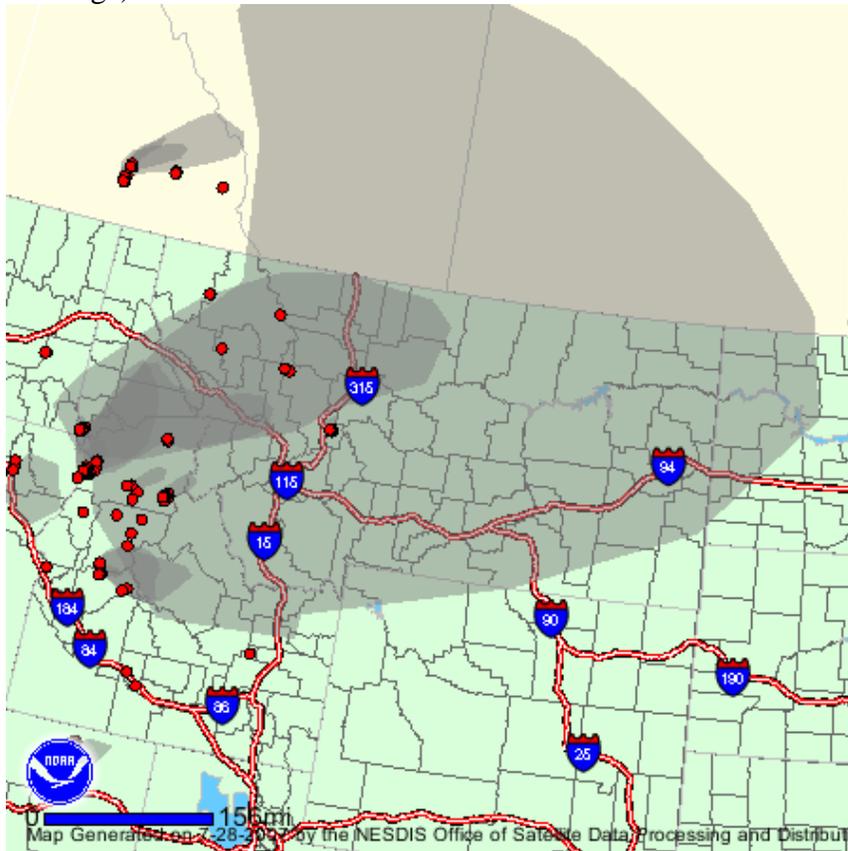
Current Situation

Smoke aloft will continue to produce hazy skies for a broad portion of Montana today. There are currently no areas with poor hourly conditions but persistent haze levels have caused [MODERATE](#) 24 hour values across the entire western half of the state except the northwestern corner. The areas around Whitefish, Kalispell, Polson, Ronan, Missoula, Hamilton, Butte, Choteau, and Helena are all posted at [MODERATE](#) at this time. Conditions immediately adjacent to the active fires are though to be [UNHEALTHY](#) or worse. Most of the smoke has come from Idaho and Oregon and westerly flow today will continue to push smoke into the state from those fires today. Local impacts near the active fires in Montana will also be of concern today as hotter and dryer conditions are on tap along with increased wind today. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM July 28, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Whitefish T24 Kalispell T24 Polson (est) Ronan T24 Missoula T24 Hamilton T24 Helena T24 Butte T24 Chouteau T24

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value (number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value (number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

The residual smoke aloft from yesterday’s fire activity will continue to slowly make its way east today. Some of this smoke will mix down to the surface later this morning and will produce noticeable impacts for a few hours under the thickest parts of the plume. Westerly flow aloft will continue to push smoke from Idaho and Oregon into western and southwestern Montana today. Smoke levels in the currently affected communities will rise for few hours later this morning as the mixing height reaches the level of the smoke plume overhead. With a red flag warning for the northern Front Range and hot, dry, and windy conditions forecast this afternoon, the fires in the state could produce significant amounts of smoke locally. The smoke impacts will be localized to the east side of the fires today with a steady westerly transport wind this afternoon. Residents near active fires need to remain aware of current conditions and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#), Meteorologist
Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

July 29 2007

10:00 AM Sunday

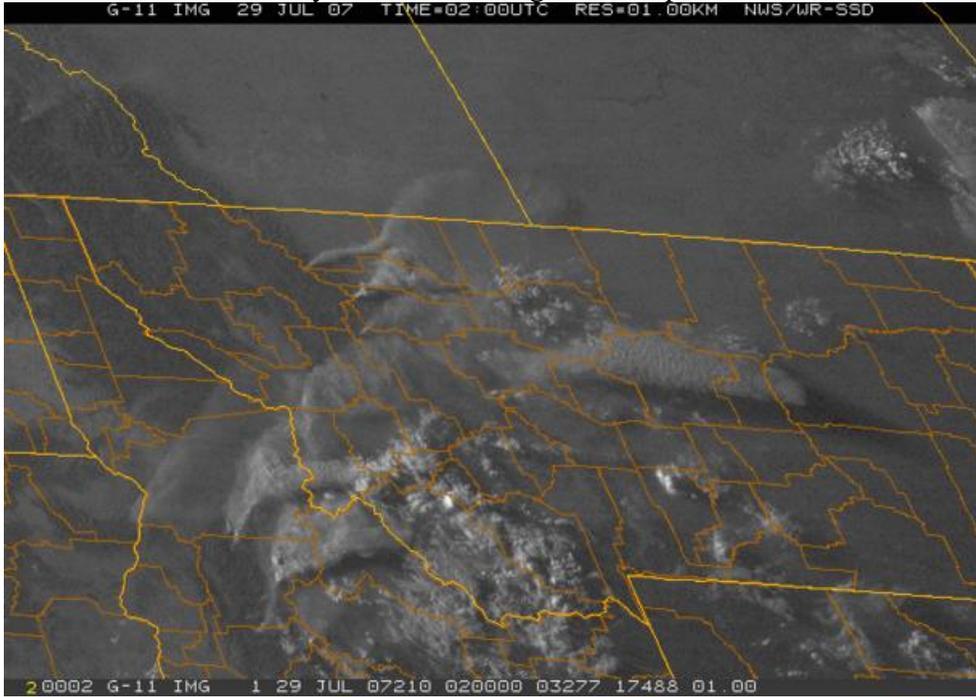
Current Situation

Smoke aloft is blanketing a huge part of Montana east of the continental divide this morning. The smoke was put up yesterday evening from fires in Idaho and Montana and has been stalled over the state under a persistent high pressure ridge. Smoke impacts at the surface are not too bad right now except in the Front Range area from Cut Bank to Great Falls. Conditions there are at the top of the [MODERATE](#) scale in most areas and Great Falls has lapsed into [UNHEALTHY FOR SENSITIVE](#) at this time. Conditions in the Front Range area will likely get worse later this morning as more smoke mixes down to the surface before improving later this afternoon. Hourly surface concentrations at the other reporting stations are not bad right now but the continuing haze has put the areas around Kalispell, Polson, Ronan, Missoula, Hamilton, Butte, and Helena into the [MODERATE](#) category. There is also a developing problem in the Clark Fork valley near Clinton where smoke from the Mile Marker 124 fire temporarily closed Interstate 90 last night. Smoke conditions in that area are expected to be [UNHEALTHY](#) or worse. Smoke impacts under the plume aloft will increase later this morning and local impacts from the fires active in Montana will be a problem today in many areas. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This satellite photo taken at 8 PM last night clearly shows the origin of the smoke spread across the state this morning. The plumes from the Skyland, Fools Creek, Ahorn, and Meriwether fires are very noticeable along with the plumes from the fires in Idaho.

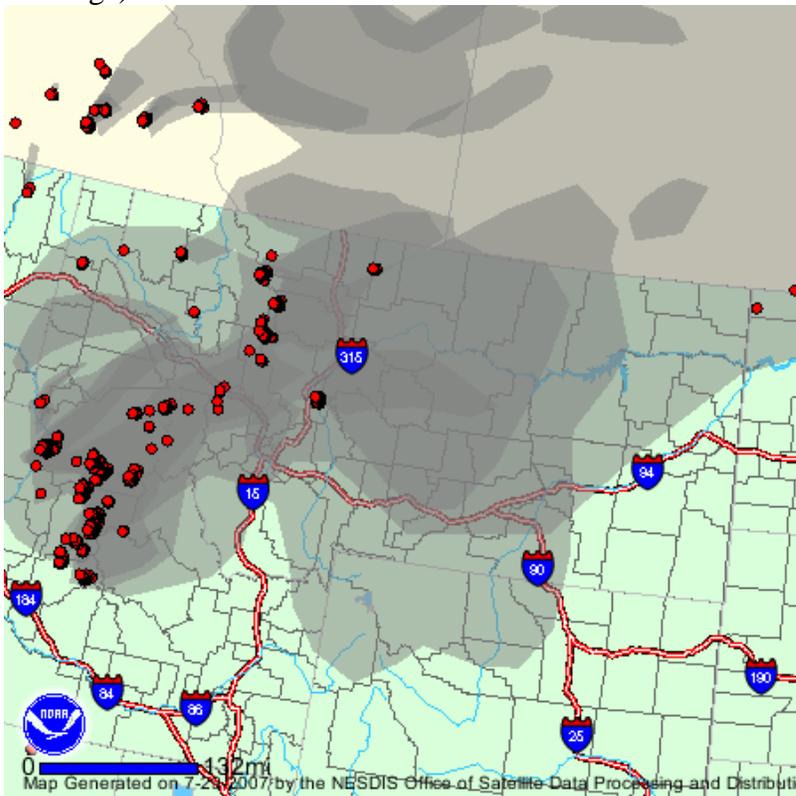


The two photos below are taken from the southwest corner of the Meriwether fire north of Helena last evening about 6 PM. (Photos taken by Candace Coefield)





This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM July 29, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Clinton (est) Bonner (est)
UNHEALTHY FOR SENSITIVE GROUPS	Great Falls Vis(12)
MODERATE	Whitefish T24 Kalispell T24 Polson (est) Ronan T24 Missoula T24 Hamilton T24 Helena T24 Butte T24 Cut Bank Vis(2) Chouteau T24

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

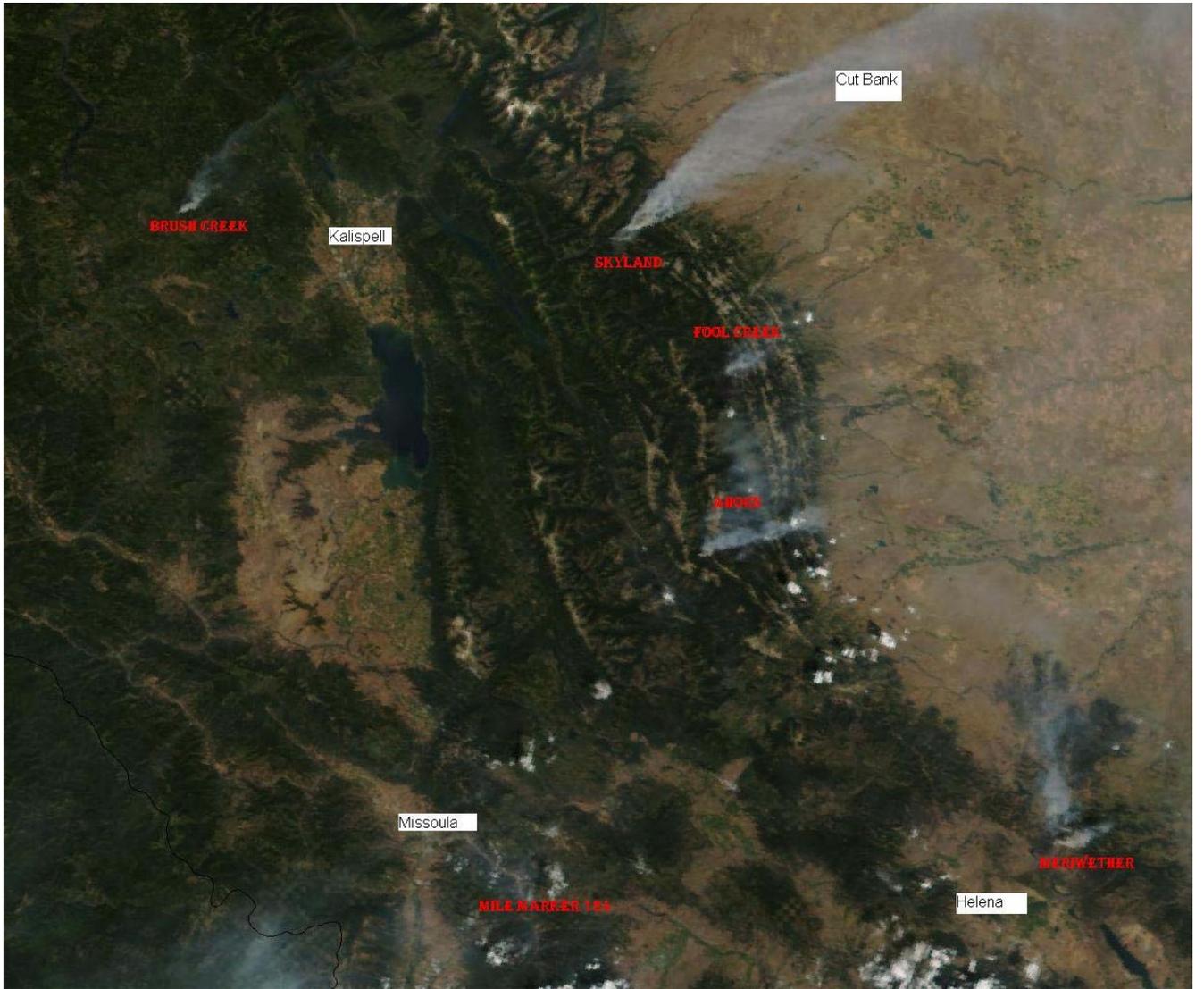
The smoke aloft will mix down to the surface later this morning producing strong, transient impacts in the areas under the thickest portions of the plumes overhead. Areas that are already seeing strong impacts will see increased smoke levels for a short time but conditions should improve markedly in areas away from the local fire activity by noon. Smoke from the Mile Marker 124 fire east of Missoula in the Clinton area is making its way down the Clark Fork valley and will likely impact the east side of Missoula before surface heating turns the flow up canyon. The residual smoke aloft from yesterday's fire activity will continue to slowly make its way east today. Some of this smoke will mix down to the surface later this morning and will produce noticeable impacts for a few hours under the thickest parts of the plume. Southwesterly flow aloft will continue to push smoke from Idaho and Oregon into western and southwestern Montana today. Smoke levels in the currently affected communities will rise for few hours later this morning as the mixing height reaches the level of the smoke plume overhead. Most areas should see marked improvement by noon. The fire weather forecast for the day is favorable for increased fire activity levels on all of the local fires and more smoke is likely this afternoon and evening. The smoke impacts will generally be on the east and northeast sides of the fires as transport winds are from the west to the southwest. Residents near active fires need to remain aware of current conditions and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#), Meteorologist
Montana Department of Environmental Quality

Modis Satellite photo from July 29 at 12:56 PM



Smaller area of the above photo with labels displayed below.



Montana DEQ Forest Fire Smoke Advisory

July 30 2007

10:00 AM Monday

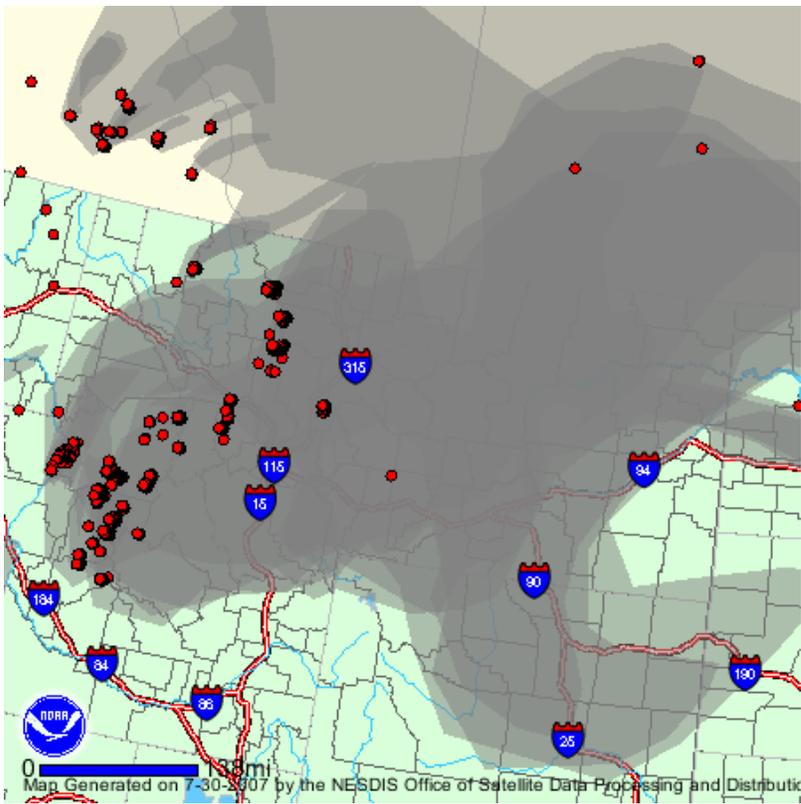
Current Situation

Cut Bank has been squarely in the path of the plume from the Skyland fire south of Glacier Park since late last night. The plume is easily visible on this morning's satellite photo. The smoke level in Cut Bank was up to [VERY UNHEALTHY](#) for about an hour early this morning. At 9 am the plume had drifted away from Cut Bank and conditions had improved dramatically. Smoke conditions all along the Front Range area are a problem with [UNHEALTHY FOR SENSITIVE](#) levels measured in Choteau and Augusta. Areas being directly impacted by smoke plumes in that area are expected to be [UNHEALTHY](#) or worse. Residual smoke aloft is blanketing broad portions of the state today producing [MODERATE](#) levels in many areas along with generally hazy skies. Whitefish, Kalispell, and Butte are at [UNHEALTHY FOR SENSITIVE](#) this morning. Smoke conditions in the Rock Creek and Clark Fork Valleys south of Missoula are expected to be [UNHEALTHY](#) or worse from the fires southeast of Missoula. A smoke plume can also be seen drifting east of the Brush Creek Fire west of Whitefish which appears to be impacting the Olney and Stryker areas. Conditions there are also expected to be [UNHEALTHY](#) or worse. [MODERATE](#) smoke levels are being reported at the areas around Polson, Ronan, Missoula, Hamilton, and Helena. Hamilton will likely become [UNHEALTHY FOR SENSITIVE](#) later this morning. Smoke levels are expected to rise later through the morning as the smoke aloft mixes down. See the forecast below for details. Direct smoke impacts from local fires may be severe today. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM July 30, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS		
VERY UNHEALTHY	Cut Bank vis(1)	
UNHEALTHY		
UNHEALTHY FOR SENSITIVE GROUPS	Whitefish T1 Kalispell T1 Choteau T8 Augusta T8 Butte T24	
MODERATE	Whitefish T24 Kalispell T24 Polson T24 Ronan T24 Missoula T24 Hamilton T24 Helena T24	T1(x) One-hour TEOM or BAM value (number of values) T8(x) Eight-hour average TEOM or BAM value(number of values) T24 24 hour average TEOM or BAM value Vis(x) Visibility value(number of hours) Vis(am/pm) Visibility value from twice/day reporting stations (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

Smoke continues to pour into the state from Idaho and Oregon and this elevated background pollution combined with smoke from the increasing number of fires in the state may produce very high levels of smoke at the surface in many areas across the state today. The smoke aloft will mix down through the morning causing widespread intermittent impacts at the surface this morning, especially under the thickest parts of the plume aloft. Smoke level will improve in most areas this afternoon as the dispersion improves. Southwest transport winds will drive smoke from the active fires to the northeast later this morning. This will clear some areas but bring smoke into other communities that have so far escaped direct plume impacts. There is a Red Flag warning out for part of the state today and hot, dry, windy conditions will increase fire activity levels and smoke production this afternoon producing [UNHEALTHY](#) smoke impacts in areas near large fires. Residents in those areas need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

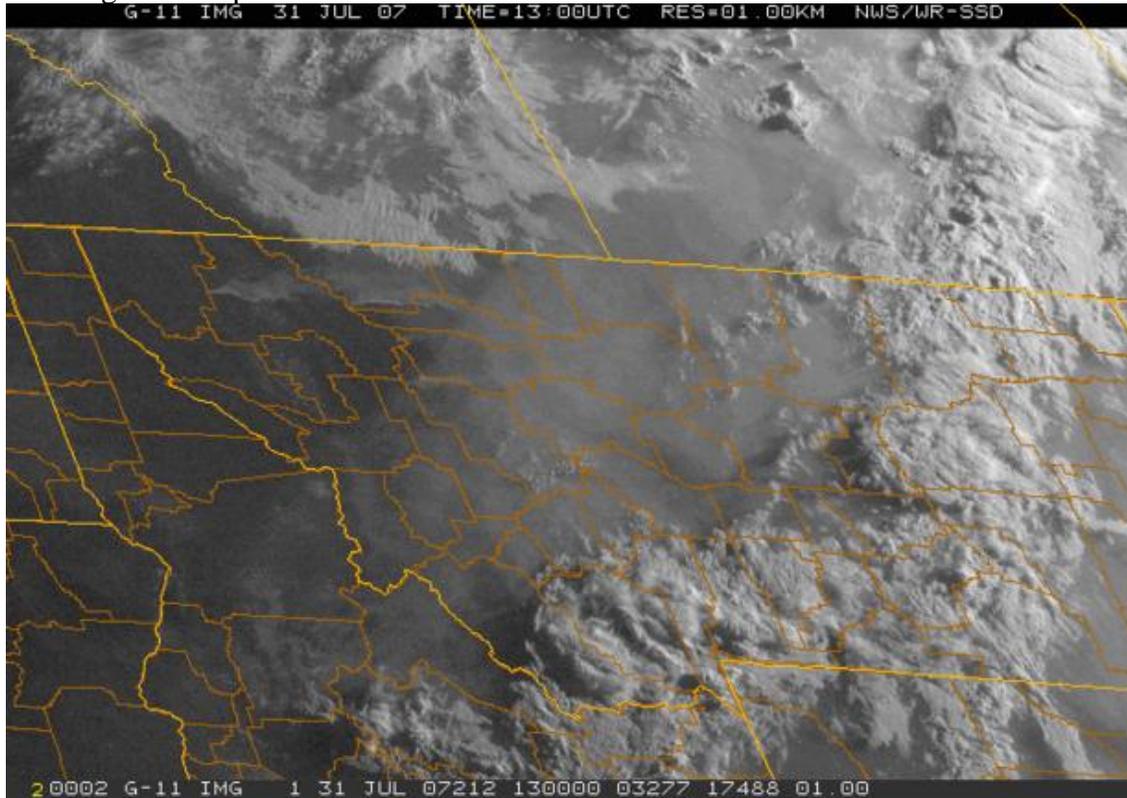
July 31 2007

10:00 AM Tuesday

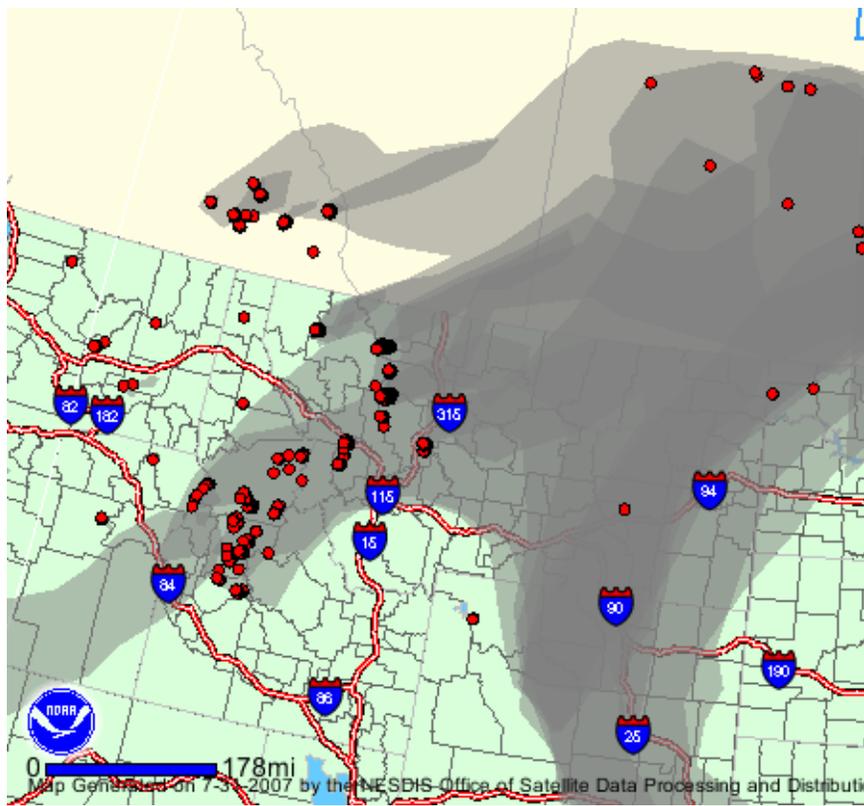
Current Situation

This morning's satellite photo looks very similar to yesterday's, with a broad swath of smoke drifting over Montana east of the continental divide and visible plumes stretching out to the east from the Brush Creek, Skyland, and Ahorn fires. Conditions in the areas immediately downwind of those fires are expected to be [UNHEALTHY](#) or worse. Smoke conditions in the reporting stations are not too bad this morning. Hamilton and Butte have been receiving enough persistent smoke to settle into the bottom of the [UNHEALTHY FOR SENSITIVE](#) range but only [MODERATE](#) conditions are impacting the areas around Whitefish, Kalispell, Missoula, Helena, Cut Bank, Choteau, Augusta, and Great Falls. Smoke impacts under the plume aloft will increase sharply for a few hours later this morning. See the forecast below for details. Direct smoke impacts from local fires may be severe today. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)

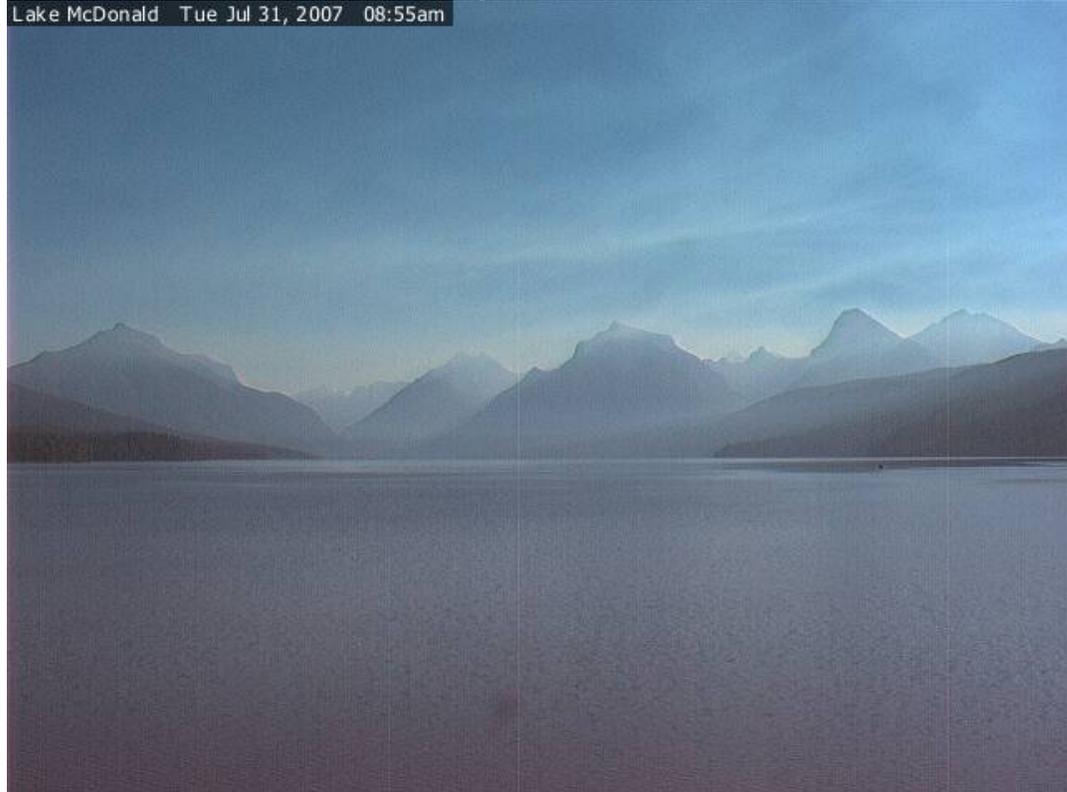


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

The picture below is from a Glacier National Park webcam looking over Lake McDonald. Tendrils of smoke aloft from the Brush Creed Fire west of Whitefish will be mixing down to the surface later this morning.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM July 31, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Hamilton T24 Butte T24
<u>MODERATE</u>	Whitefish T24 Kalispell T24 Missoula T24 Helena T24 Cut Bank Vis(2) Choteau T24 Augusta T24 Great Falls Vis(1)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

There is a visible back edge to the plume of smoke aloft in this morning's satellite photo. A cool front is working its way into the state from Canada and this will provide some blue sky to areas that have been seeing persistent haze for a while today. Smoke production levels will be very high again today and the plumes should start heading southeast by this afternoon. This could bring a lot of smoke into the northern Flathead Valley and impacts in the Kalispell area may be severe later this afternoon. The Front Range area will continue to see a lot of smoke throughout the day. Late morning smoke impacts at the surface will be noticeable again today in the areas under the plume aloft. Smoke impacts in southwest Montana will also likely rise with the shift in transport winds. North winds over the Meriwether fire northeast of Helena could also send a lot of smoke into the Helena Valley by tomorrow. Continued hot, dry, and windy weather will increase fire activity levels and smoke production this afternoon producing [UNHEALTHY](#) smoke impacts in areas near large fires. Residents in those areas need to

pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

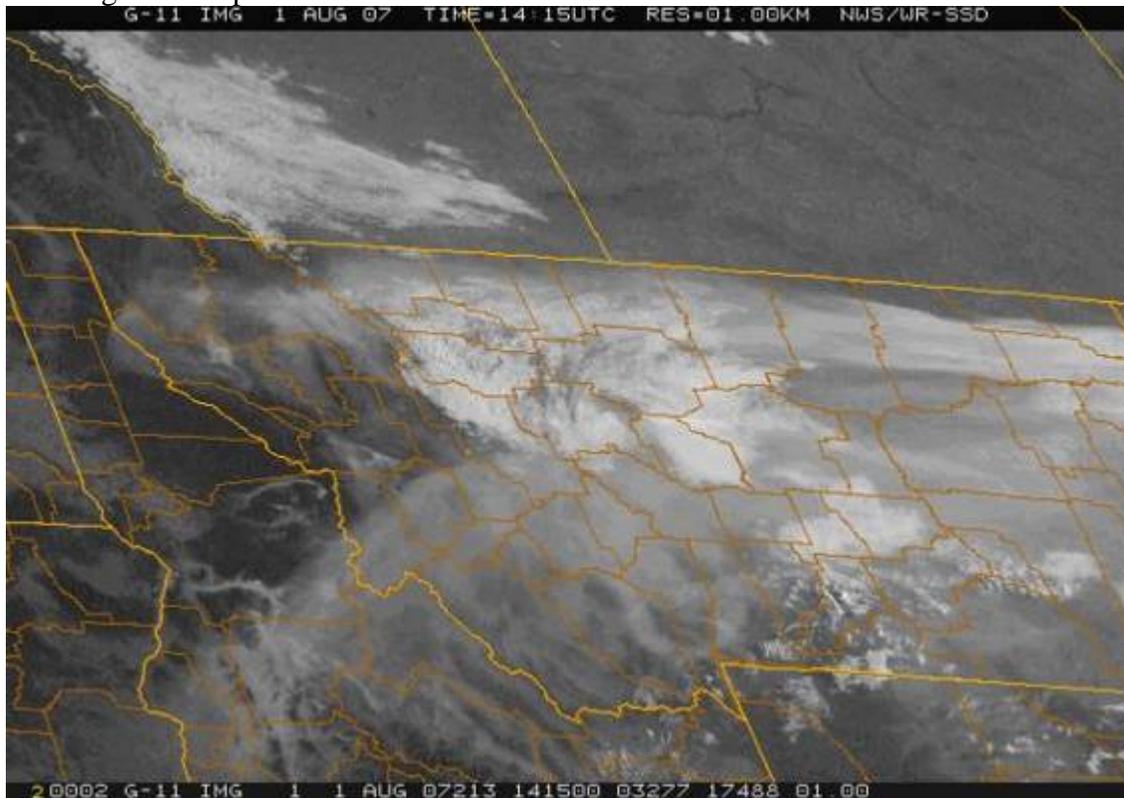
August 01 2007

10:00 AM Wednesday

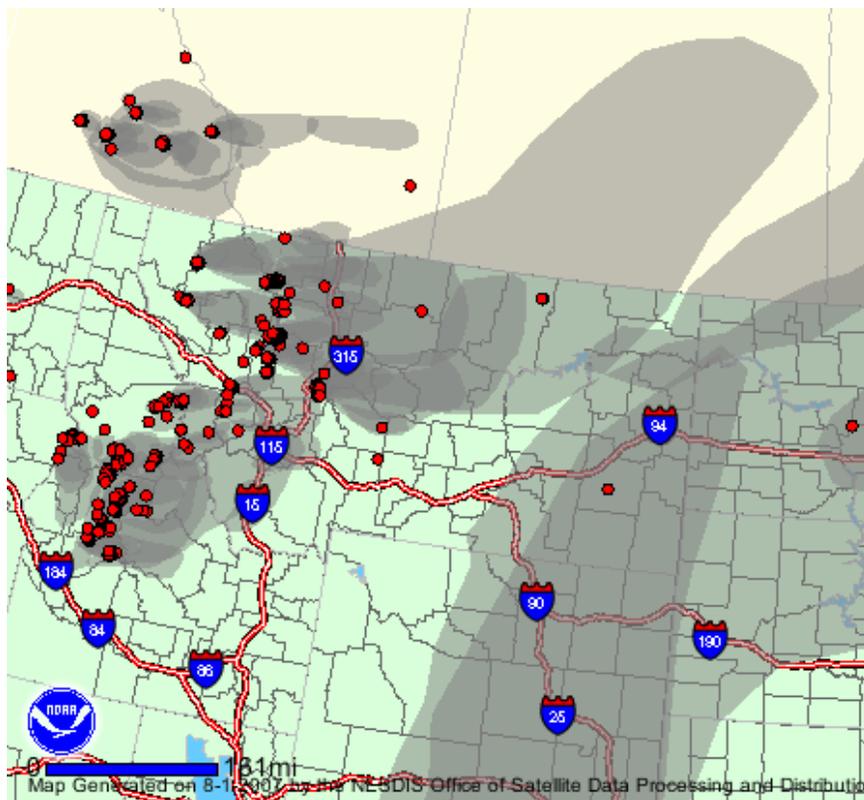
Current Situation

The smoke plume aloft stretches across the entire state this morning. Last night the smoke at the surface was at [VERY UNHEALTHY](#) levels near the Front Range in Augusta and Choteau and at [UNHEALTHY](#) in Great Falls for several hours. Conditions in those areas are much improved this morning with the smoke staying above the surface inversion for now. Smoke has filled the Clark Fork Valley from Rock Creek into the east edge of Missoula (see the Missoula web cam picture below). The conditions there are expected to be [UNHEALTHY](#) or worse. There also looks to be a lot of smoke trapped in the northern Flathead Valley. Current smoke levels in the Kalispell and Whitefish areas are at [UNHEALTHY FOR SENSITIVE](#) and will be worse later today, see the forecast below for details. [MODERATE](#) levels of smoke are present at all of the western Montana reporting stations with the exception of Libby. Smoke levels at the surface across the state will ramp up this morning as the mixing height reaches the layer of smoke aloft. Direct smoke impacts from local fires may be severe today. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)

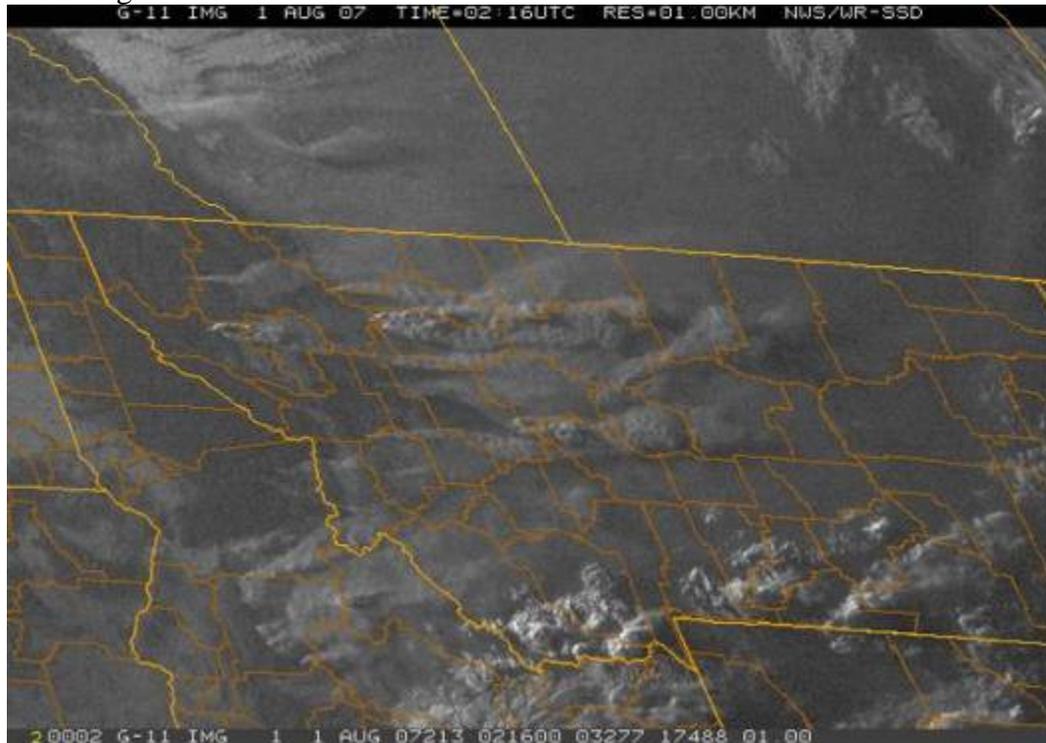


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo taken last night at 8:16 PM clearly shows the many plumes of smoke stretching out from the active fires in Idaho and Montana.



This web cam photo below from the Missoula County Health department at 9:21 AM this morning shows the front edge of the smoke from the Mile Marker 124 fire draining into the Missoula Valley out of Hellgate canyon.



Smoke billows up from the Meriwether fire above the Gates of the Mountains last night about 8 PM. (Photo by Candace Coefield)



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 01, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Butte T24
UNHEALTHY FOR SENSITIVE GROUPS	Whitefish T24 Kalispell T24 Missoula vis (1)
MODERATE	Hamilton T24 Helena T24 Cut Bank Vis(2) Choteau T24 Augusta T24 Great Falls Vis(1) Dillon Vis (3) Bozeman Vis(2) Livingston Vis(5)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

There is a steady surface flow from the north today east of the continental divide with westerly winds aloft. This will send the top of any big smoke plumes this afternoon and evening towards the east and then spread the smoke mixing down to the surface towards the south. Smoke aloft will continue to cover the entire state through tomorrow except for the extreme northwest corner. West of the divide, east winds near the surface will keep a lot of smoke bottled up in the mountains producing very elevated smoke levels in many areas. Surface smoke levels east of the divide will spike up sharply for several hours this morning as the smoke mixes down. Smoke at [UNHEALTHY FOR SENSITIVE](#) levels will be occurring in many communities until about 1 or 2 this afternoon. Smoke levels under the thickest parts of the plume aloft could reach [UNHEALTHY](#). Direct plume impacts will be problem today for many areas. Residents need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#), Meteorologist
Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

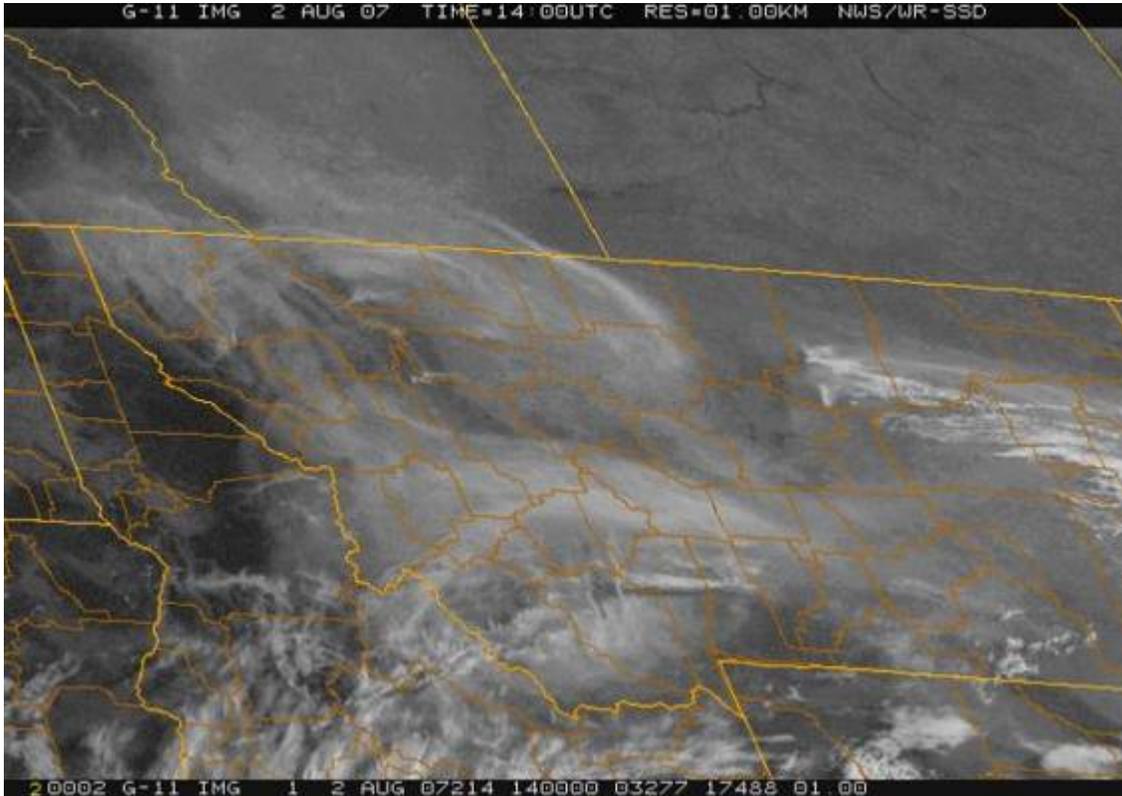
August 02 2007

10:00 AM Thursday

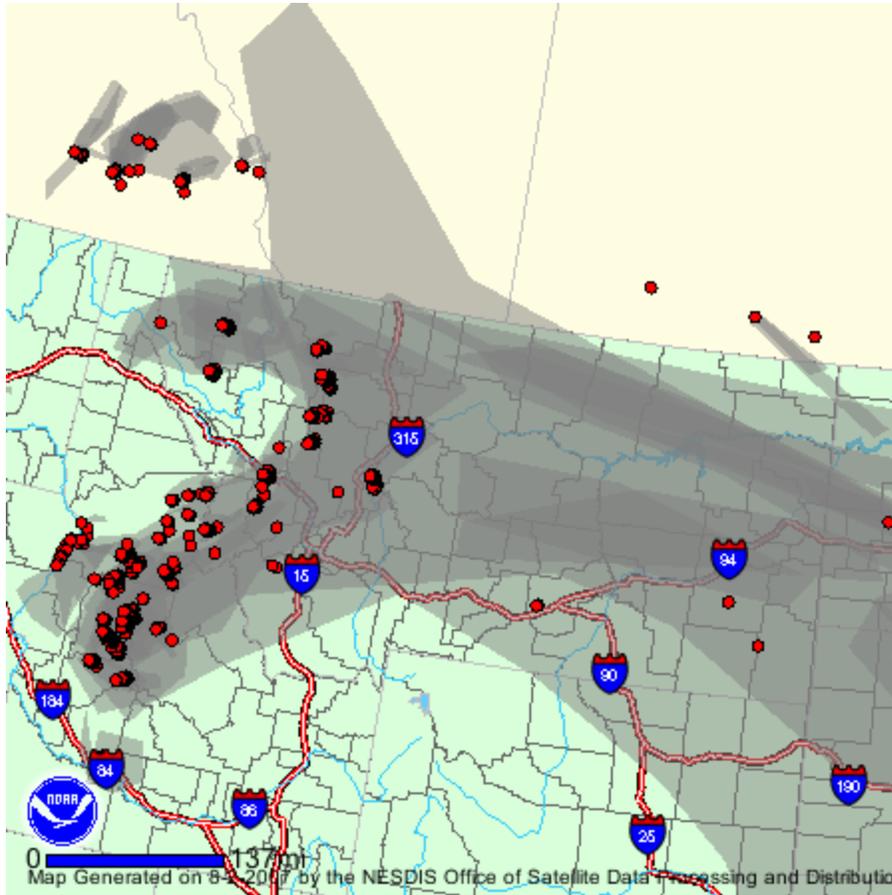
Current Situation

Very high levels of smoke are trapped in the valleys of western Montana this morning. [UNHEALTHY](#) levels are currently being recorded in Whitefish, Kalispell, Missoula and Butte. Smoke is also impacting eastern Montana intermittently. Sidney recorded about 3 hours of heavy smoke impacts early this morning that put them in [UNHEALTHY](#) temporarily. Polson, Ronan and Helena are currently at [UNHEALTHY FOR SENSITIVE](#) and although Libby and Hamilton are still hanging on to [MODERATE](#) ratings early, they will likely end up there as well. Smoke levels will rise during the morning as the day heats up in most areas before thinning out somewhat this afternoon. Direct smoke impacts in the areas near the active fires, especially in the Clark Fork valley near the Mile Marker 124 fire are expected to be [UNHEALTHY](#) or worse today. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



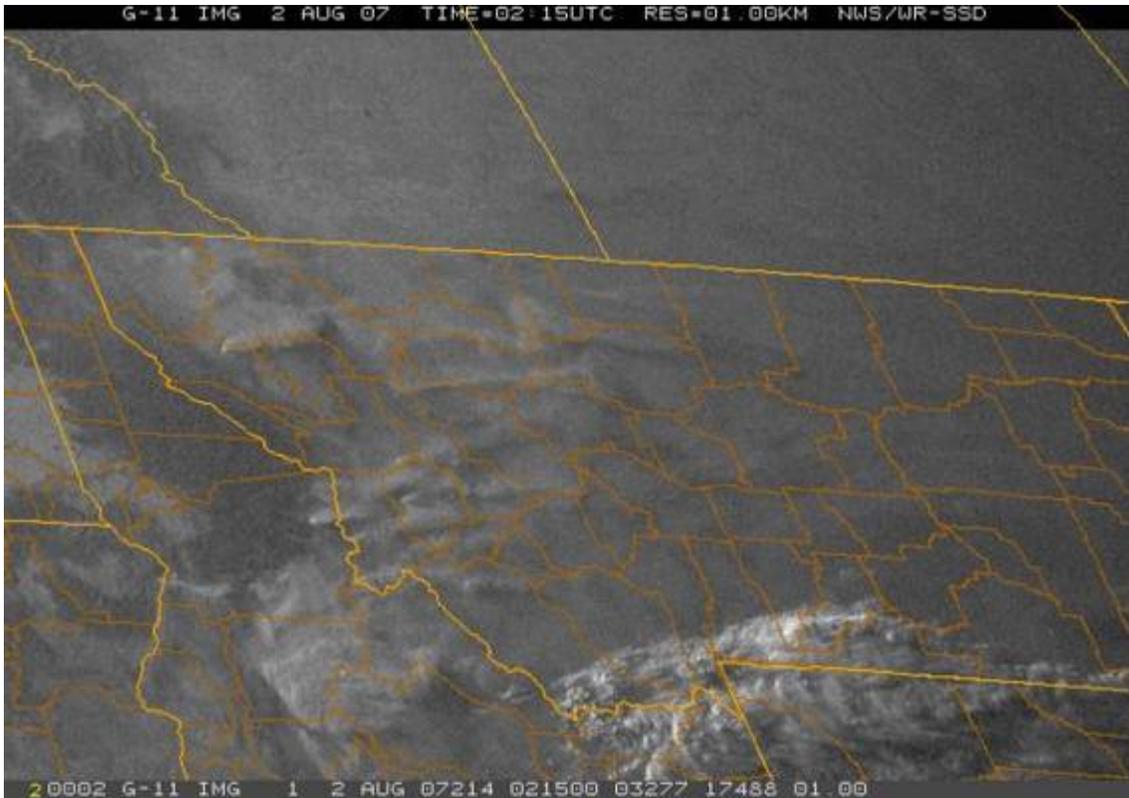
This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite.
Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo below was taken last night at 8:15 PM clearly shows the many plumes of smoke stretching out from the active fires in Idaho and Montana.



The smoke is structured in layers as plumes from different fire episodes settle in to their final plume heights. This can produce dramatic sunsets like this one from August 1 that put stripes across the face of the sun. (Photo by Candace Coefield)



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 02, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Whitefish T24 Kalispell T24 Missoula T24 Butte T24 Sidney Vis(3)
UNHEALTHY FOR SENSITIVE GROUPS	Polson T24 Ronan T24 Helena T24
MODERATE	Libby T24 Hamilton T24 Dillon Vis (3)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

High pressure will remain over the state today and only modest improvement in the trapped smoke conditions are expected this afternoon. For the morning, smoke impacts could rise sharply for a few hours in the valleys that do not currently have direct fire impacts. With no coherent transport winds today, most of the smoke will be hanging around through tomorrow for continued very smoky conditions west of the divide and intermittent smoke intrusion east of the divide. Smoke at [UNHEALTHY FOR SENSITIVE](#) levels or worse will be occurring in many communities until about 1 or 2

this afternoon. Smoke levels under the thickest parts of the plume aloft could reach [UNHEALTHY](#). Direct plume impacts will be problem today for many areas. Residents need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

August 03 2007

10:00 AM Friday

Current Situation

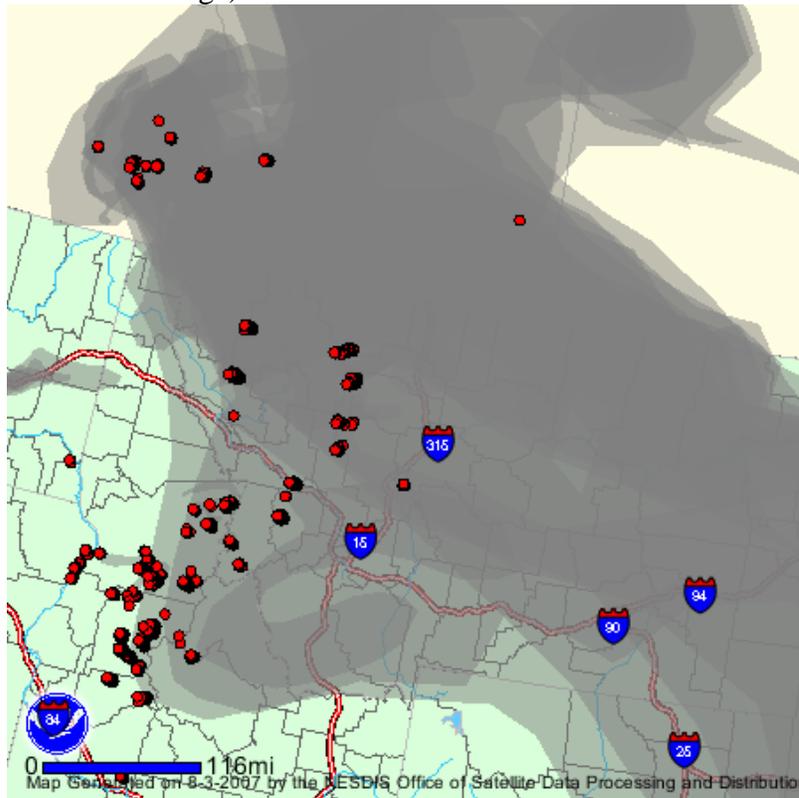
A westerly push has cleared the sky over the northwestern corner of the state up to line between the Brush Creek and Chippy Creek fires west of the Flathead Valley. Conditions in the south part of the Flathead are much improved over yesterday's smoke levels. Ronan has improved to [MODERATE](#) and but Polson is still at [UNHEALTHY FOR SENSITIVE](#) at the moment. Whitefish, Kalispell and Missoula are all at [UNHEALTHY](#) levels this morning due to their close proximity to several active fires. Smoke from the fires in and near the Front Range has that area socked in this morning with [UNHEALTHY FOR SENSITIVE](#) readings in Cut Bank, Choteau, and Augusta. Great Falls is seeing MODERATE smoke levels today. Hamilton and Butte are still stuck in [UNHEALTHY FOR SENSITIVE](#) this morning mostly due to smoke from the fires in Idaho. Helena and Baker have been seeing [MODERATE](#) conditions this morning. Smoke levels in the immediate vicinity of the active fires are expected to be [UNHEALTHY](#) or worse, especially in the Clark Fork Valley near Clinton. The Northern Flathead will likely see strong smoke impacts locally today but Missoula could see substantial improvement as a weak cold front heads into the state. Local plume impacts along the Front Range could be severe later today. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed

smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite.
Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This MODIS satellite photo below was taken at 2:11 PM yesterday August 2nd and clearly shows the Brush Creek and Chippy Creek fires west of Flathead Lake.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 03, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Whitefish T24 Kalispell T24 Missoula T24
UNHEALTHY FOR SENSITIVE GROUPS	Polson T24 Hamilton T24 Butte T24 Cut Bank Vis(2) Choteau T8 Augusta T8
MODERATE	Ronan T24 Helena T24 Great Falls Vis(1) Baker Vis(1)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

Lower smoke production yesterday, a steady westerly flow, low clouds, and a weak frontal passage should bring substantial improvement to many of the areas severely impacted yesterday. Missoula will be upwind of most smoke and should look pretty good by afternoon as the westerly winds kick in. Helena should see improvement as well and the general haze over the entire state should thin out through the day. The exception will be those areas downwind of the active fires today and this evening as the fire weather forecast indicates a strong likelihood of very intense plumes stretching out to the east of the fires later today. These plumes will not spread much laterally until late tonight and communities in the center line of these plumes could see very severe impacts. The dispersion this afternoon should be excellent and with good transport winds a lot of the residual smoke could be exiting the state for good by tomorrow. This will produce the improved general haziness. There will be some intermittent smoke impacts under the smoke aloft later this morning as the smoke mixes down. Direct plume impacts will be

problem later today for many areas. Residents need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

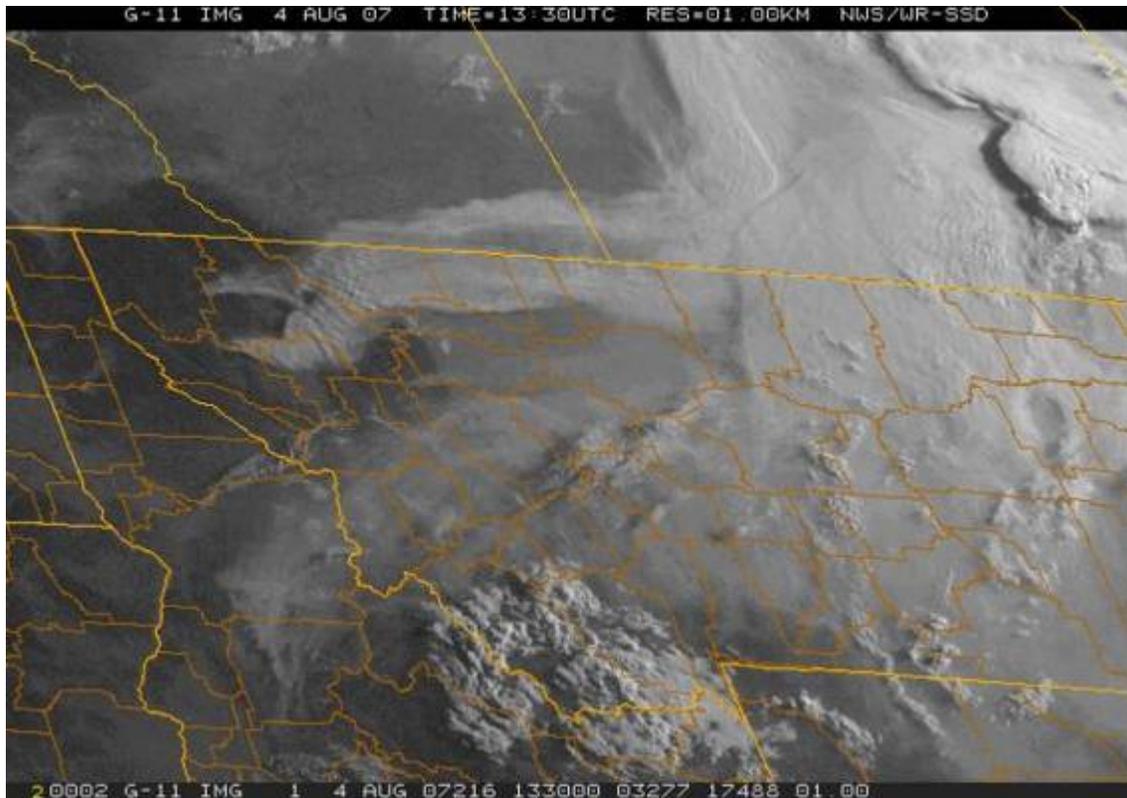
August 04 2007

10:00 AM Saturday

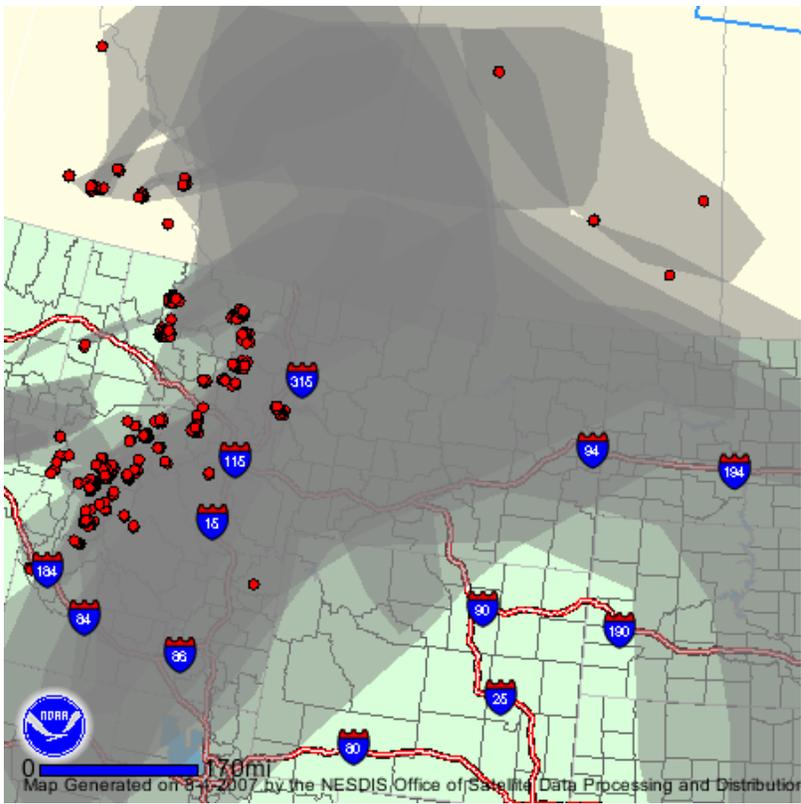
Current Situation

Smoke has temporarily lifted out of some of the western Montana valleys that were being impacted so heavily by smoke yesterday. Whitefish and Kalispell have improved to [UNHEALTHY FOR SENSITIVE](#) at this time as the smoke is trapped aloft in a stable layer about 2000-3000 feet overhead. Missoula, Polson, and Ronan have dropped all the way down to MODERATE this morning. Smoke levels in Hamilton have been steadily rising, they are at [UNHEALTHY FOR SENSITIVE](#) now and are expected to see [UNHEALTHY](#) later today. Butte and Great Falls are also both at [UNHEALTHY FOR SENSITIVE](#) this morning. Havre, Choteau, and Lewistown have been getting intermittent smoke impacts and are at [MODERATE](#) today. There is an immense plume of smoke spreading across the northern tier of the state and moving up into Canada clearly visible on this morning's satellite photo. Also note the compression waves imbedded in the plume east of the Rocky Mountains as strong winds aloft bounce off the high terrain. This is bringing the smoke down to the surface faster in the Hi-Line and Front Range areas. As soon as the ground heats up, the mixing heights will rise to the smoke layer and smoke impacts at the surface should spike dramatically. See the forecast below. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from last evening at 8 PM shows the awesome plumes of smoke boiling up out of the active fires in Idaho and Montana last night. This is what produced the huge mass of smoke aloft over northern and eastern Montana seen on this morning's photo.



This picture from the Lake McDonald webcam in Glacier National Park clearly shows the bands of smoke aloft impinging on the mountain peaks. Surface conditions are good at this time.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 04, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Whitefish T24 Kalispell T24 Hamilton T24 Butte T24 Great Falls Vis(6)
<u>MODERATE</u>	Polson T8 Ronan T8 Missoula T24 Choteau T8 Havre Vis(5) Lewistown Vis(3)

T1(x)

One-hour TEOM or BAM value (number of values)

T8(x)

Eight-hour average TEOM or BAM value(number of values)

T24	24 hour average TEOM or BAM value
Vis(x)	Visibility value(number of hours)
Vis(am/pm) (est)	Visibility value from twice/day reporting stations estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

Smoke levels will rise temporarily in many areas today as the smoke produced yesterday mixes down to the surface. With a good west to southwest flow aloft, the smoke over the state this morning will be moving into Canada and North Dakota leaving only today's smoke to deal with by later this afternoon. There are Red Flag warnings out for wind and low humidities and most of the fires in the state should see significant growth again today. Smoke impacts east of the active fires could be severe this afternoon. Hamilton, Whitefish, Kalispell, Polson, Ronan, Seeley Lake, and Butte will all likely end up in [UNHEALTHY](#) by the end of the day. Residents need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

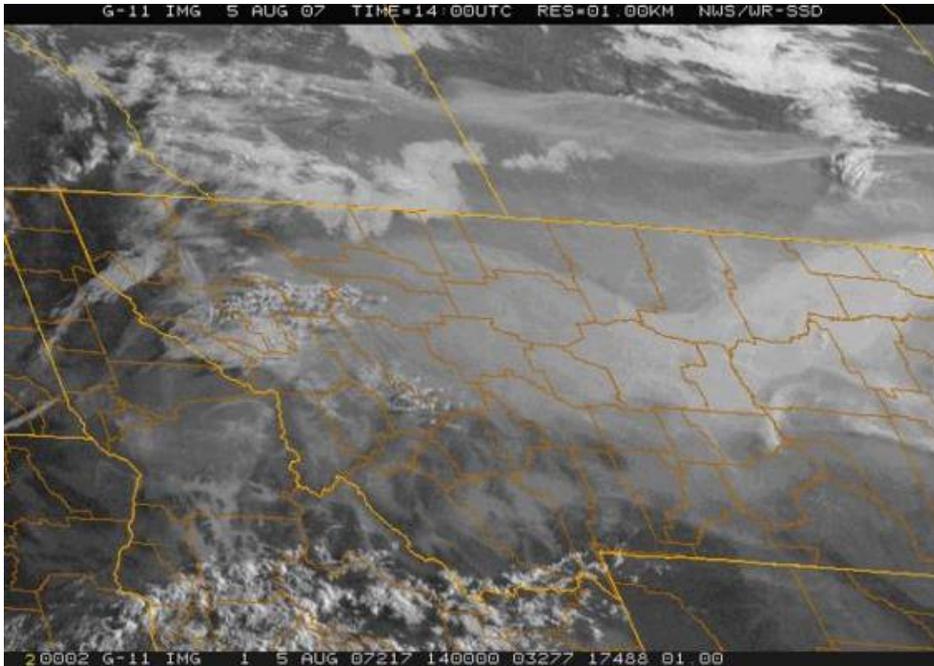
August 05 2007

10:00 AM Sunday

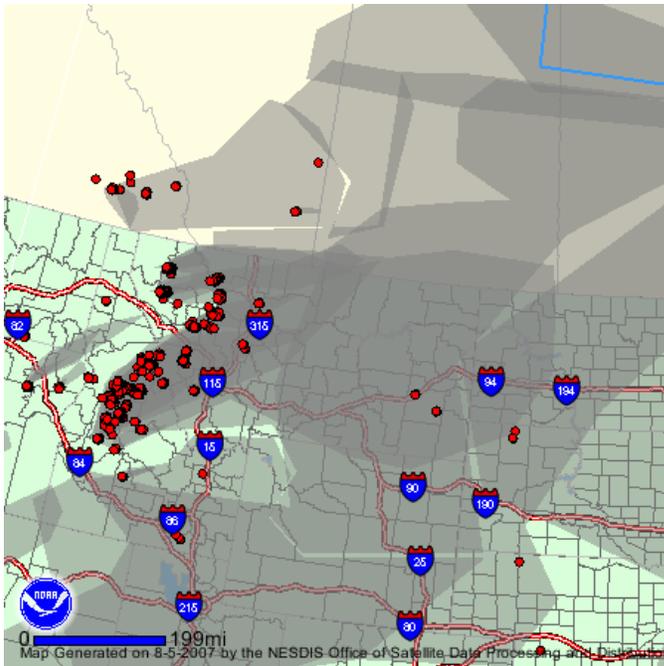
Current Situation

Smoke from the fires in Idaho and Western Montana is heavily impacting the southeast corner of the state this morning. Miles City is at [UNHEALTHY](#) and Baker is at [UNHEALTHY FOR SENSITIVE](#) as the smoke has settled in there since late last night. In western Montana most reporting stations have improved to [MODERATE](#) this morning as night time inversions have kept the smoke aloft in most areas. Smoke levels in Seeley Lake are expected to be [UNHEALTHY](#) or worse this morning. Areas under the plume aloft will see sharply higher impacts later this morning. See the forecast below. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from last evening at 8 PM shows the plumes of smoke from the active fires in Idaho and Montana last night. This is what produced the plume of smoke stretching across the state today.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 05, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Miles City Vis(8)
UNHEALTHY FOR SENSITIVE GROUPS	Baker Vis(8)
MODERATE	Whitefish T8 Kalispell T8 Polson T8 Ronan T8 Missoula T24 Butte T8 Choteau T8 Helena T8 Dillon Vis(1)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

Smoke levels will rise temporarily in many areas today as the smoke produced yesterday mixes down to the surface. Winds will be shifting to the southwest over the western part of the state as a trough deepens near the coast. This will move the plumes north and will

clear out some of the areas that saw a lot of smoke yesterday. The northern Flathead, the Seeley-Swan Valley, and the Front Range areas should see a lot of smoke today. Smoke will continue to move into the Bitterroot Valley and the Butte and Dillon areas as well. Fire activity levels will likely be high again today. Residents near active fires need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

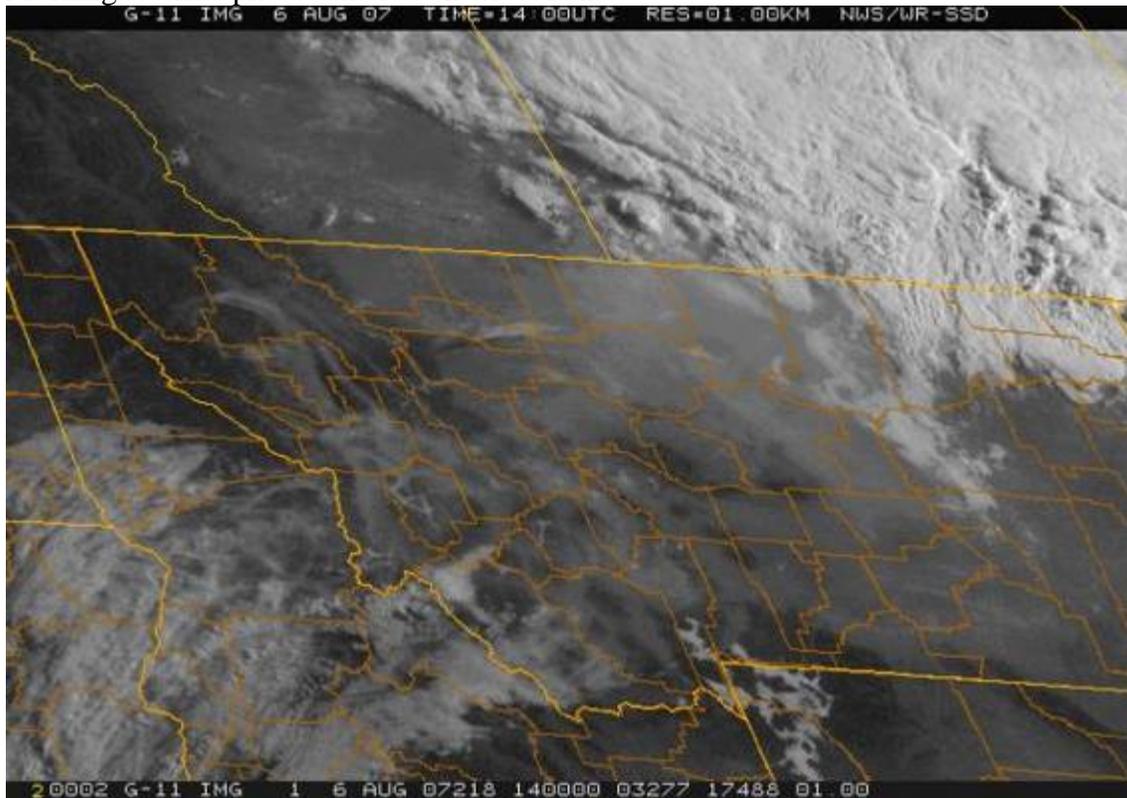
August 06 2007

10:00 AM Monday

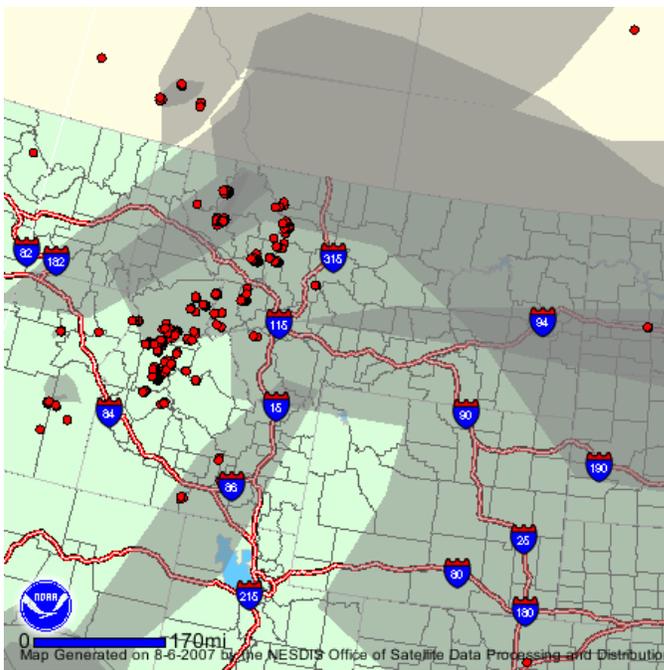
Current Situation

Smoke has settled into the valleys of western Montana this morning, trapped under strong inversions. [UHEALTHY](#) levels of smoke are currently impacting, Whitefish, Kalispell, Polson, Ronan, Missoula, Hamilton, and the Seeley/Swan valley. [UNHEALTHY FOR SENSITIVE](#) levels are present in Helena Butte, and Great Falls. [MODERATE](#) smoke is impacting Bozeman, Choteau, Augusta, and Lewistown. Overall, the smoke aloft does not seem as thick as previous days as fire activity levels yesterday were substantially lower than Saturday's firestorms. Conditions in most of the valley areas should improve later this morning but local impacts will still remain a problem. Drier and windier conditions are forecast today which will likely increase fire levels this afternoon and evening. See the forecast below. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 06, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Whitefish T8 Kalispell T8 Missoula T24 Polson T8 Ronan T8 Seeley/Swan valley Hamilton (est)
UNHEALTHY FOR SENSITIVE GROUPS	Helena T8 Butte T8 Great Falls Vis(8)
MODERATE	Choteau T8 Bozeman Vis(5) Lewistown Vis(1) Augusta T8

T1(x)	One-hour TEOM or BAM value (number of values)
T8(x)	Eight-hour average TEOM or BAM value(number of values)
T24	24 hour average TEOM or BAM value
Vis(x)	Visibility value(number of hours)
Vis(am/pm)	Visibility value from twice/day reporting stations
(est)	estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

West and southwest winds today will continue to funnel smoke into the state from Idaho and send plumes to the east of the active fires in the state. General haziness will persist over most areas but the dense smoke trapped near the surface in the mountain valleys should thin out noticeably by late morning to early afternoon. Residents under the plume aloft in eastern Montana will notice smoke at the surface intermittently through the morning as the smoke mixes down. Red Flag warning have been issued for gusty winds later today and fire activity could increase substantially this afternoon and evening. This will cause the smoke levels nearer the active fires to increase again later tonight through tomorrow morning. Residents near active fires need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

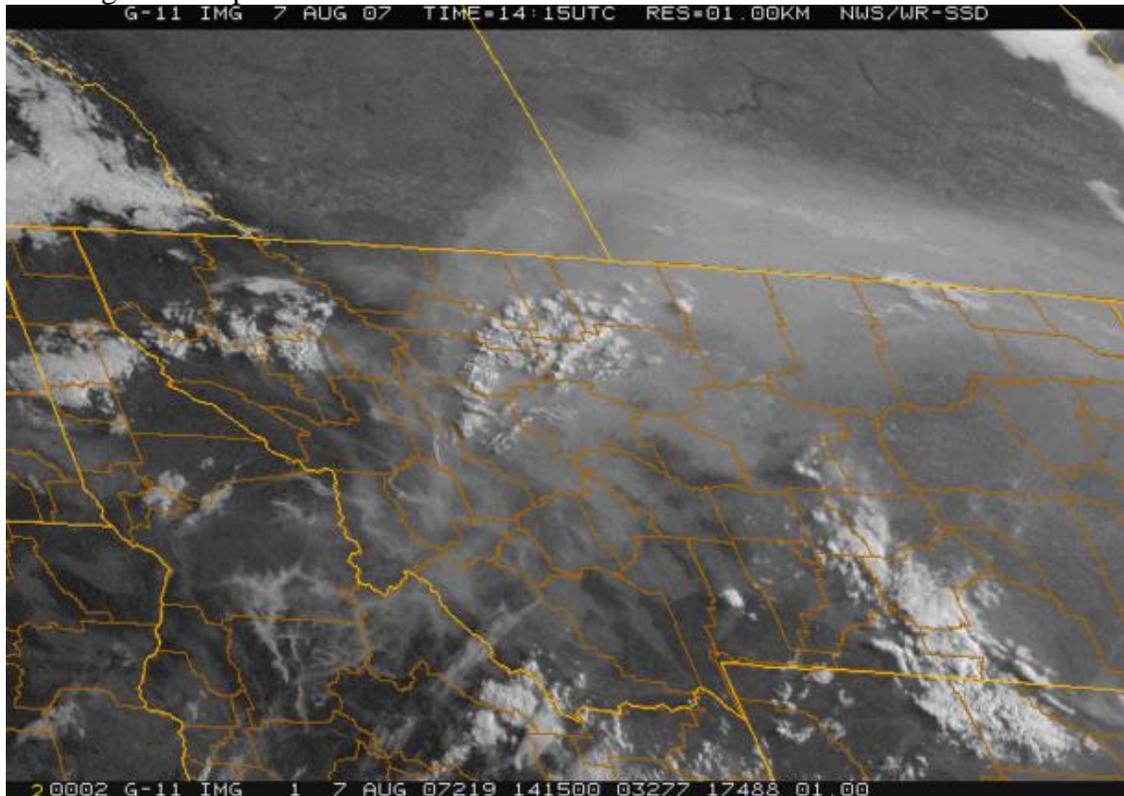
August 07 2007

10:00 AM Tuesday

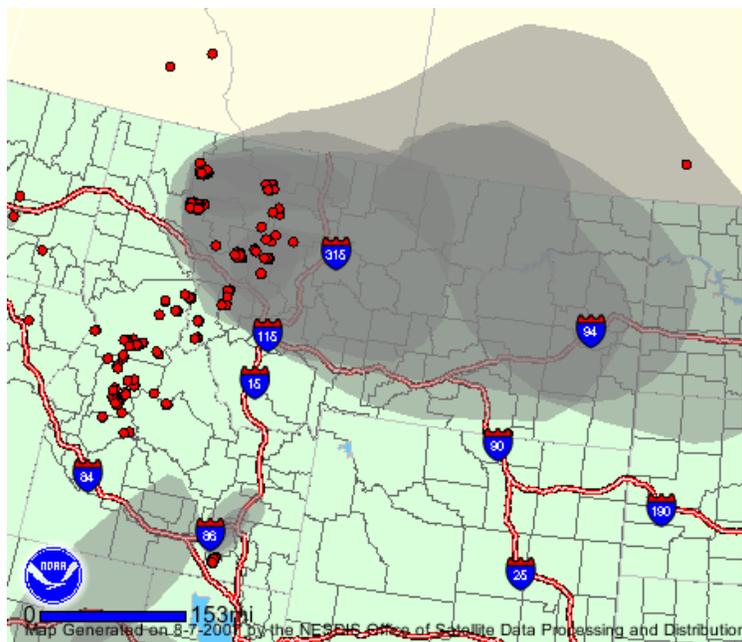
Current Situation

Low level inversions have trapped smoke just overhead in some of the western valleys that were so smoky yesterday leaving the near surface layer clearer. The relief will be short lived for most of these areas as west winds will mix the smoke down by late morning. Smoke in the valleys with active local fires is very much a problem today. The Southern Bitterroot is packed with smoke and so are the northern Flathead and the Rock Creek areas. Smoke levels in Whitefish, Kalispell, Polson, Ronan, Seeley Lake, Butte, and Hamilton are at [UNHEALTHY](#) this morning. Along the western Hi-line, Cut Bank is right in the path of smoke from several fires and conditions there are [UNHEALTHY](#) at this time. Great Falls and Helena are at [UNHEALTHY FOR SENSITIVE](#) this morning. [MODERATE](#) levels of smoke are also persisting in the eastern end of the state in Miles City and Baker. Missoula has cleared out to [MODERATE](#) as west winds are favorable for them. Dillon is also seeing [MODERATE](#) levels of smoke this morning. Red Flag warning over the active fires will cause problems this afternoon. See the forecast below. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)

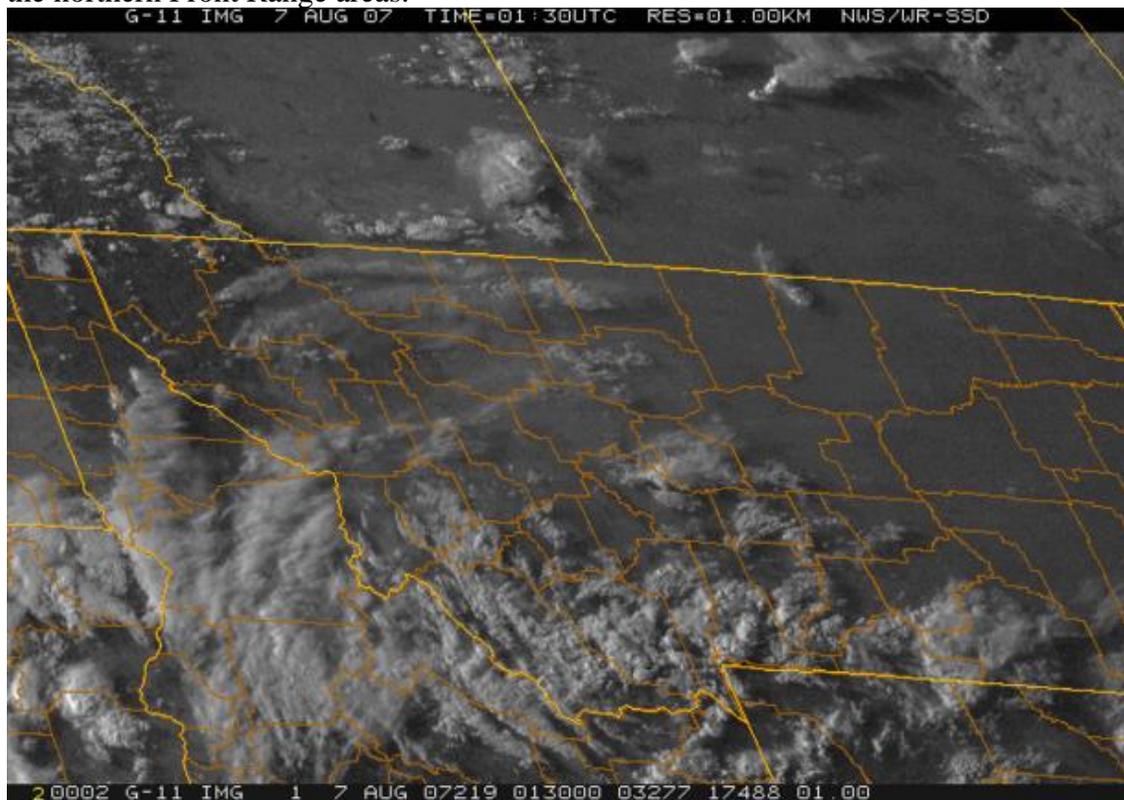


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from 8PM last night clearly shows the plumes from the Brush Creek and Chippy Creek Fires Stretching over the Flathead Valley, Glacier National Park, and the northern Front Range areas.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 07, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Whitefish T24 Kalispell T24 Polson T24 Ronan T24 Seeley Lake (est) Hamilton T24 Butte T24 Cut Bank Vis(8)
UNHEALTHY FOR SENSITIVE GROUPS	Helena T8 Great Falls Vis(8)
MODERATE	Missoula T24 Bozeman Vis(5) Dillon Vis(1) Miles City Vis(3) Baker Vis(1)

T1(x)	One-hour TEOM or BAM value (number of values)
T8(x)	Eight-hour average TEOM or BAM value(number of values)
T24	24 hour average TEOM or BAM value
Vis(x)	Visibility value(number of hours)
Vis(am/pm) (est)	Visibility value from twice/day reporting stations estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

West winds will pick up strongly later today and tonight. Smoke impacts in areas east of the fires will continue to be a problem. Smoke aloft will mix down over some areas and produce sharply higher smoke impacts. The northern Flathead, the northern Front Range, Seeley Lake, the southern Bitterroot Valley, The Rock Creek area, and Butte should all continue to see [UNHEALTHY](#) levels of smoke at times throughout the day and tonight. The current wind direction is favorable for Missoula and they should continue to see some relief today. Great Falls and Helena will likely stay at [UNHEALTHY FOR SENSITIVE](#) all day. With Red Flag warnings out for most of the current active fires, large plume development is likely again today and local smoke impacts could be severe. Residents near active fires need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

August 08 2007

10:00 AM Wednesday

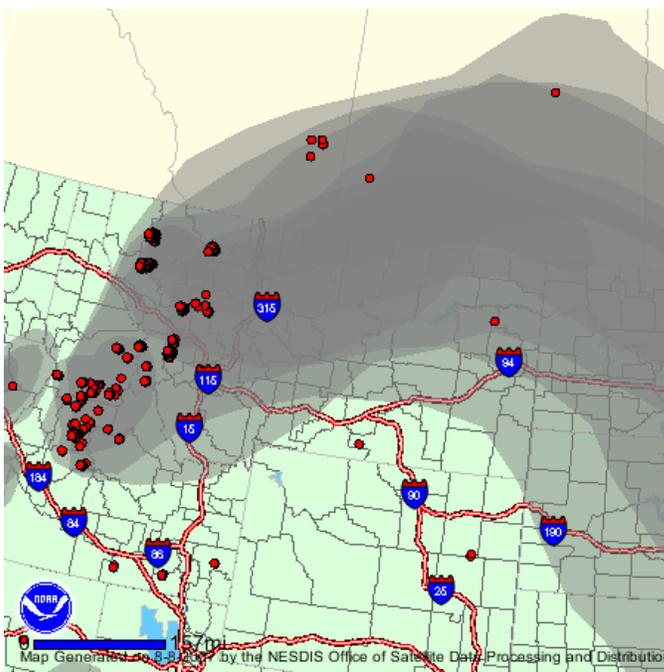
Current Situation

Most of the smoke produced yesterday has moved off over eastern Montana this morning causing some [MODERATE](#) conditions at Glasgow, Wolf Point, and Lewistown this morning. Residual smoke is trapped in the northern Flathead, Southern Bitterroot, Rock Creek, Clark Fork, and Helena valleys producing [UNHEALTHY FOR SENSITIVE](#) levels in Whitefish, Kalispell, Hamilton, Butte, and Helena. [MODERATE](#) conditions are left in Polson, Ronan, Missoula, Bozeman, Cut Bank, and Great Falls. More smoke aloft will be mixing down over western Montana and west winds will be fanning the flames on the active fires, see the forecast below. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Map Generated by NESDIS Office of Satellite Data Processing and Distribution
 Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 08, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	Whitefish T24 Kalispell T24 Hamilton T24 Helena T8 Butte T8
MODERATE	Polson T24 Ronan T24 Missoula T24 Bozeman Vis(3) Cut Bank Vis(1) Great Falls Vis(2) Lewistown Vis(5) Glasgow Vis(6)

	Wolf Point Vis(1)
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T1(x)	One-hour TEOM or BAM value (number of values)
T8(x)	Eight-hour average TEOM or BAM value(number of values)
T24	24 hour average TEOM or BAM value
Vis(x)	Visibility value(number of hours)
Vis(am/pm) (est)	Visibility value from twice/day reporting stations estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

Strong westerly winds are forecast across the state today and Red Flag warnings have been posted over most of the active fires. This will likely produce large plumes of smoke this afternoon and evening stretching out to the east of the active fires. Smoke aloft will mix down to the surface later this morning for some noticeable short term impacts under the thickest part of the smoke plume aloft. Most of the areas that had smoke yesterday will see it again today and the wind shift will likely bring more smoke into southwest Montana in the Dillon and Bozeman areas. Residents near active fires need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

August 09 2007

10:00 AM Thursday

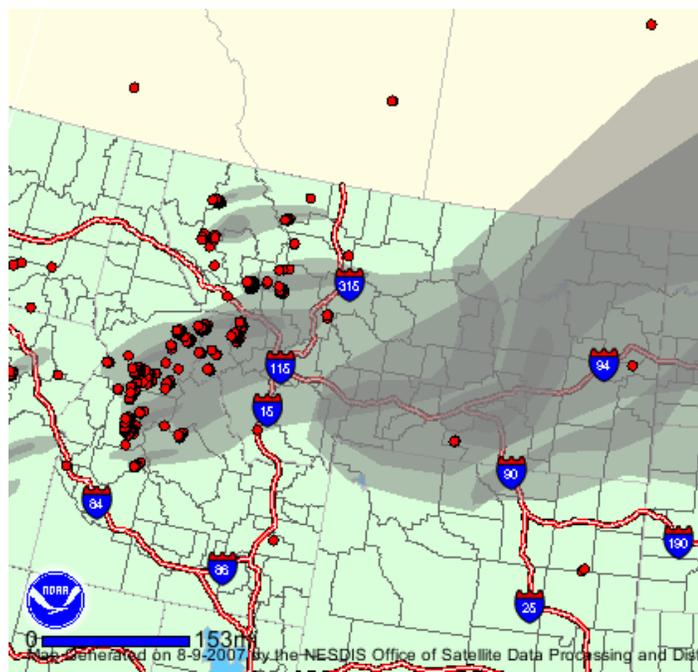
Current Situation

Smoke has poured into Butte all night from the fires in western Montana and Idaho. They are currently seeing [UNHEALTHY](#) levels of smoke this morning. Smoke can be seen trapped in the Rock Creek drainage and the south end of the Seeley/Swan Valley and conditions there are estimated to be [UNHEALTHY](#) as well. Lingered smoke in the northern Flathead and southern Bitterroot valleys has produced [UNHEALTHY FOR SENSITIVE](#) conditions in Whitefish, Kalispell, and Hamilton. [MODERATE](#) conditions are impacting Missoula, Helena, Dillon, Great Falls, Miles City, and Baker. There is a well defined plume of residual smoke aloft visible in an arc spread across eastern Montana and some of this smoke will mix down to the surface later this morning for some temporary impacts. See the forecast below for details. Direct smoke impacts from the active fires in the state are expected to be a problem later today. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from 7:45 PM last night shows the big plumes coming off of the fires in Idaho and Montana that left the smoke aloft in the picture above.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 09, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Butte T24 Seeley Lake (est) Rock Creek area(est)
UNHEALTHY FOR SENSITIVE GROUPS	Whitefish T24 Kalispell T24(est) Hamilton T24
MODERATE	Helena T8 Missoula T24 Great Falls Vis(1) Dillon Vis(5) Miles City Vis(2) Baker Vis(6)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

The smoke aloft over central and eastern Montana will mix down to the surface later this morning. This will produce some intermittently strong smoke impacts at the surface in the areas under the thickest parts of the plume. Hazy skies will be common across the state as well. Smoke levels in the communities currently seeing higher smoke impacts will improve as the mixing height rises and the smoke thins out. There will be heavy local plume impacts from the active fires again this afternoon as the fire activity levels increase. Transport winds will be generally from the west and southwest and communities downwind of these fires will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

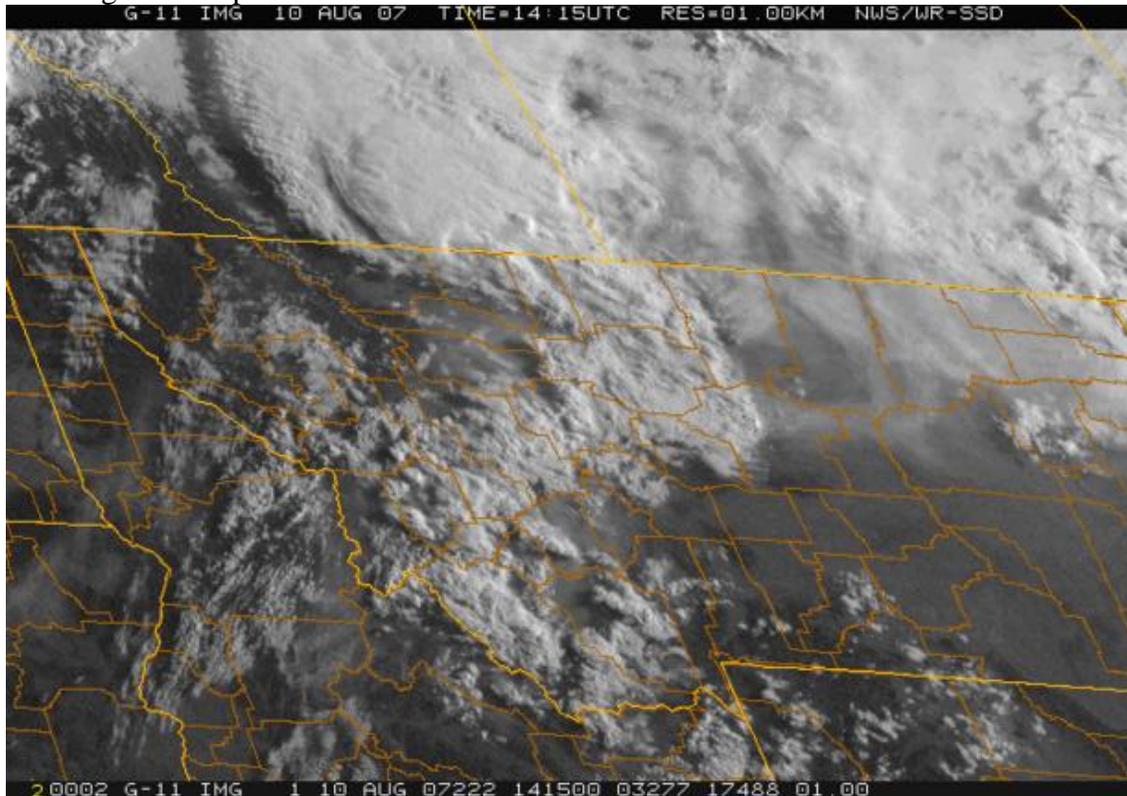
August 10 2007

10:00 AM Friday

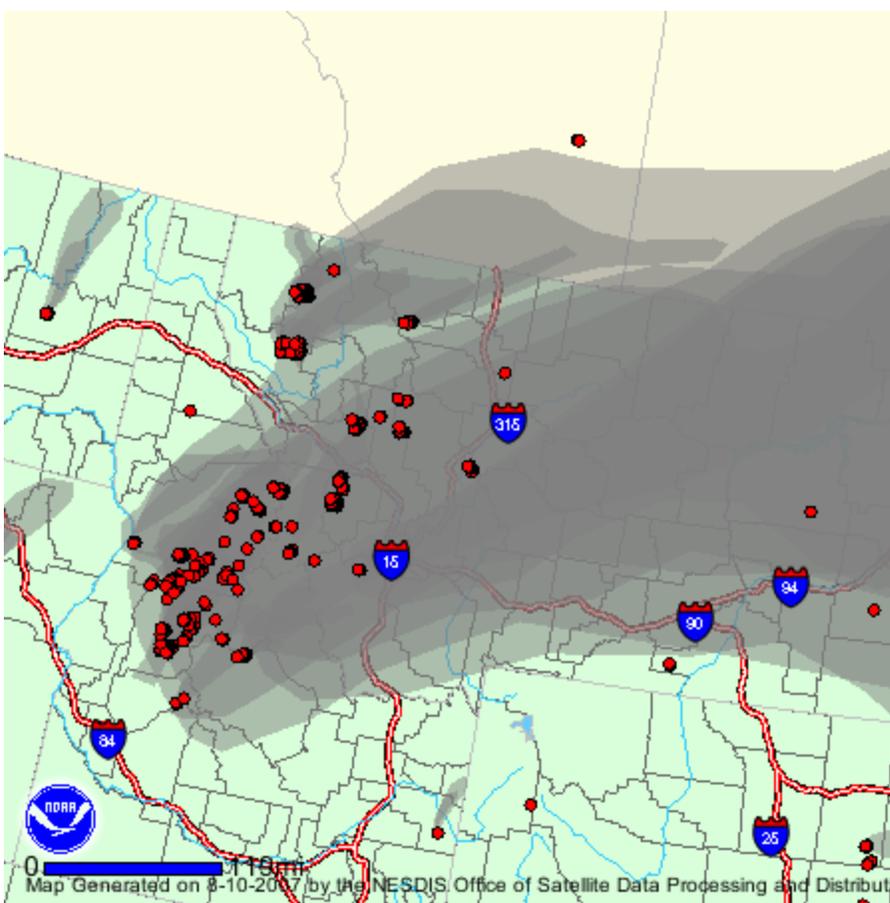
Current Situation

There is lots of smoke visible between the clouds on this morning's satellite photo. The leading edge of a cooler Canadian air mass working its way into the northwest corner of the state is also very evident with the front becoming the back edge of the residual smoke plume. It is still very smoky at the surface in the northern Flathead Valley and Whitefish and Kalispell remain at [UNHEALTHY](#) even though current short term smoke levels have been generally [MODERATE](#) for much of the early morning. [UNHEALTHY FOR SENSITIVE](#) levels of smoke are still impacting Missoula, Hamilton, and Butte as smoke from Idaho combined with smoke from the fires in the southern Bitterroot and Rock Creek drainages has been a continuing problem for those areas. [MODERATE](#) levels are impacting Choteau, Augusts, Helena, Dillon and Baker as well. With the frontal passage today, Red Flag warnings have been posted for high winds and a pronounced shift in wind direction. This will produce a profound change in some impact areas. See the forecast below for details. Direct smoke impacts from the active fires in the state are expected to be a problem later today. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)

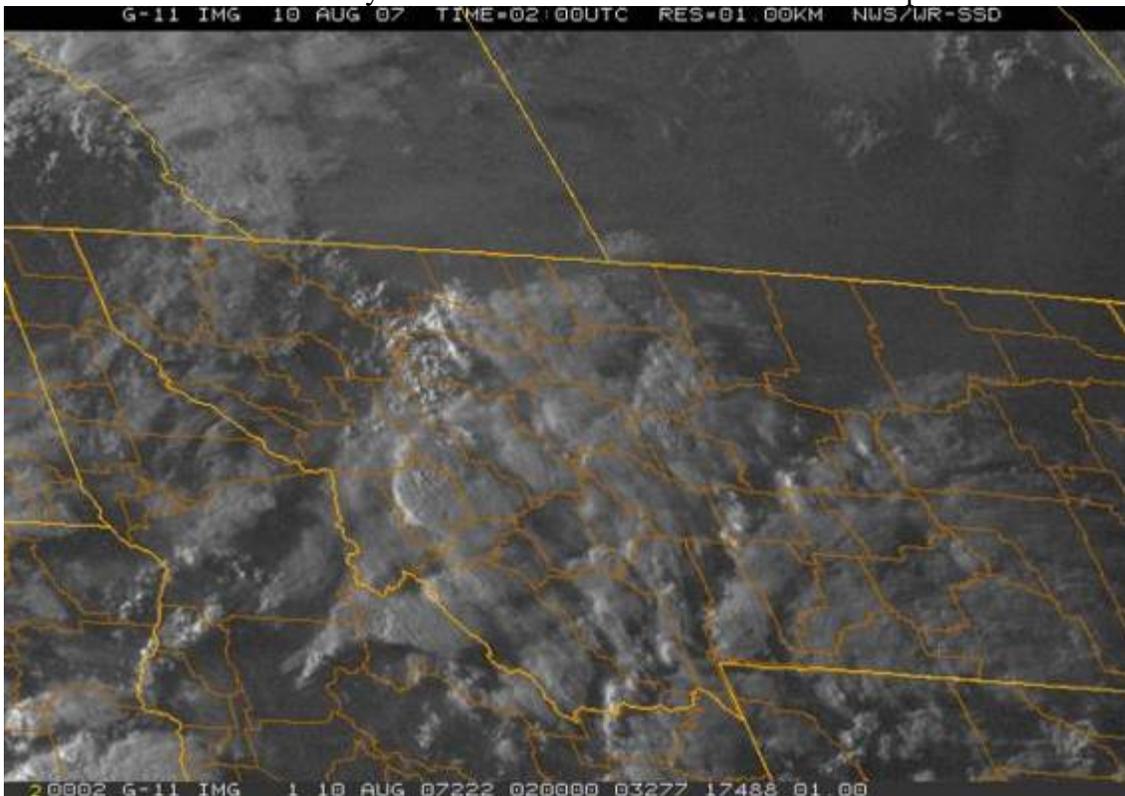


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from 8:00 PM last night shows the big plumes coming off of the fires in Idaho. There are too many clouds over the Montana fires to see the plumes from there.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 10, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Whitefish T24 Kalispell T24
UNHEALTHY FOR SENSITIVE GROUPS	Hamilton T24 Butte T24 Missoula T24
MODERATE	Choteau T8 Augusta T8 Helena T8 Dillon Vis(1) Baker Vis(2)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

Strong gusty southwest winds will be followed by brisk northwest winds today as a weak frontal passage moves through the state from the northwest. This will shift the plume centerlines substantially and will drive the smoke from Idaho into southwest Montana. Smoke impacts will increase in the southern Flathead valley, Great Falls, and Bozeman by this afternoon and evening. There will be heavy local plume impacts from the active fires again this afternoon as the fire activity levels increase. Transport winds will start from the southwest and shift to the northwest by this evening. Strong plume formation is likely over some of the active fires and communities downwind of these fires will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#), Meteorologist
Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

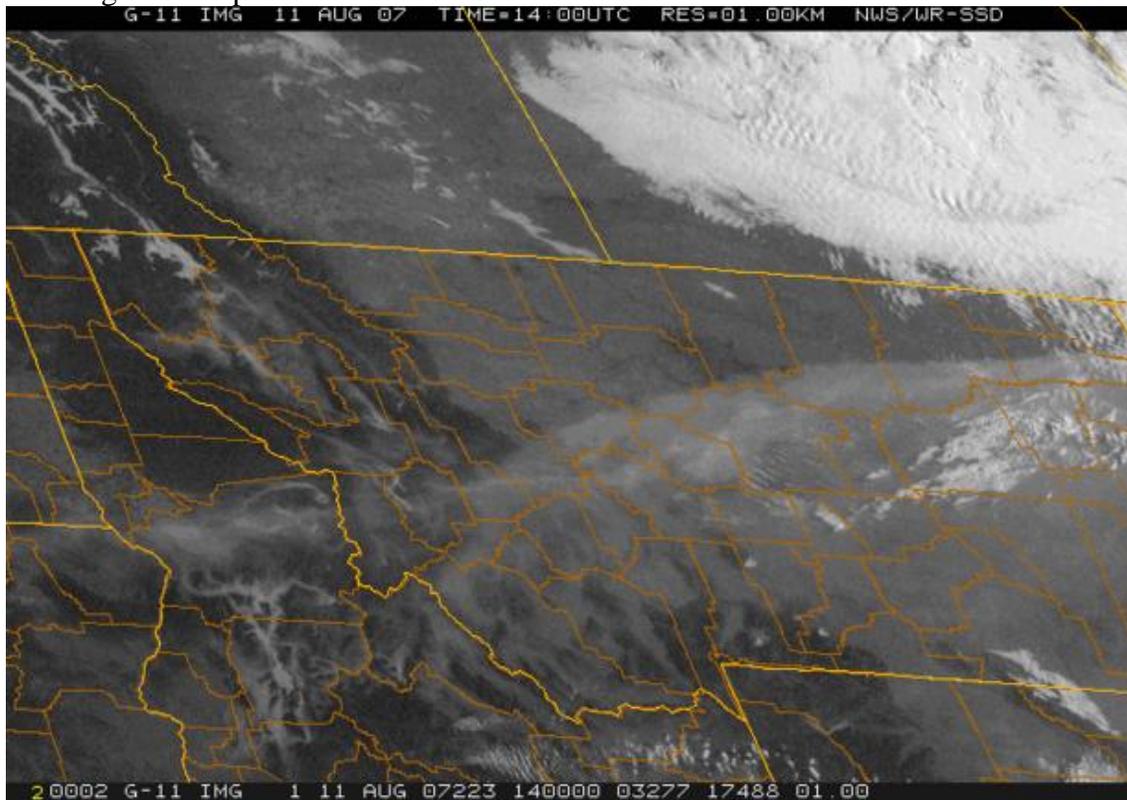
August 11 2007

10:00 AM Saturday

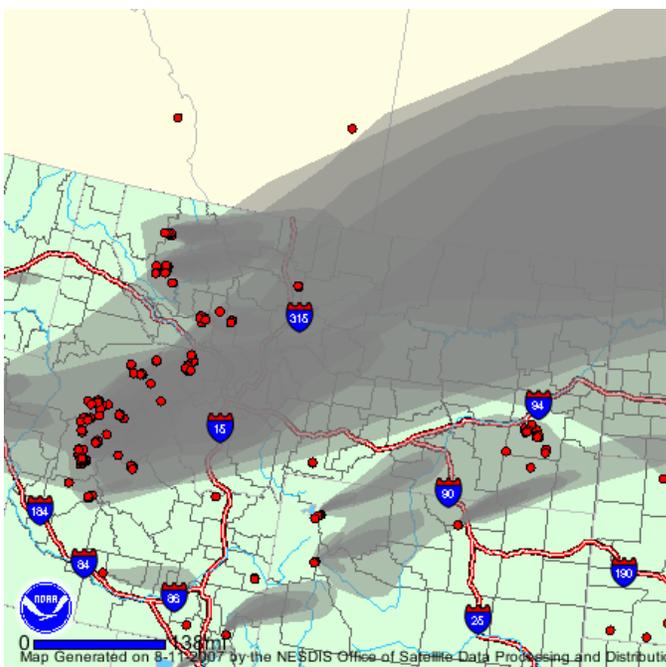
Current Situation

The plume of smoke over Montana has been pushed south by yesterday's frontal passage. The back edge of the smoke aloft is very clear on this morning's satellite photo. This will bring blue sky back to many areas today as reduced fire activity yesterday left much less residual smoke in the air and allowed some communities a welcome break from high smoke levels. Smoke can be seen trapped in the south end of the Seeley/Swan valley from the Jocko Lakes fire and in the Rock Creek drainage from the Sawmill Complex fires. Conditions in those are expected to be [UNHEALTHY](#) or worse. For the reporting sites only [MODERATE](#) smoke is being currently experienced in Kalispell, Missoula, Hamilton, and Dillon. Southeast winds at the surface will move smoke into new areas today and communities under the residual smoke aloft will see some smoke later this morning. See the forecast below for details. Direct smoke impacts from the active fires in the state may be a problem later today. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)

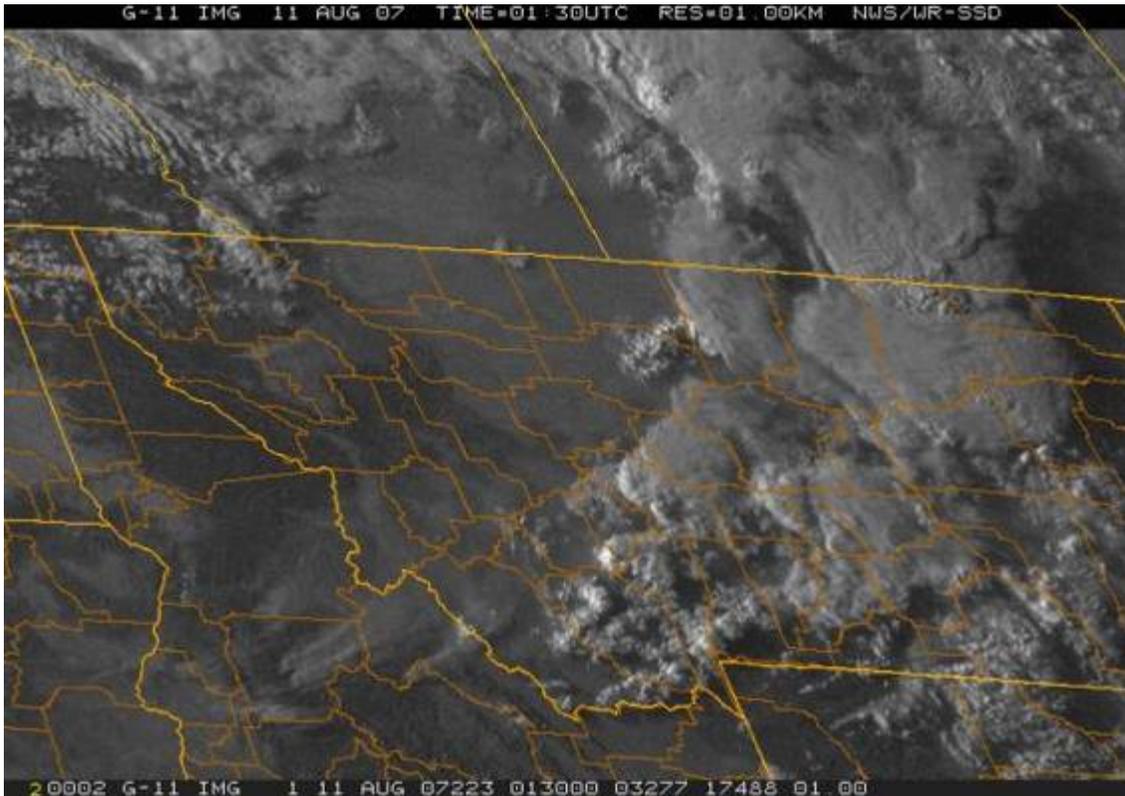


Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from 7:30 PM last night shows the plumes coming off of the fires in Idaho. The only noticeable plume in Montana is from the Chippy Creek fire west of Polson.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 11, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Kalispell T8 Hamilton T24 Missoula T8 Dillon Vis(1)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

High pressure is building into the state today. This will provide some southeast winds at the surface pushing smoke to the west and into different areas than the previous week. Libby, Thompson Falls, and Missoula will likely see more smoke today than they are used to. The southern Bitterroot is also likely to receive a lot of smoke from the Sawmill Complex along with local smoke. Butte, Helena and Great Falls are in a good position and should have clear sky today. Local smoke impacts will still be a problem today for communities near active fires. Those communities downwind of these fires will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

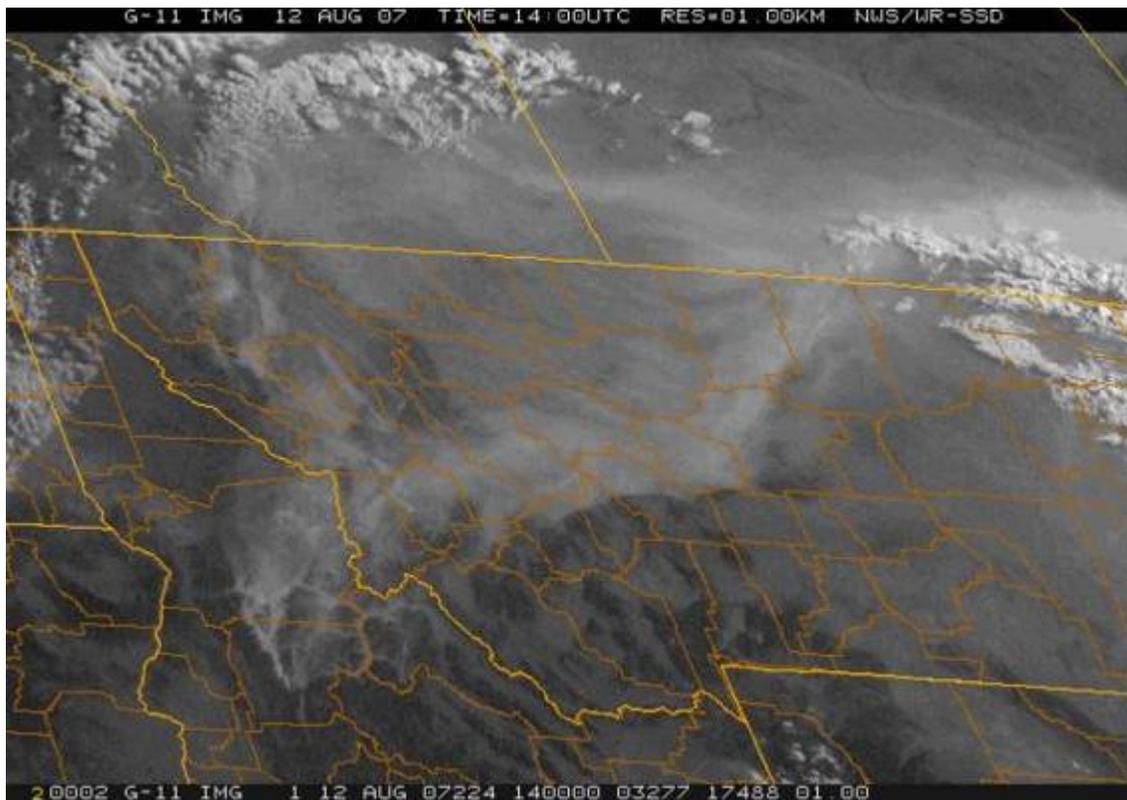
August 12 2007

10:00 AM Sunday

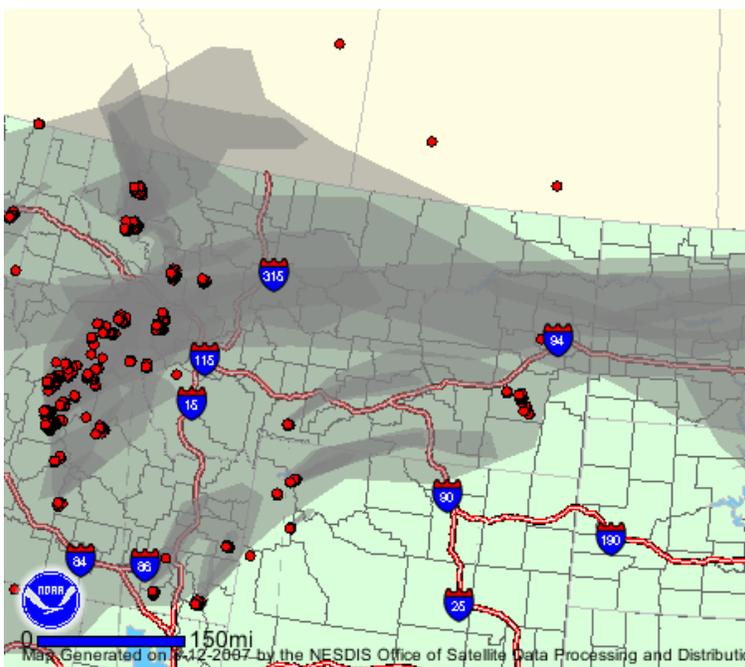
Current Situation

Smoke is covering the sky over a wide swath of Montana this morning. Most of the residual smoke is aloft right now but will be mixing down to the surface later this morning. Smoke is trapped under strong inversions in most of the valleys west of the divide. It is clear at the surface with the smoke right overhead in some locations but [UHNEALTHY](#) levels have reached the surface in Kalispell and Whitefish. [UNHEALTHY FOR SENSITIVE](#) conditions are currently impacting Polson, Ronan, Missoula and Hamilton. [MODERATE](#) smoke is currently reported in Butte and Dillon. With Red Flag warning for dry and windy conditions this afternoon, direct smoke impacts downwind of active fires could be severe today. See the forecast below for details. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind(the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)

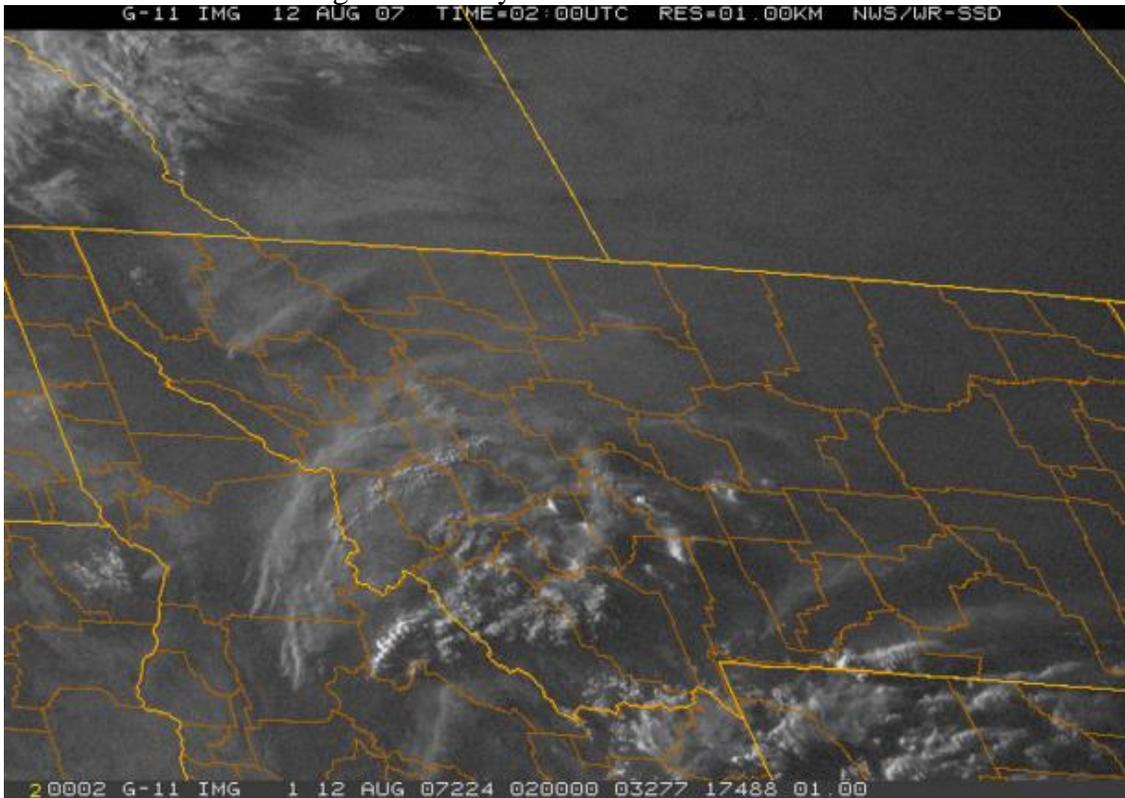


Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from 7:30 PM last night shows the plumes coming off of the fires in Idaho and Montana. Plumes from the Chippy Creek fire west of Polson and the Wicked Creek fires south of Livingston are very noticeable.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 12, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Kalispell Vis(2) Whitefish Vis(2)
UNHEALTHY FOR SENSITIVE GROUPS	Polson T24 Ronan T24 Missoula T8 Hamilton 24
MODERATE	Butte T8 Dillon Vis(1)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

Red Flag warnings for high winds, low humidity and a pronounced wind shift have been posted beginning at noon today. These conditions are likely to produce large plumes from the fires in the area today. Overall smoke transport under the high pressure ridge will be marginal and the smoke levels will be building over the state for the next several days. Smoke aloft will mix down sharply in the western valleys and over central Montana under the thickest parts of the plume aloft. Smoke will return to Helena, Butte and Great Falls today and will likely start impacting communities farther east by tomorrow. Smoke from the Wicked Creek fire may start to be a problem in the upper and middle Yellowstone drainage. Smoke impacts along the northern Front Range will also likely increase. Most western Montana valleys will be experiencing high levels of smoke for the next several days. Direct plume impacts northeast and east of the active fires will be a problem today for communities near active fires. Those communities downwind of these fires will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

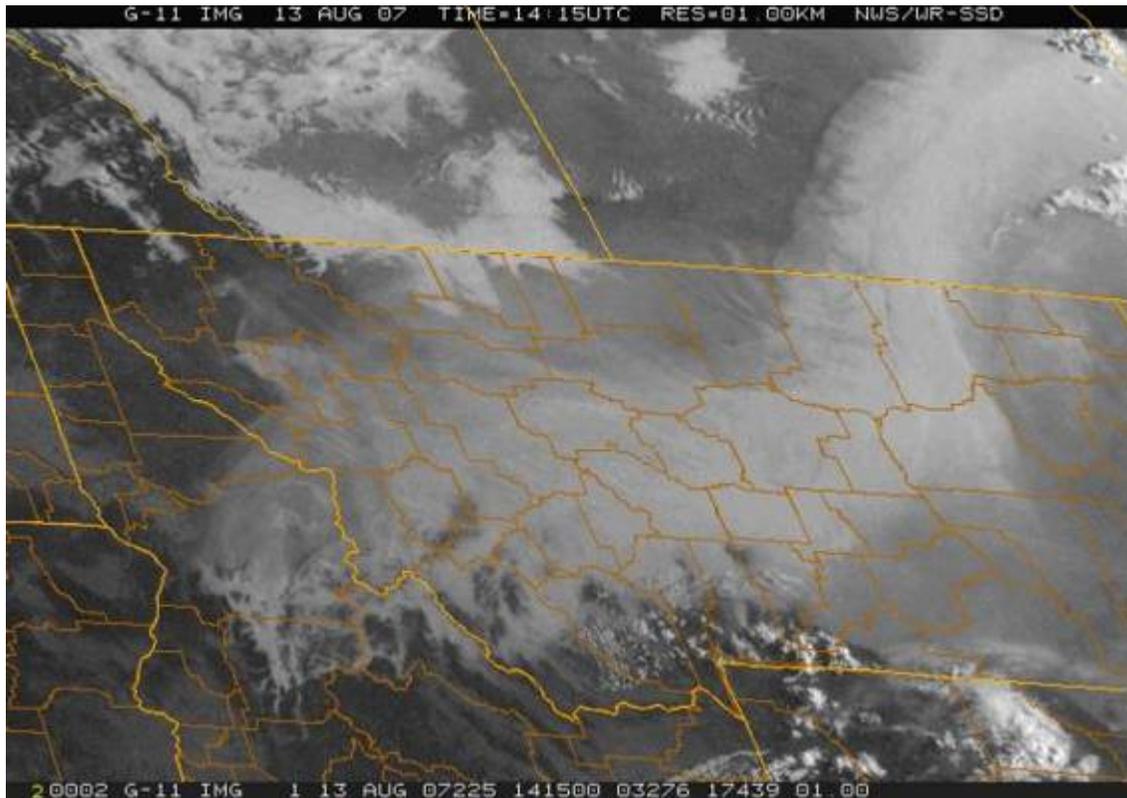
August 13 2007

10:00 AM Monday

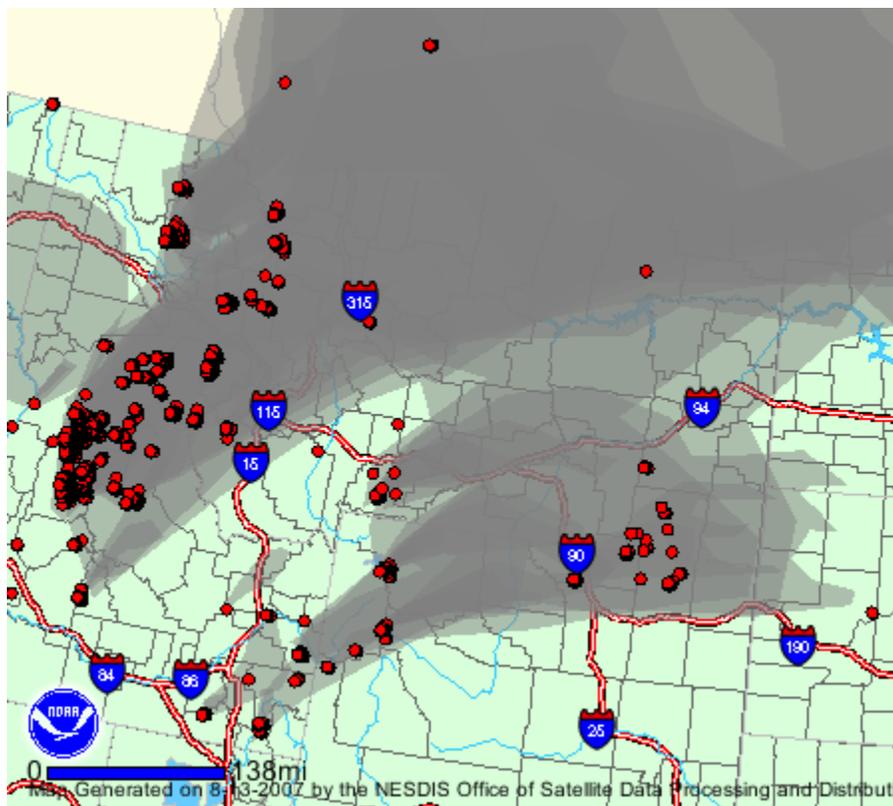
Current Situation

Very smoky conditions persist across broad areas of the state this morning. This morning's satellite photo shows that the main plume aloft has moved off towards Saskatchewan but plenty of residual smoke is left to blanket the state. The smoke came off yesterday afternoon and evening in towering plumes of smoke that combined into a very dramatic mass of smoke seen in the satellite photo from last night farther below. Smoke has been trapped in several western Montana Valleys and [UHNEALTHY](#) levels of smoke are left in Missoula, Hamilton, Butte, Dillon, Bozeman, Livingston, and Helena. Smoke has lifted overhead temporarily in Whitefish and Kalispell and they are at [UNHEALTHY FOR SENSITIVE](#) at the moment. East of the mountains, [UNHEALTHY FOR SENSITIVE](#) levels are impacting Great Falls, Choteau, and Augusta. [MODERATE](#) smoke levels are listed in the Polson, Ronan, Lewistown, Billings, and Baker. Many other areas of the state with no reporting mechanism are also being impacted today. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions. Smoke aloft will mix down in many areas later this morning and direct smoke impacts from active fires will also be a problem again this afternoon. See the forecast at the bottom for details.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from 7:45 PM last night shows the huge plumes coming off of the fires in Idaho and Montana. Plumes from the Brush Creek Fire west of Whitefish, the Chippy Creek fire west of Polson and the Wicked Creek fires south of Livingston are visible but plumes from the other fires in the state are lost in the combined plumes starting in Idaho.



This MODIS satellite photo taken yesterday, August 12 about 2:45 PM, before the Idaho plumes reached the state shows the plumes coming up from the Montana fires.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 13, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Missoula T8 Hamilton 24 Butte T8 Dillon Vis(8) Helena T8 Bozeman T24 Livingston T24
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Kalispell T24 Whitefish T24 Choteau T24 Augusta T24 Great Falls Vis(8)

MODERATE

Polson T24
Ronan T24
Billings Vis(2)
Lewistown Vis(2)
Baker Vis(2)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

The winds that produced the Red Flag conditions yesterday have diminished and conditions for the next several days will be hot and stagnant with only a few hours of good dispersion in the afternoons. This will help reduce the fire activity levels but the smoke impacts will continue to be a problem for at least the next few days. Transport winds will be from the southwest today switching around to the west by tomorrow. This will continue to move smoke into Montana communities. Smoke levels will be intermittently very bad with some clearing as the plumes move around. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

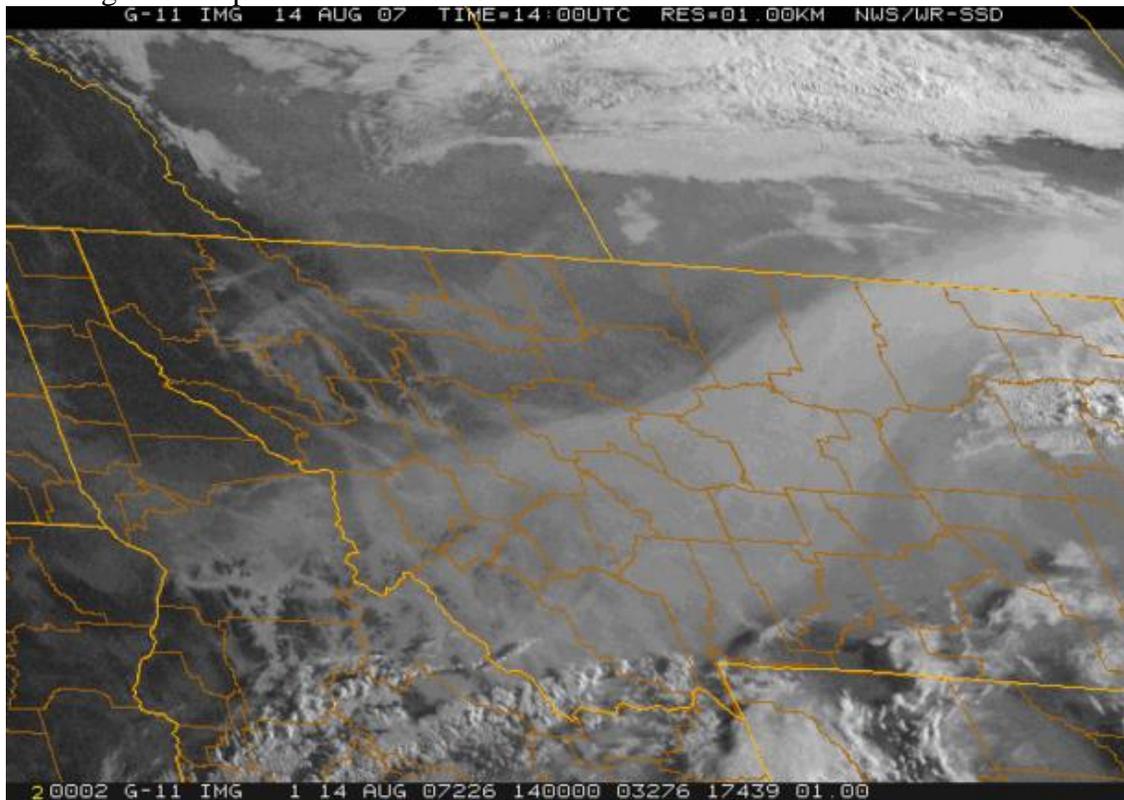
August 14 2007

10:00 AM Tuesday

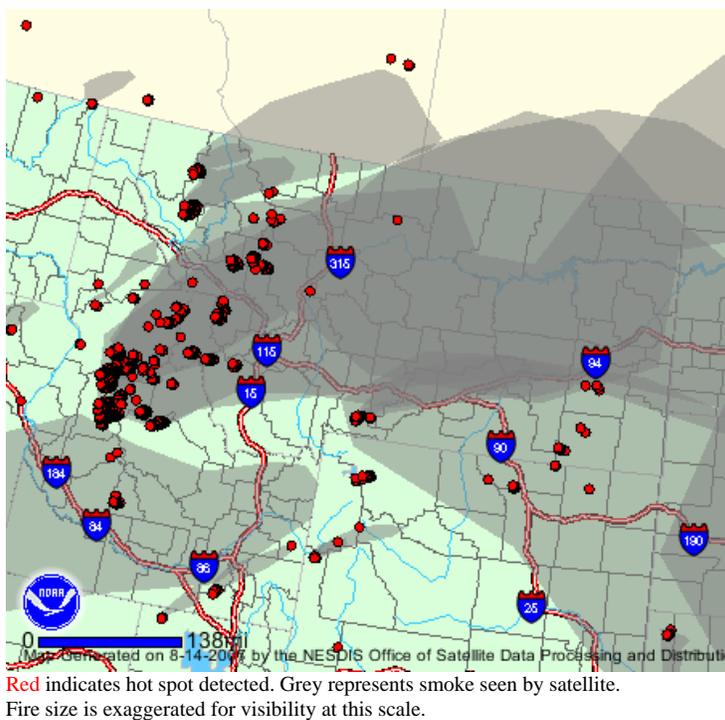
Current Situation

Air quality conditions in Butte have degraded to [VERY UNHEALTHY](#) this morning as smoke continues to plague the state. Residual smoke aloft and trapped in valleys are very evident on this morning's satellite photo below. Conditions have improved in some areas that were very smoky yesterday including Great Falls, Helena and Livingston. West of the divide however, [UNHEALTHY](#) levels of smoke are being recorded in Whitefish, Kalispell, Missoula, and Hamilton. Southwestern Montana is also being heavily impacted with Dillon and Bozeman both at [UNHEALTHY](#) as well. Smoke has lifted overhead temporarily in Polson and Ronan and they are at [UNHEALTHY FOR SENSITIVE](#) at the moment. Many other areas of the state with no reporting mechanism are also being impacted today. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions. Smoke aloft will mix down in many areas later this morning and direct smoke impacts from active fires will also be a problem again this afternoon. See the forecast at the bottom for details.

Morning satellite photo centered on Great Falls:

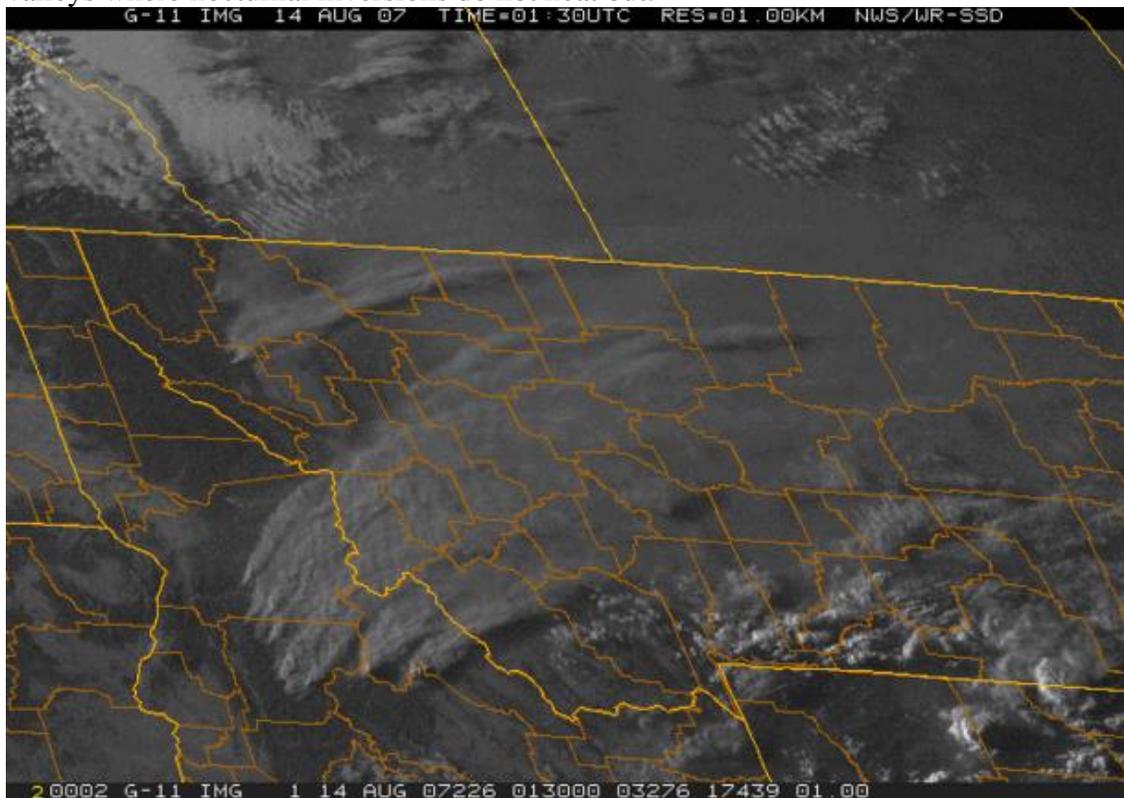


This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from 7:30 PM last night shows another day with the huge plumes of smoke rolling across the state from the fires in Idaho and Montana. The smoke is thick enough to limit surface heating and thus stagnant conditions in the bottom of some valleys where nocturnal inversions do not heat out.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS,

CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 14, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	Butte T24
<u>UNHEALTHY</u>	Kalispell T24 Whitefish T24 Missoula T8 Hamilton T24 Dillon Vis(8) Bozeman Vis(8)
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Polson T24 Ronan T24 Augusta T24
<u>MODERATE</u>	Helena Vis(1) Choteau T24 Great Falls Vis(8) West Yellowstone T1

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

With Red Flag conditions along the Front Range, and hot and dry advisories everywhere else, smoke production from the active fires will stay high for the next couple of days and smoke will continue to be a problem in many areas. Plumes will be headed east and slightly north of the active fires and direct plume impacts will be occasionally severe. Smoke will continue to be trapped in the valleys of western Montana and when the smoke aloft mixes down later this morning, wide areas of the state will see smoke at the surface for a few hours. Hazy sky will persist across the state under the plume overhead. Smoke will thin out during the afternoon in some of the areas that are being heavily impacted this morning but the relief will be brief. Smoke levels will be intermittently very bad with some clearing as the plumes move around. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

Montana DEQ Forest Fire Smoke Advisory

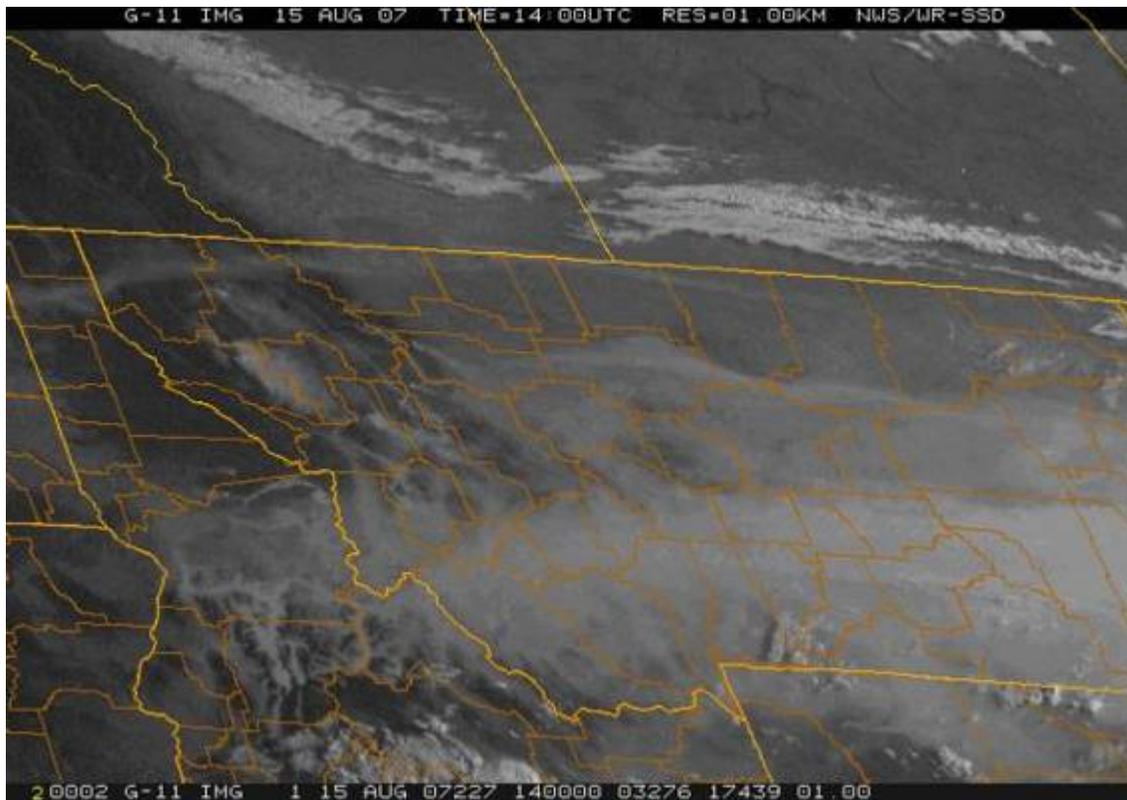
August 15 2007

10:00 AM Wednesday

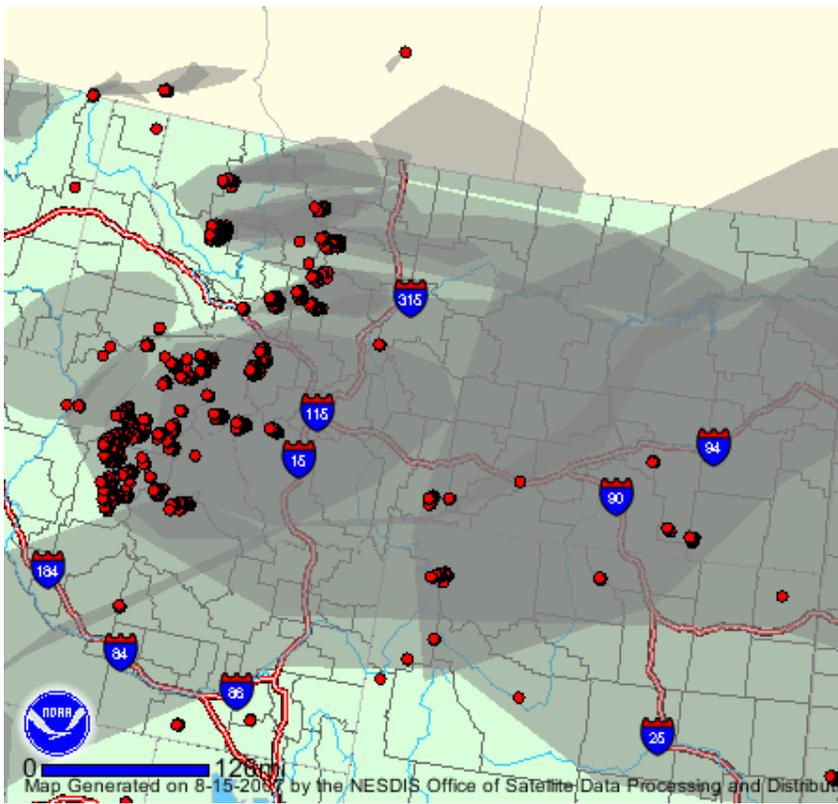
Current Situation

Another smoky day is on tap this morning with a large plume of smoke aloft stretching across the center of the state and lots of smoke trapped in the valleys of western and southwestern Montana. [UNHEALTHY](#) levels are currently impacting Hamilton, Butte, Dillon, Helena, and Livingston. Whitefish, Kalispell, Missoula, West Yellowstone, Bozeman, Great Falls, and Choteau are all at [UNHEALTHY FOR SENSITIVE](#) at this time. Smoke conditions in some of the valleys with active fires are expected to be [UNHEALTHY](#) or worse. Many other areas of the state with no reporting mechanism are also being impacted today. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions. Smoke aloft will mix down in many areas later this morning and direct smoke impacts from active fires will also be a problem again this afternoon. See the forecast at the bottom for details.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)

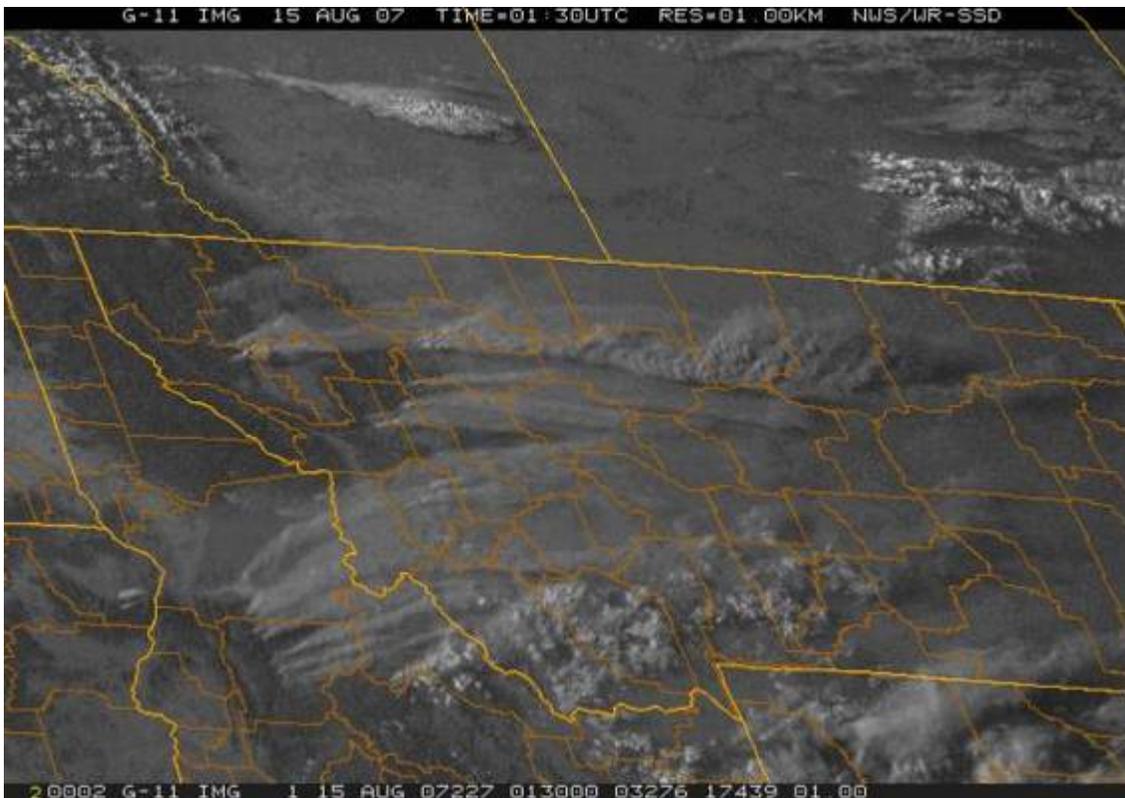


Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo from 7:30 PM last night shows another day with plumes of smoke rolling across the state from the fires in Idaho and Montana. There was less smoke last night than the previous two days. The smoke is still thick enough to limit surface heating and thus produce stagnant conditions in the bottom of some valleys where nocturnal inversions do not heat out.



Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 15, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Hamilton T24 Butte T24 Dillon Vis(8) Helena T24 Livingston Vis(8)
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Kalispell T24 Whitefish T24 Missoula T8 Bozeman Vis(8) Choteau T24 Great Falls Vis(8) West Yellowstone T1
<u>MODERATE</u>	Polson T24 Ronan T24 Lewistown Vis(1)

T1(x)	One-hour TEOM or BAM value (number of values)
T8(x)	Eight-hour average TEOM or BAM value(number of values)
T24	24 hour average TEOM or BAM value
Vis(x)	Visibility value(number of hours)
Vis(am/pm)	Visibility value from twice/day reporting stations
(est)	estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines to evaluate possible health risks and make informed activity decisions.

Forecast

Conditions are favoring another day of active fires with large plumes and plenty of smoke. Transport will be from the west southwest and direct plume impacts will be occasionally severe. Smoke will continue to be trapped in the valleys of western Montana and when the smoke aloft mixes down later this morning, wide areas of the state will see smoke at the surface for a few hours. Hazy sky will persist across the state under the plume overhead. Smoke will thin out during the afternoon in some of the areas that are being heavily impacted this morning but the relief will be brief in most areas. Smoke

levels will be intermittently very bad with some clearing as the plumes move around. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

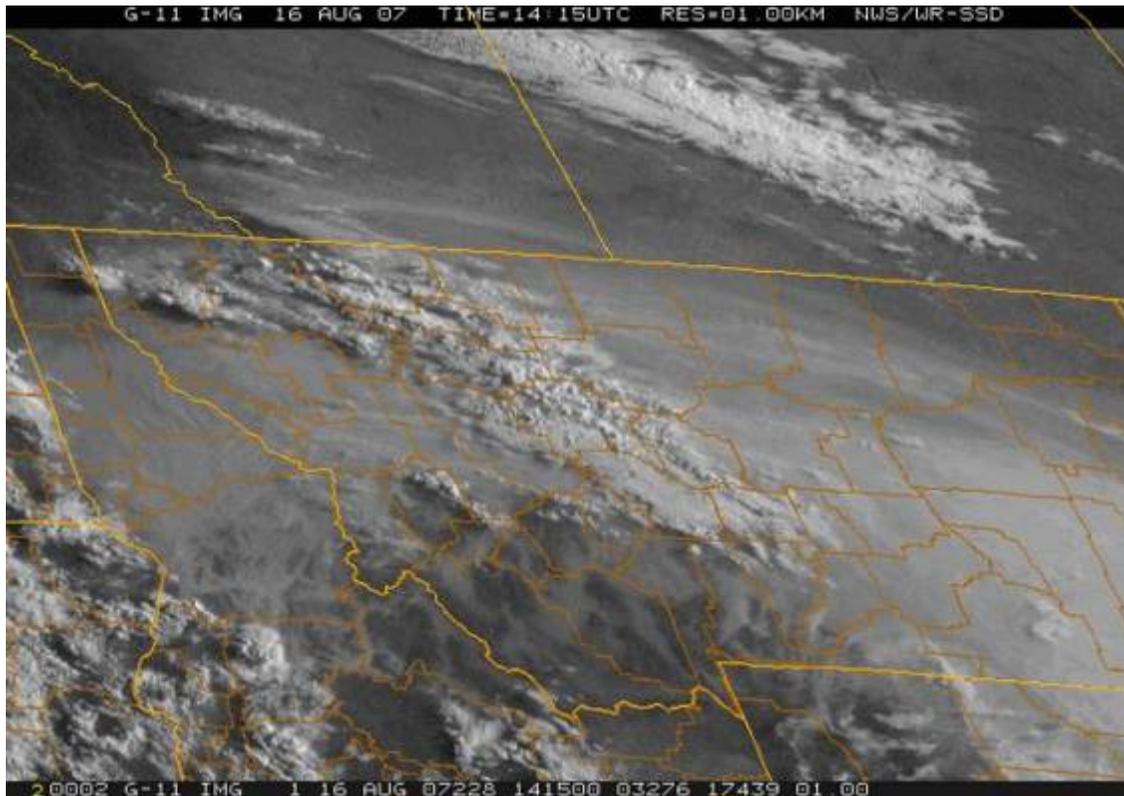
August 16 2007

10:00 AM Thursday

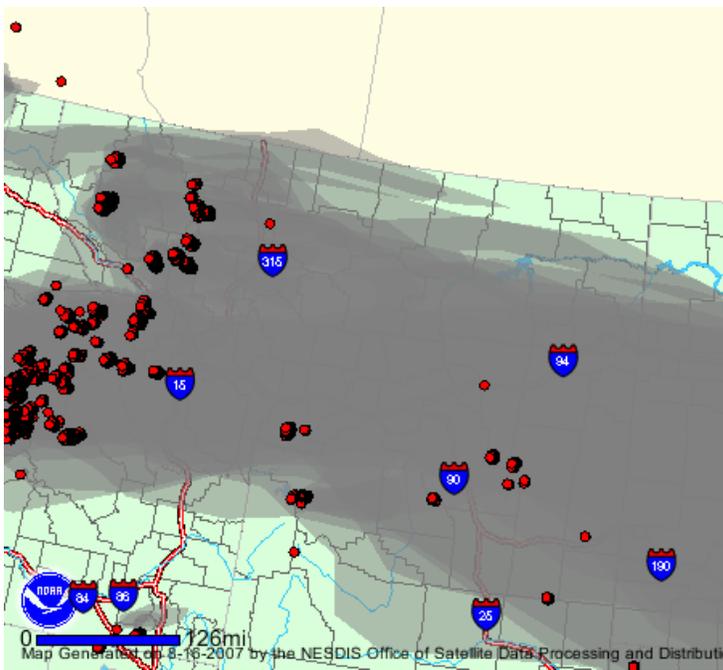
Current Situation

Western and southwestern Montana are being heavily impacted by smoke this morning with [VERY UHEALTHY](#) smoke being measured in Butte and [UNHEALTHY](#) levels in Whitefish, Kalispell, Polson, Missoula, Hamilton, and Dillon. Ronan and Helena are at [UNHEALTHY FOR SENSITIVE](#) this morning. Many other areas of western Montana with no reporting mechanism are also being impacted today. The smoke plume aloft has shifted north today as southerly flow last night moved it over the northern two thirds of the state. Except for Livingston area where conditions are [MODERATE](#) most of the state east of the mountains is not experiencing impacts at the surface, just very hazy skies. The smoke aloft will mix down later this morning for noticeable impacts across a wide area. Winds will be switching around today along with some gusts from scattered thunderstorms. This could push plumes into areas that have not been impacted lately. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions. Smoke aloft will mix down in many areas later this morning and direct smoke impacts from active fires will also be a problem again this afternoon. See the forecast at the bottom for details.

Morning satellite photo centered on Great Falls:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage)



Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Updated 10 AM August 16, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

HAZARDOUS	
VERY UNHEALTHY	Butte T24
UNHEALTHY	Kalispell T24 Whitefish T24 Polson T24 Hamilton T24 Missoula T8 Dillon Vis(8)
UNHEALTHY FOR SENSITIVE GROUPS	Ronan T24 Helena T24
MODERATE	Livingston Vis(2) Bozeman Vis(8) West Yellowstone Choteau T24 Augusta T24

T1(x)	One-hour TEOM or BAM value (number of values)
T8(x)	Eight-hour average TEOM or BAM value(number of values)
T24	24 hour average TEOM or BAM value
Vis(x)	Visibility value(number of hours)
Vis(am/pm)	Visibility value from twice/day reporting stations
(est)	estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Forecast

Scattered thunderstorms with gusty winds and a pronounced wind shift later today make it very hard to predict where smoke plumes will be going. Winds in many areas will be easterly early, shifting around to the south and then the southwest. Smoke trapped in mountain valleys today is unlikely to thin out much as the smoke blocks enough sunshine to limit surface heating and dampen out convection. Some areas may still get a dose of good dispersion if they happen to produce a thunderstorm but overall stagnant conditions are expected to persist through the day. Fire activity levels are expected to remain high along with smoke production and smoke concentrations will not improve before tomorrow in most areas. Some thinning will occur during the warmest part of the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to guide their activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Montana DEQ Forest Fire Smoke Advisory

August 17, 2007

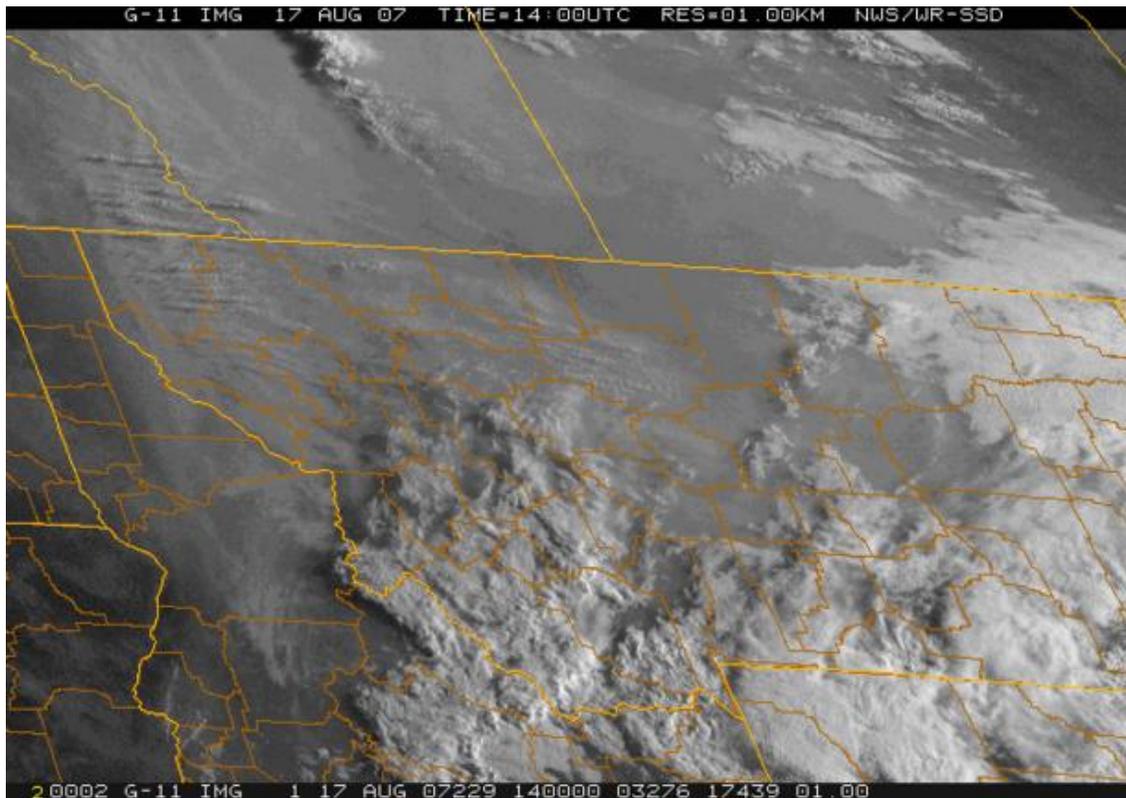
10:00 AM Friday

FORECAST:

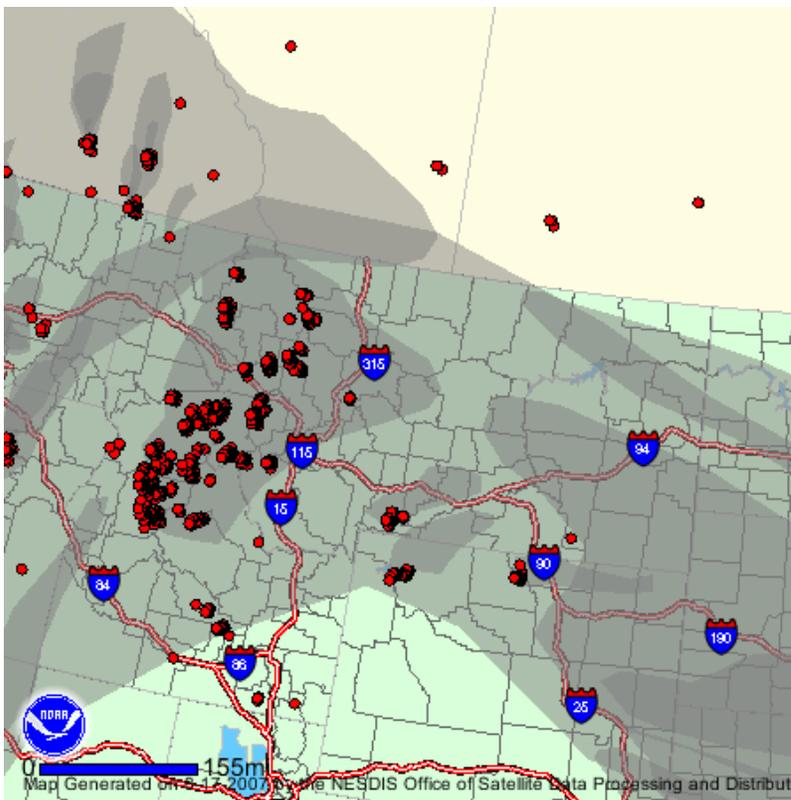
A thick layer of smoke is impacting west central and northwestern Montana this morning. Winds from the south and east have concentrated the smoke over this area and surface smoke levels are unhealthy in most areas at this time. East of the divide, the smoke is aloft and only a few moderate levels have been reported.

Winds today in the western part of the state will be switching from east to west with little net transport and smoke conditions in the most heavily impacted areas are not expected to show much improvement. Some areas will see the smoke thin out in the afternoon but direct plume impacts in some areas could be severe. East of the divide, south winds over the WH Complex fire south of Livingston will continue to impact the upper Yellowstone area today and late morning mixing will bring smoke to the surface across a wide area for a few hours. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Montana DEQ Forest Fire Smoke Advisory

August 17, 2007

10:00 AM Friday

DISCUSSION:

Libby is at unhealthy for sensitive. The rest of the reporting areas in northwest and west central Montana are at unhealthy as of 8 am. This includes Whitefish, Kalispell, Polson, Ronan, Missoula, and Hamilton. Kalispell and Missoula are almost at very unhealthy conditions and could end up there later today. Smoke levels in the Seeley Lake area and the Rock Creek area near the active fires are expected to be as bad or worse. The south winds have improved conditions in Butte substantially; they are now down to moderate after the very high levels there yesterday. Helena, Choteau, and Livingston are currently at moderate as well. Fire activity levels are expected to remain high along with smoke production and smoke concentrations will not improve before tomorrow in most

areas. Some thinning will occur during the warmest part of the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#).

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility to guide activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Updated 10 AM August 17, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Kalispell T24 Whitefish T24 Polson T24 Ronan T24 Hamilton T24 Missoula T8
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Libby T8
<u>MODERATE</u>	Helena T8 Butte T8 Livingston Vis(2) Choteau T24

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Montana DEQ Forest Fire Smoke Advisory

August 18, 2007

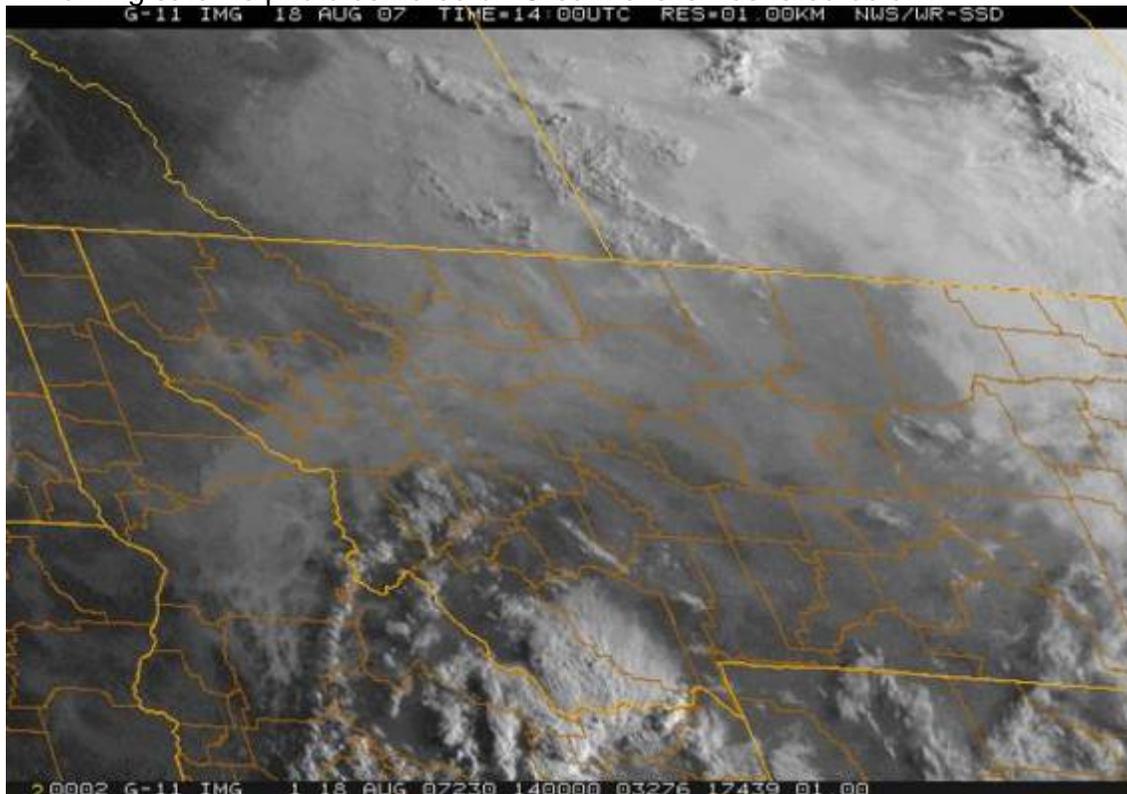
10:00 AM Saturday

FORECAST:

The thick layer of residual smoke that was trapped above northwestern Montana yesterday has finally moved off to the east taking several days worth of smoke with it. Smoke impacts along the Front Range and the western plains have increased but many areas of western Montana are much improved with inversions keeping the smoke aloft away from the surface. The exception is the valleys with active fires like the Bitterroot where unhealthy levels of smoke are being recorded this morning.

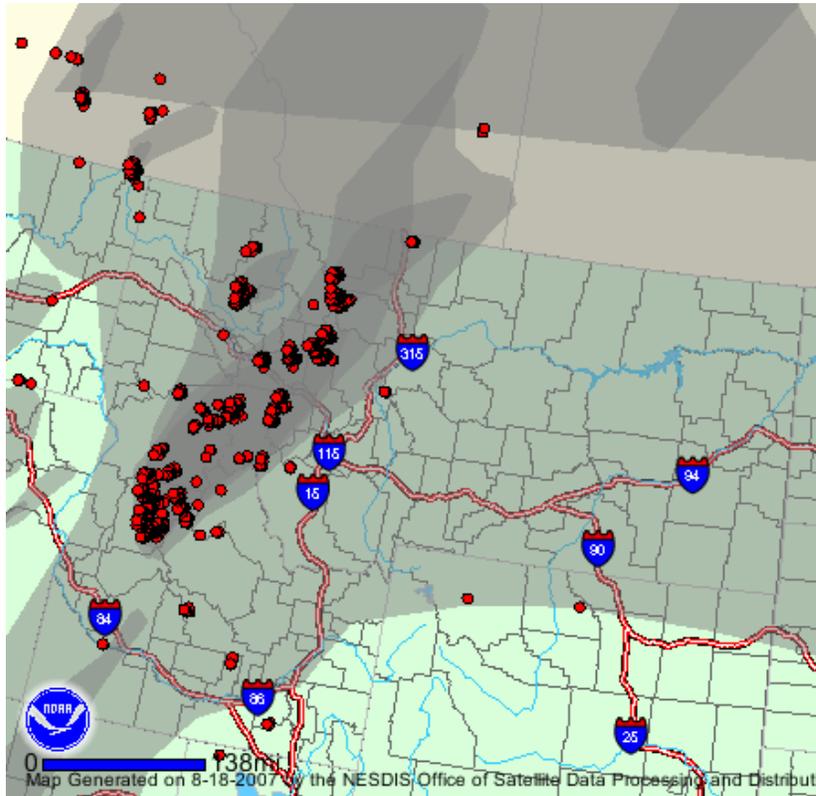
The stagnant conditions that have been producing the high levels of smoke in the western valleys the past week will be moderating over the next couple of days as a trough along the coast starts to work into the state. This will produce stronger winds and better dispersion Saturday and Sunday and will bring in much fresher air by Monday along with a good chance of wetting rains in some areas. Much stronger winds ahead of this system will likely produce strong plume driven fire activity. Red Flag warnings have been posted for western Montana today and local impacts from nearby fires will be an issue in many areas today. Smoke will mix down later this morning across the state and intermittent heavy smoke impacts are likely under the thickest parts of the plume of smoke aloft for a few hours. Overall transport winds will be from the southwest switching to the west by Sunday. This leaves the Bitterroot Valley, the Flathead Valley, Front Range area, and the Big Timber area downwind of large fire activity today and tomorrow. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the

analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo taken at 7:30 PM last night shows the plumes of smoke from fires in Oregon, Idaho, and Montana stretching out to the northeast due to an active afternoon of burning.



<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Montana DEQ Forest Fire Smoke Advisory August 18, 2007

10:00 AM Saturday

DISCUSSION:

Hamilton is still at unhealthy, but Missoula has improved to unhealthy for sensitive and Whitefish and Kalispell have improved dramatically to moderate at this time. Smoke along the Front Range has Cut Bank and Choteau at unhealthy for sensitive and Great Falls and Helena at moderate. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the visibility guidelines to determine current conditions. Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility to guide activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Updated 10 AM August 18, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Hamilton T24
UNHEALTHY FOR SENSITIVE GROUPS	Missoula T8 Cut Bank Vis(8) Choteau T24
MODERATE	Kalispell T8 Whitefish T8 Helena T8 Great Falls Vis(6)

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Montana DEQ Forest Fire Smoke Advisory

August 19, 2007

10:00 AM Sunday

FORECAST:

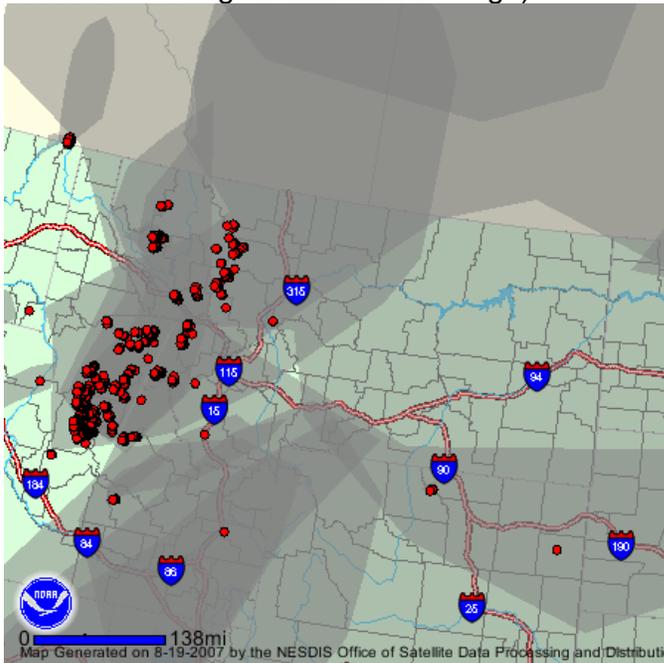
A strong push of air from the southwest ahead of an approaching trough has lifted the smoke out of southwestern Montana this morning. Smoke remains trapped in the Bitterroot Valley and conditions are unhealthy there at this time. The smoke had lifted for a time in many parts of western Montana late last night but has started to impact The Flathead, Jocko, and Missoula Valleys again with unhealthy for sensitive levels currently impacting many areas. Smoke has also reached the surface across the Front Range and the plains as far east as Lewistown.

We will see one more smoky day today ahead of a strong cold front that will sweep into northwestern Montana later this afternoon and will push through the state by Monday evening. This frontal passage will provide strong southwest winds at first changing to the west and finally the northwest. Red Flag warnings have been posted in most areas for strong winds and low relative humidities ahead of the front. Smoke production rates will be very high through this period and strong direct plume impacts will occur downwind of the active fires. As the cooler air mass moves into the state, the residual smoke that has been hanging around for so long will finally move out of the state leaving only the current day's smoke to deal with. There will be some rain with this system along with much cooler temperatures and higher relative humidity. Many of the fires in Idaho and Montana should see a couple of days of much lower fire activity starting tomorrow. This should allow a breath of fresh air in many areas that have been trapped in a long cycle of smoky days and nights. We still have to get by today however, and there is still plenty of smoke around. Smoke will be mixing down through the morning and early afternoon for noticeable surface impacts in many locations. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

This satellite photo taken at 6:30 PM last night shows the plumes of smoke from fires in Idaho, and Montana stretching out to the northeast due to an active afternoon of burning.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory August 19, 2007

10:00 AM Sunday

DISCUSSION:

West of the divide, Hamilton is at [unhealthy](#) this morning and Whitefish, Kalispell, and Missoula are at [unhealthy for sensitive](#). Smoke along the Front Range and across the plains has Cut Bank and Choteau at [unhealthy for sensitive](#) and Lewistown and Helena at MODERATE. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual

smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions. Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility to guide activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Updated 10 AM August 19, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Hamilton T24
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Kalispell Vis(2) Whitefish Vis(2) Missoula T8 Cut Bank Vis(8) Choteau T24
<u>MODERATE</u>	Helena Vis(2) Lewistown Vis(4)

Montana DEQ Forest Fire Smoke Advisory

August 20, 2007

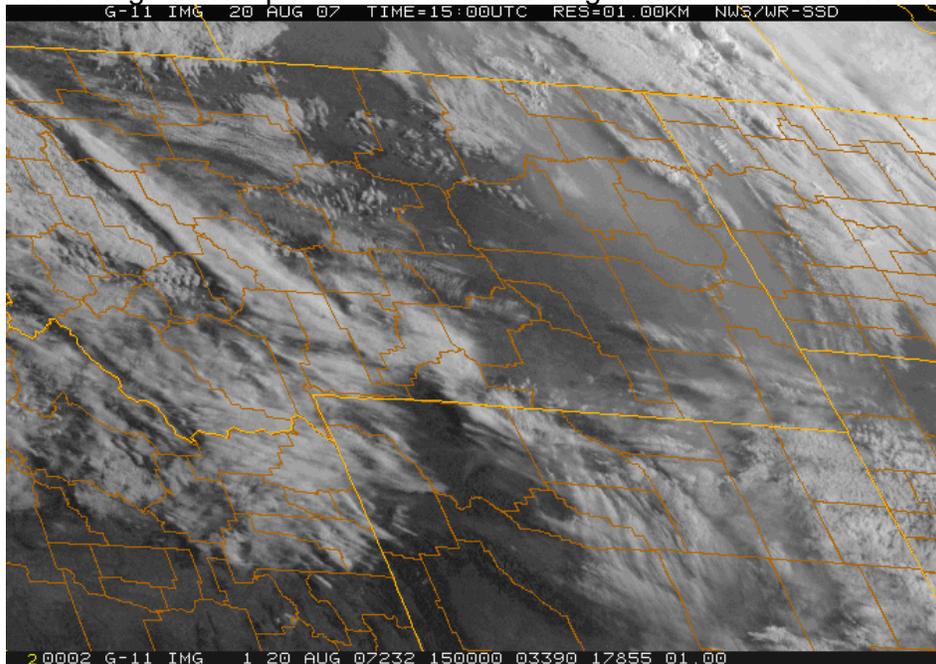
10:00 AM Monday

FORECAST:

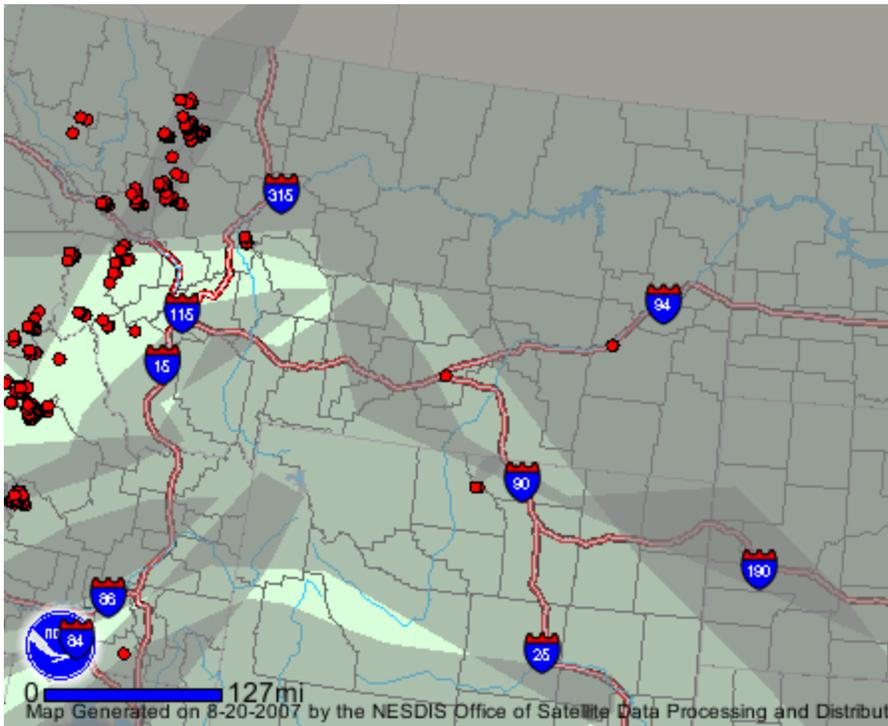
The cold front passing through the state last night and this morning turned into a smoke front for many areas of the state. The mass of smoke being pushed along by high winds is several hundred miles wide and stretches north to south from Canada to Wyoming. The smoke front went through Butte, Helena, Bozeman, and Great Falls last night suddenly dropping visibilities down under two miles and lasting for 5 to 6 hours producing very unhealthy to unhealthy smoke levels as it passed. The smoke has moved into eastern Montana this morning reaching Glasgow at 6 am and Miles City at 7 am. Smoke levels there are at unhealthy right now and will likely persist in that range for a few more hours. Smoke conditions in western Montana behind the front are almost uniformly good right now as all of the residual smoke has been flushed out of the valleys where it had been trapped so long. Moderate levels of smoke have started reaching Dillon however as a strong westerly wind has pushed fresh smoke from Idaho into the southwestern corner of the state.

There will be considerable relief from the smoke for at least the next day or so as a northwest flow aloft becomes established and more showers reduce fire activity levels in many areas. This does not seem to be the "season ending event" we have been waiting for and warmer temperatures and dry conditions will return mid-week. Local smoke impacts from nearby plumes will still be an issue with brisk winds keeping some fires active. Residents near active fires or experiencing noticeable smoke levels should use the [visibility guidelines](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Billings is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory August 20, 2007

10:00 AM Monday

DISCUSSION:

Western Montana is much improved this morning with [good](#) conditions replacing the smoky tale of the past few weeks. Local impacts near the active fires are still an issue and [moderate](#) levels have re-established themselves in the Dillon area as west winds are pushing fresh smoke from the fires in Idaho into southwestern Montana. In eastern Montana, Glasgow and Miles City are at [unhealthy](#) right now and Glendive, Wolf Point, and Sidney have just started to see the front edge of the smoke plume. This smoke should be pretty much out of the state by early afternoon. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions. Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility to guide activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Updated 10 AM August 20, 2007

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Glasgow Vis(3) Miles City Vis(3) Wolf Point Vis(2)
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	Dillon Vis(3) Glendive Vis(2) Sidney Vs(2)

Montana DEQ Forest Fire Smoke Advisory

August 21, 2007

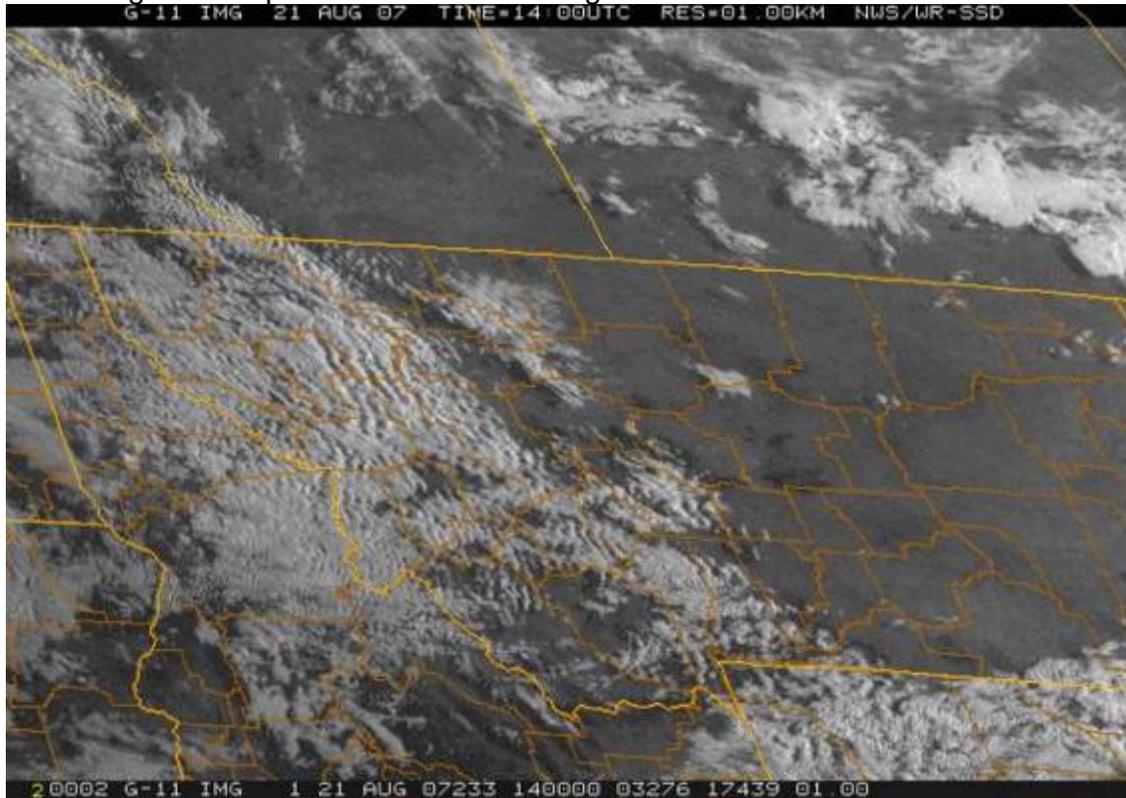
10:00 AM Tuesday

FORECAST:

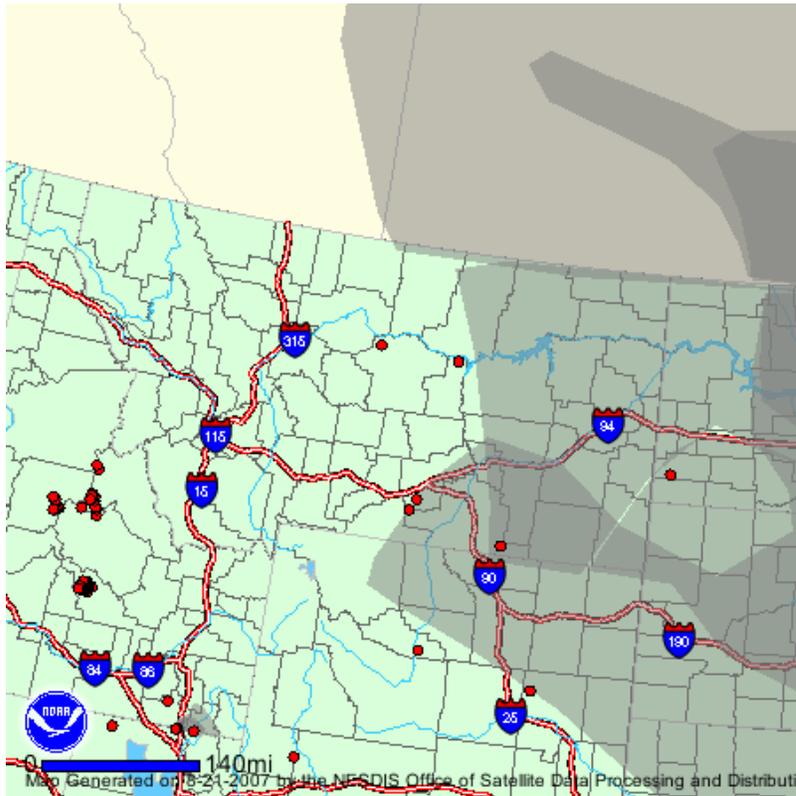
There are no reports of unhealthy levels of smoke this morning. Fresh air has replaced the stagnant smoky air mass that had been lingering over the state for so long. Some moderate smoke is reported in the Butte area and there are likely a few local smoke impacts immediately adjacent to the active fires but overall, clear blue sky is the rule across the state today.

Another day of good air is on tap this morning across the state. Fire activity levels are much lower and the amount of smoke being transported in Montana from Idaho is much less than the past couple of weeks. Westerly winds will bring some smoke overhead later in the day but no buildup of smoke is expected before tomorrow at least. Warmer, dryer weather starting Wednesday could start causing a problem again in that time period. Local smoke impacts from nearby plumes will still be an issue with brisk winds keeping some fires active. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Billings is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory August 21, 2007

10:00 AM Tuesday

DISCUSSION:

All reporting stations are at [good](#) this morning with the exception of Butte which has been seeing some [moderate](#) levels of haze this morning from the fires to the west. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the visibility guidelines to determine current conditions. Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility to guide activity decisions as the situation changes.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

10 AM Update August 21, 2007	
These advisories represent conditions between midnight and 8 AM and may change substantially through the day.	
<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	Butte T8

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 22, 2007

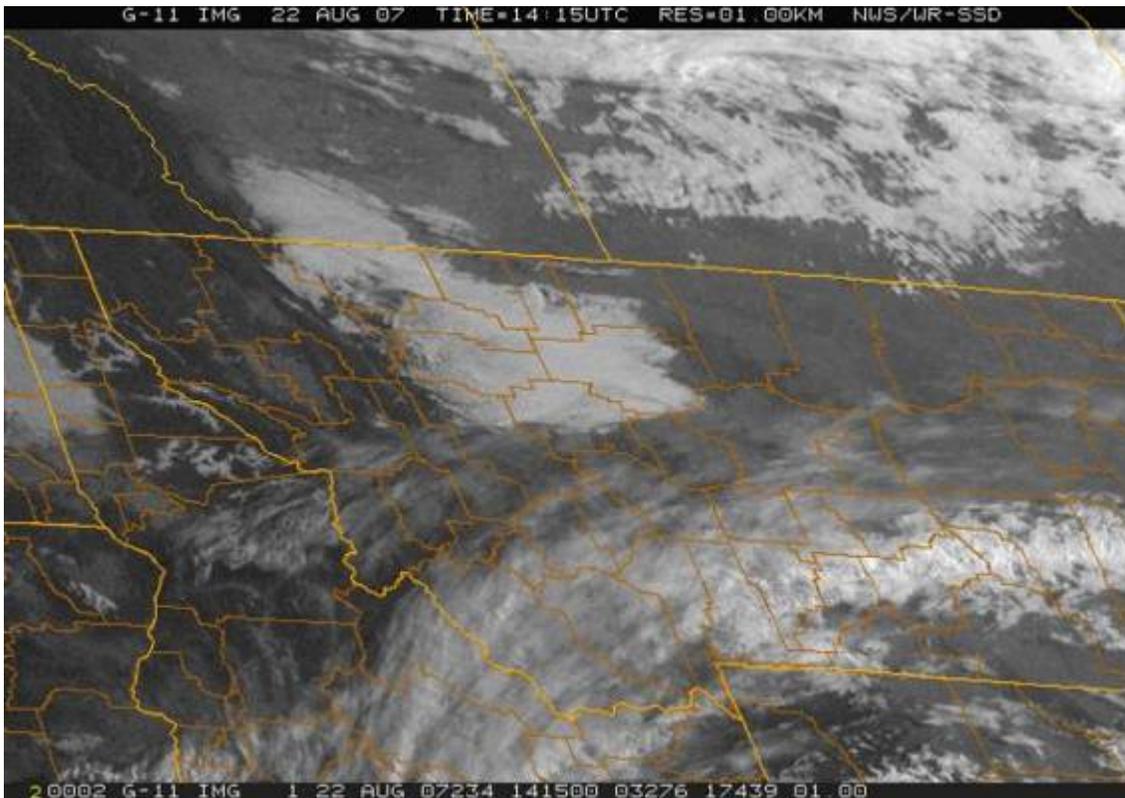
10:00 AM Wednesday

FORECAST:

The Big Sky is blue today with no reports of unhealthy levels of smoke this morning. Fire activity levels across the Idaho/Montana area have been much reduced for the past two days and dispersion and transport have been very favorable. Smoke levels are starting to creep up in the northern Flathead and Missoula areas where conditions are into the moderate range.

With the exception of possible local direct impacts from nearby fires, no significant smoke problems are expected across the state today. West and northwest transport winds will stay steady today and there should be no big build up of residual smoke like last week. A ridge is starting to build into the area and warmer, dryer air and lower dispersion rates will start to raise the smoke impacts over the next several days. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

August 22, 2007

10:00 AM Wednesday

DISCUSSION:

All reporting stations are at [good](#) this morning with the exception of Whitefish, Kalispell, and Missoula where conditions have moved up into [moderate](#). The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 22, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Whitefish T24 Kalispell T24 Missoula Vis(2)

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 23, 2007

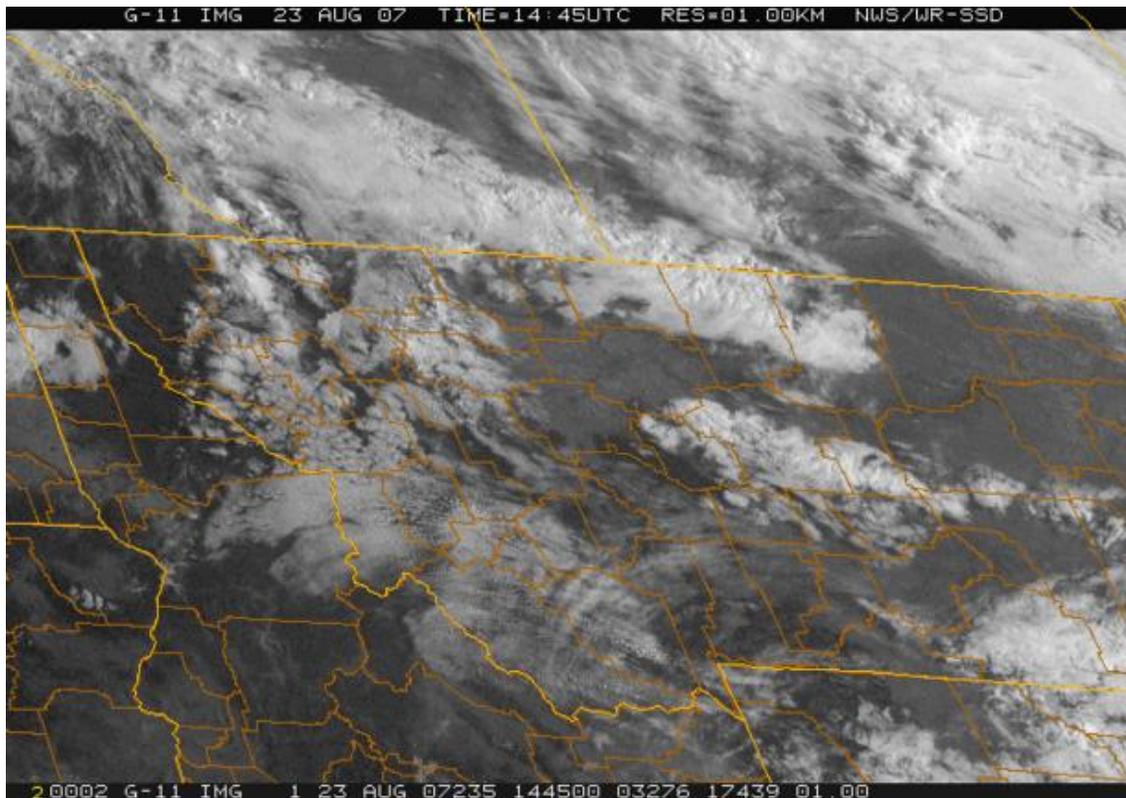
10:00 AM Thursday

FORECAST:

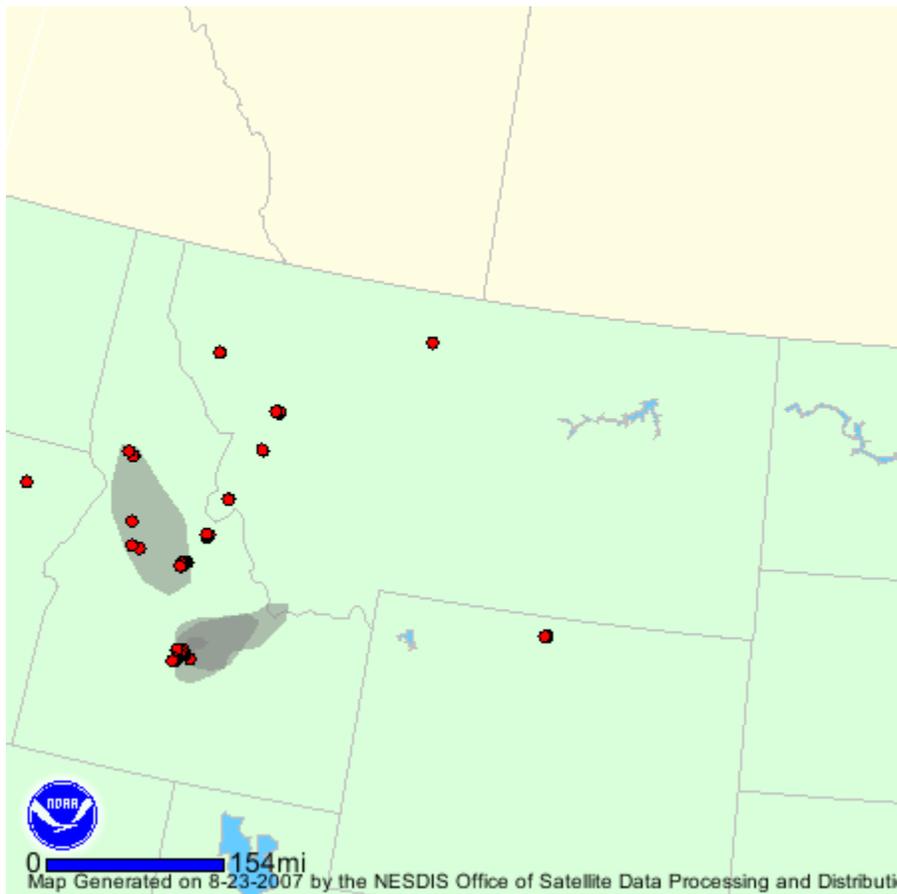
Smoke levels are starting to rise today as smoke from yesterday's fire activity works its way across the state. The northern Flathead is seeing some unhealthy for sensitive levels. Other areas are seeing some transient impacts from the passing smoke as well.

The flow aloft is from the northwest in the northern part of the state and from the west across the central and southern parts. That will bring smoke into the northern Flathead from the Brush Creek fire. More smoke from Idaho will push into central and southwest Montana today and haze levels will start to creep up in the Missoula, Hamilton, and Butte areas. Dispersion this afternoon will be pretty good with little stagnation and smoke build up should not be a major problem. Expect the general haze level to continue to rise over the next several days. Direct plume impact from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite.
Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory August 23, 2007

10:00 AM Thursday

DISCUSSION:

Smoke is sloshing around in the Kalispell, Missoula, and Butte areas. Kalispell is at [unhealthy for sensitive](#), and Whitefish, Missoula, and Butte are at [moderate](#). All the rest of the reporting stations are at [good](#) this morning. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 23, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Kalispell T1
<u>MODERATE</u>	WhitefishT1 Missoula T8 Butte T8

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 24, 2007

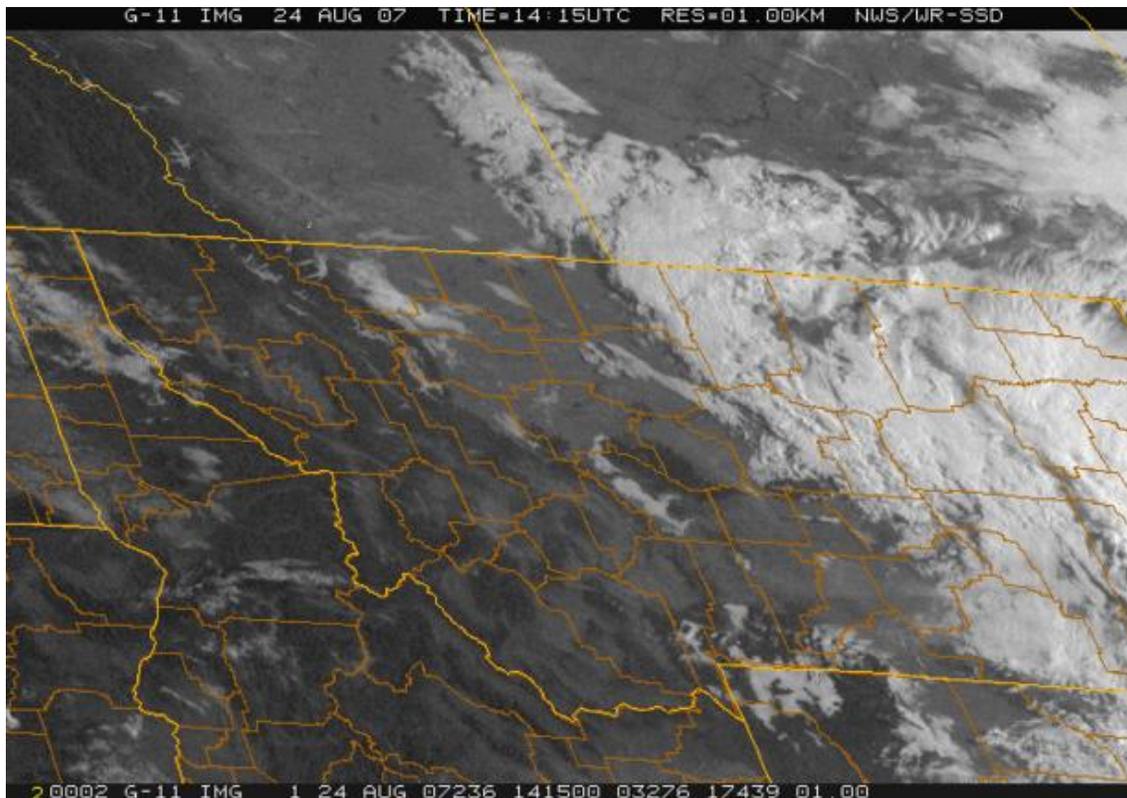
10:00 AM Friday

FORECAST:

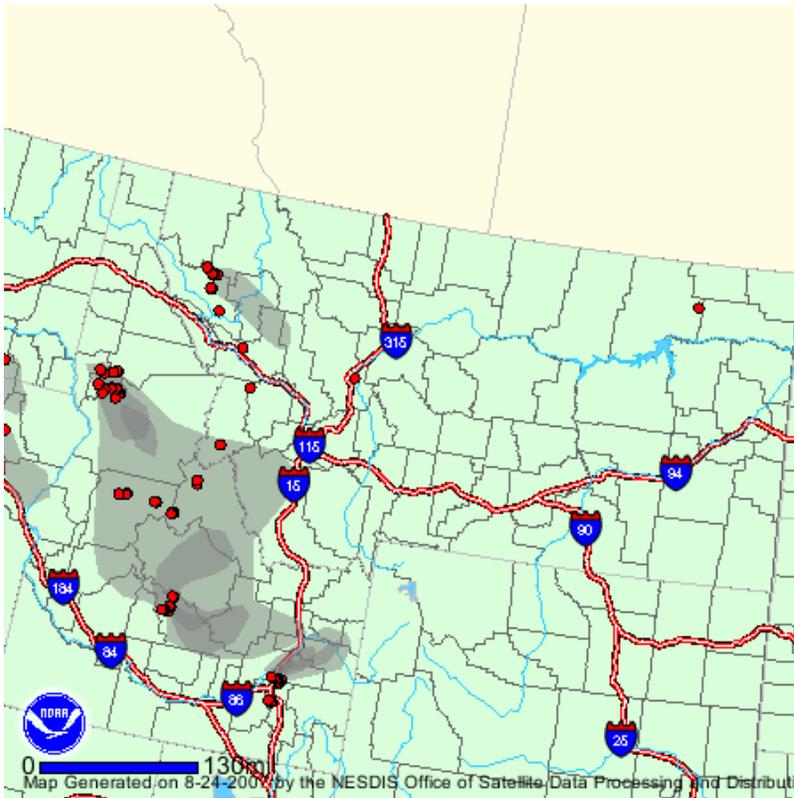
There is a layer of smoke aloft hanging over western Montana but the surface concentrations are no worse than moderate. The rest of the state is seeing blue sky again this morning.

Temperatures will rise over the next couple of days as a ridge builds into Montana. Strong gusty winds are expected to increase smoke production and produce some direct plume impacts locally but the dispersion will remain excellent today and no widespread stagnation episodes are expected. Overall transport winds will be from the west-northwest today and this will bring smoke into the southern Bitterroot, Butte and Dillon areas later this afternoon. Expect the general haze level to continue to rise over the next two days. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Montana DEQ Forest Fire Smoke Advisory August 24, 2007

10:00 AM Friday

DISCUSSION:

Smoke can be seen in the Seeley Lake area on this morning's satellite photo. The smoke from recent fire activity is mostly aloft but [moderate](#) smoke levels are currently impacting Whitefish, Kalispell, Missoula, and Hamilton. Conditions there are expected to get worse for few hours this morning before improving this afternoon. All the rest of the reporting stations are at [good](#) this morning. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 24, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	Whitefish T24 Kalispell T24 Missoula T24 Hamilton T24

T1(x) One-hour TEOM or BAM value (number of values)
 T8(x) Eight-hour average TEOM or BAM value(number of values)
 T24 24 hour average TEOM or BAM value
 Vis(x) Visibility value(number of hours)
 Vis(am/pm) Visibility value from twice/day reporting stations
 (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 25, 2007

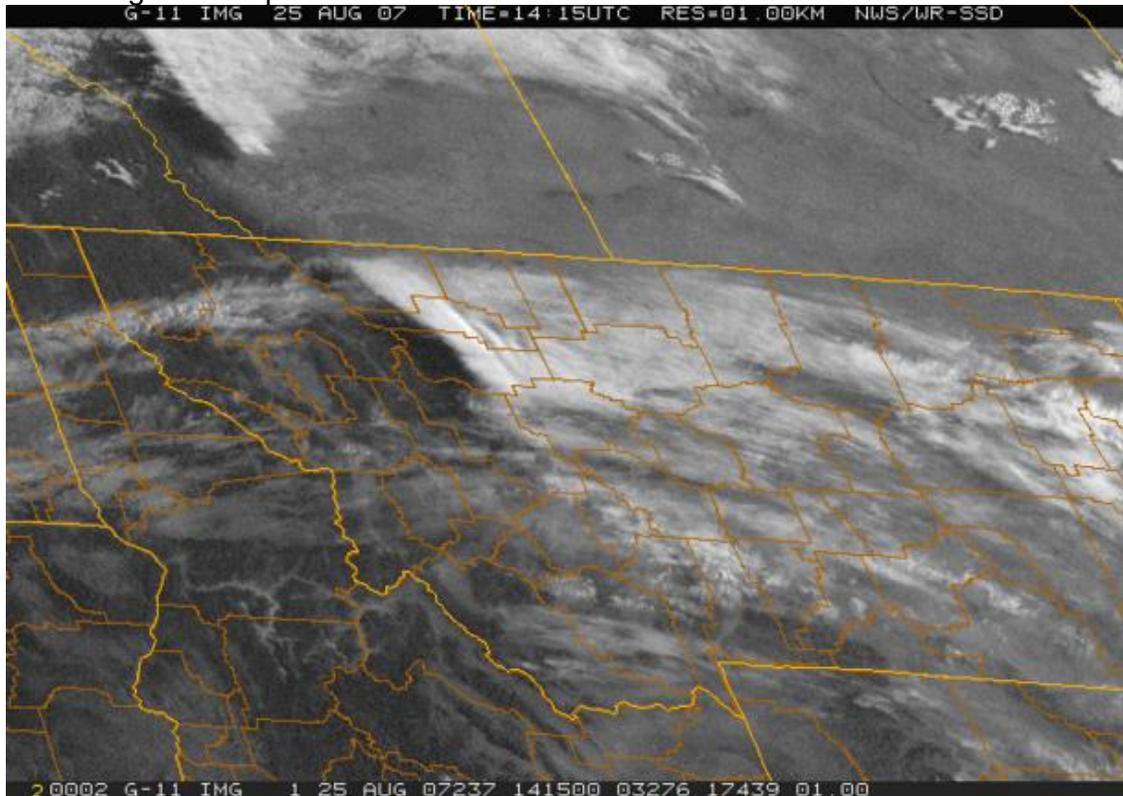
10:00 AM Saturday

FORECAST:

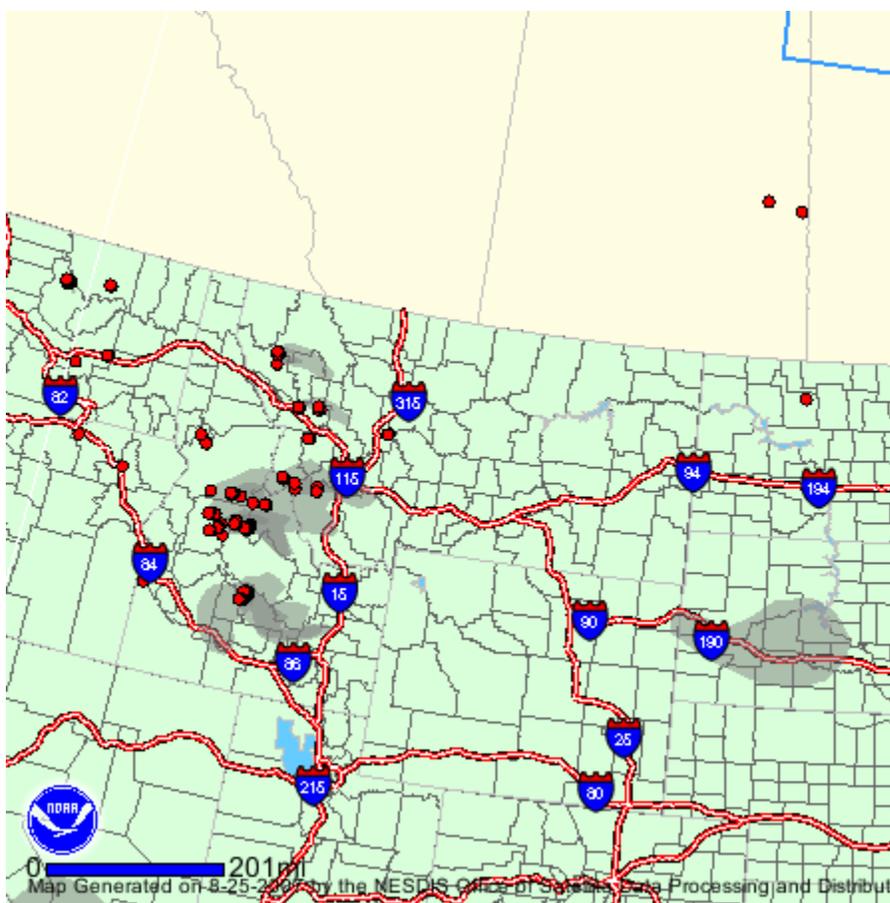
There is a layer of smoke aloft over western Montana and some trapped smoke in the Bitterroot and Seeley/Swan valleys but the surface concentrations at the reporting stations are no worse than moderate. The rest of the state is starting to see broad areas of hazy sky this morning.

Red Flag warnings for hot, dry, and windy conditions are forecast through the day today. These conditions are expected to significantly increase the fire activity levels and to increase smoke levels in the western part of the state and in all communities downwind of the active fires. Transport winds from the west northwest will push smoke from Idaho into the Bitterroot valley and the southwestern corner of Montana. Locally, smoke is expected in the Flathead Valley, the Missoula area, and the Seeley Lake area. The general haze level will continue to rise over the next two days. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory August 25, 2007

10:00 AM Saturday

DISCUSSION:

Smoke can be seen in the Bitterroot Valley, the Seeley Lake area, and the Wisdom area on this morning's satellite photo. The smoke from recent fire activity is mostly aloft but **MODERATE** smoke levels are currently impacting Whitefish, Missoula, and Hamilton. All the rest of the reporting stations are at **GOOD** this morning. Conditions in Western Montana are expected to get worse for few hours this morning and then improve for a while this afternoon before new smoke is starts to move back into the area. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

John Coefield
Meteorologist
Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFU remote access Nephelometers and BAMS.

Updated 10 AM August 25, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	Whitefish T8 Missoula T8 Hamilton T8

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 26, 2007

10:00 AM Sunday

FORECAST:

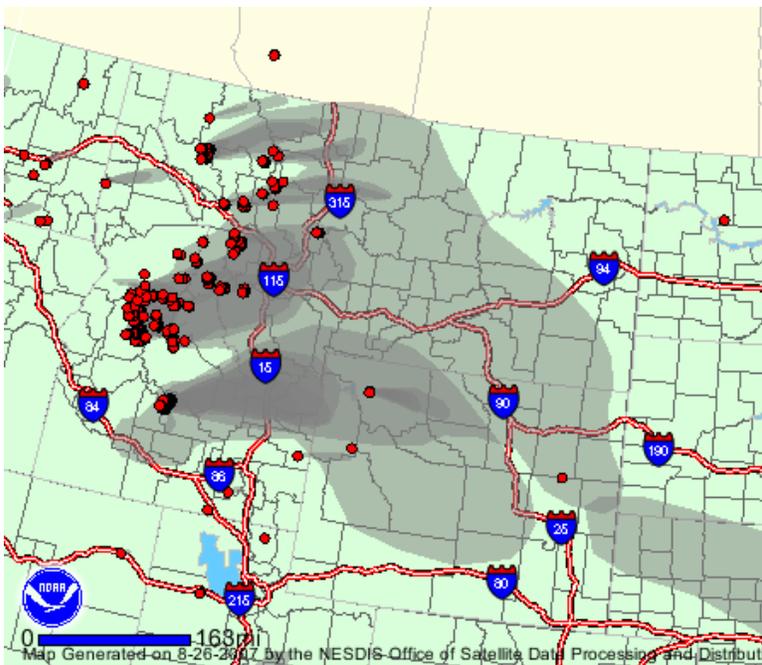
The big plume of smoke that resulted from yesterday's Red Flag conditions and rolled into many communities in Southwestern Montana for a few hours yesterday evening has moved out across south central and eastern Montana and is clearly evident in this morning's satellite photo. Some moderate levels of smoke have remained in the valleys of western Montana.

More Red Flag warnings for hot, dry, and windy conditions are forecast across most of the active fires again today. These conditions are expected produce more of the intense plumes of smoke seen yesterday this afternoon and evening. Transport winds will be westerly most of today and start changing to northwesterly late tonight behind a weak cold front that will start moving into the state this afternoon. Smoke impacts in the Bitterroot Valley and southwestern Montana will be a problem today with those wind vectors. Locally, smoke is expected in the Flathead Valley, the Missoula area, the Rock Creek and Flint Creek areas and the Seeley Lake area. The general haze level will continue to rise today and some temporary surface impacts from the plume aloft are likely across eastern Montana. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

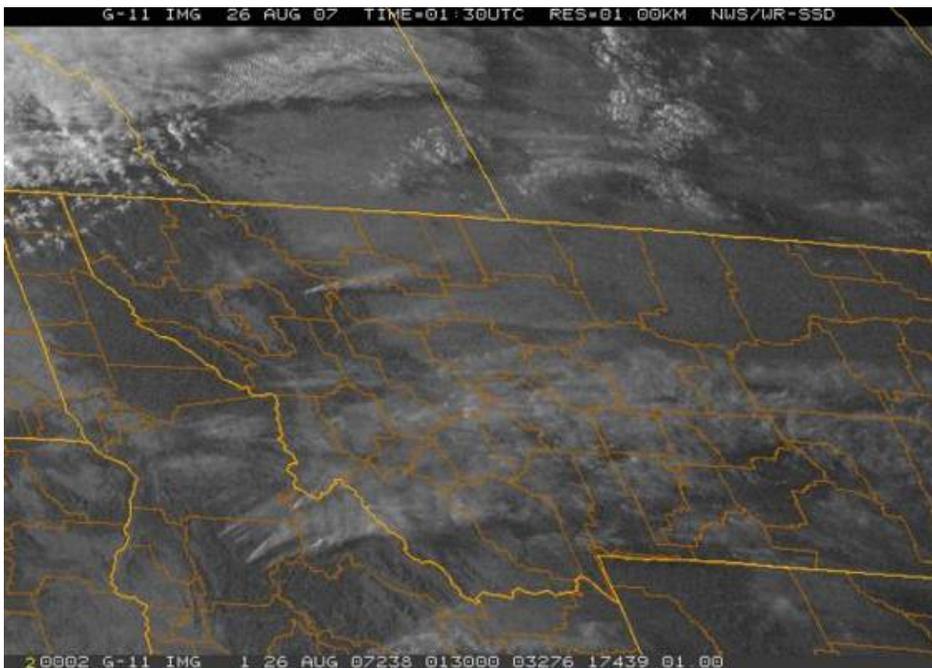


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo taken at 7:30 PM last night shows the origin of the plume across central Montana seen on this morning's photo.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

August 26, 2007

10:00 AM Sunday

DISCUSSION:

Most of the smoke from yesterday's Red Flag event has stayed aloft and is moving across southcentral and eastern Montana. Some of that smoke will mix down to the surface later this morning. In southwestern Montana, Dillon was at [unhealthy for](#)

[sensitive](#) until about 6am this morning. Conditions there have improved temporarily to MODERATE but they will be downwind of a lot of smoke all day so the improvement is not likely to last. [Moderate](#) smoke levels are hanging around most of western Montana. Smoke draining downslope from local fires in the Bitterroot reached Hamilton at 6 AM. The south end of the Bitterroot is likely to stay smoky until this afternoon. All the rest of the reporting stations are at [good](#) this morning. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 26, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day.

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	Dillon Vis(6)
MODERATE	Whitefish T8 Kalispell T8 Missoula T24 Hamilton T1 Butte T8 Dillon Vis(2)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 27, 2007

10:00 AM Monday

FORECAST:

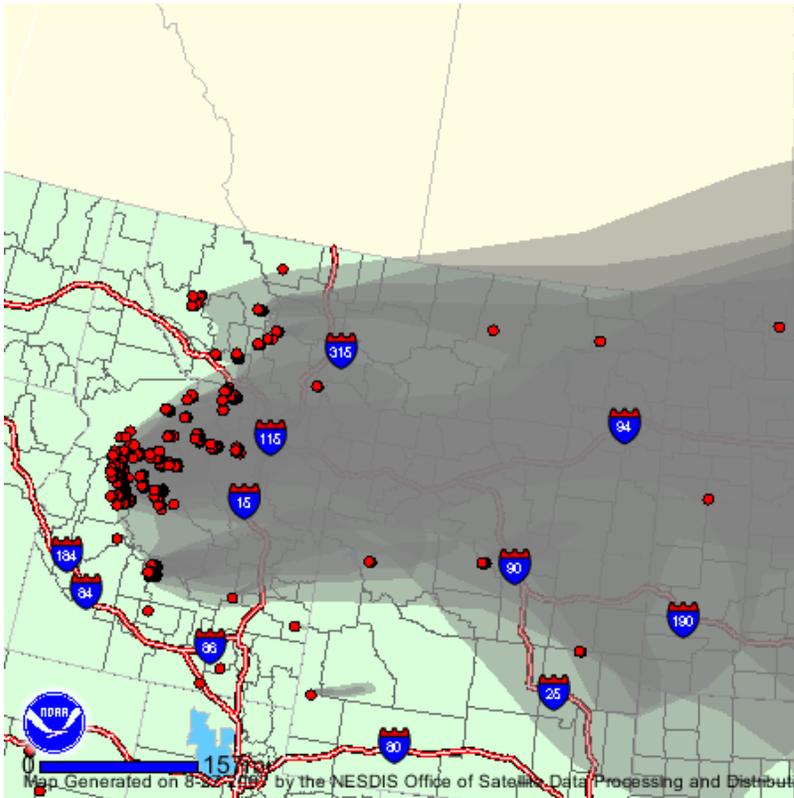
The fires in Idaho and Montana were active yesterday but most of the smoke is staying aloft right now and is headed steadily east. Moderate conditions are still present in some western Montana communities from local fires but only the southwestern corner of the state is receiving new smoke this morning. Many of the fires in the Krassel complex west of Salmon, Idaho remained active through the night and smoke from those fires is just overhead in the Wisdom, Butte, Bozeman, and Dillon areas.

The flow aloft is from the west today as a shallow, cool air mass from Canada has pushed into the northern half of the state producing northerly surface winds east of the divide. We will be transitioning into a weak ridge for the next day and stagnant conditions are not expected. Later this morning, the smoke aloft will start to mix down to the surface and smoke will be noticeable under the thicker parts of the plume of smoke aloft. Hazy skies will be evident across the southern half of the state. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

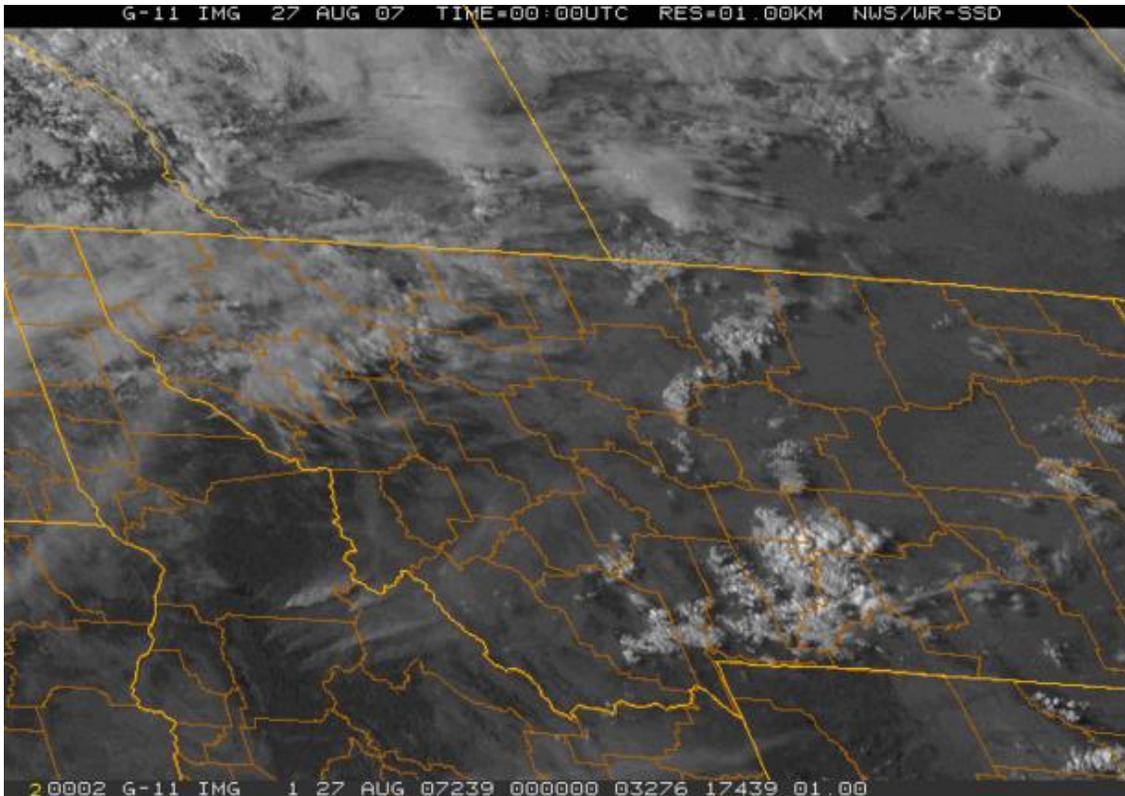


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

This satellite photo taken at 6:00 PM last night shows the smoke plumes from the fires in Idaho moving across into southwestern Montana.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

August 27, 2007

10:00 AM Monday

DISCUSSION:

The smoke from recent fire activity is mostly aloft but [moderate](#) smoke levels are currently impacting Whitefish, Kalispell, and Missoula. There is a lot of smoke in the southwest corner of the state as some of the fires continued to be active throughout the night and still have plumes visible downwind this morning. Surface conditions are OK now but are expected to get worse occasionally later this morning and in the afternoon. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 27, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	WhitefishT24 Kalispell T24 Missoula T24

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 28, 2007

10:00 AM Tuesday

FORECAST:

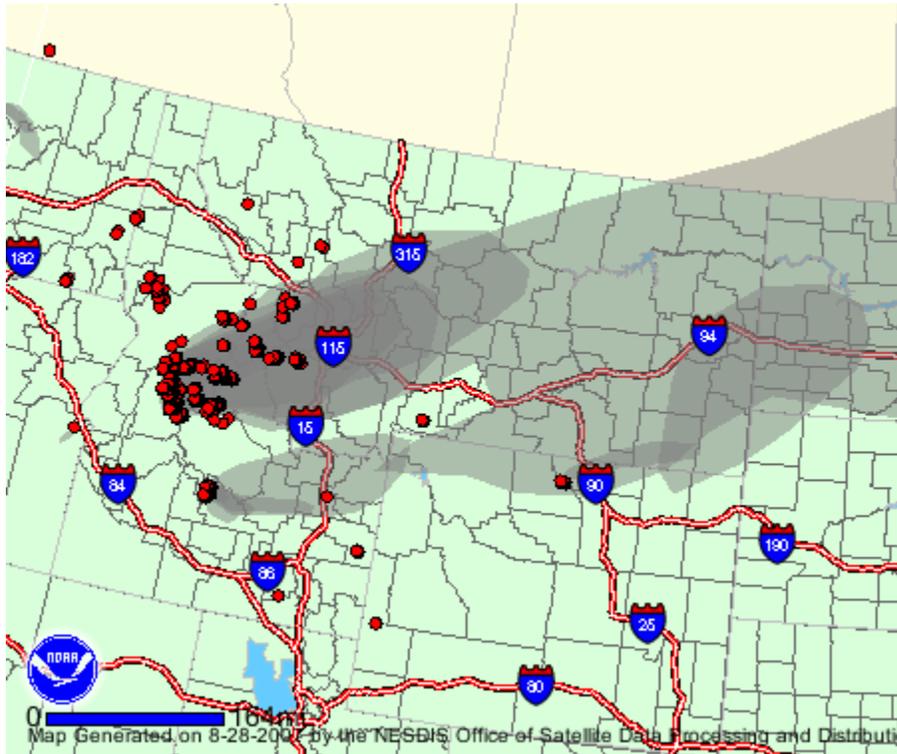
Fire activity was light in most area yesterday and there are no widespread areas of smoke. Smoke is visible in the southern Bitterroot, Rock Creek and Big Hole valleys this morning. Moderate conditions are still present in some western Montana communities from local fires. The fires in the Krassel complex west of Salmon, Idaho were active yesterday through the evening and smoke from those fires is just overhead in the Wisdom, Butte, Bozeman, and Dillon areas.

The flow aloft is from the west today and will start shifting to the southwest by tomorrow as a ridge builds into the northern Rockies. This will start shifting the Idaho smoke into the Missoula and Helena areas and should clear Dillon out by tomorrow. Later this morning, the smoke aloft will start to mix down to the surface and smoke will be noticeable under the thicker parts of the plume of smoke aloft. Hazy skies will be evident across the west and southwestern parts of the state. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite.
Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lq_fire2.php

This MDT web cam photo from Big Hole Pass in southwest Montana at 9 am this morning shows the residual smoke from the fires in Idaho.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

August 28, 2007

10:00 AM Tuesday

DISCUSSION:

The smoke from recent fire activity is mostly aloft but [moderate](#) smoke levels are currently impacting Whitefish, Kalispell, Missoula, and Butte. There is a lot of smoke in the southwest corner of the state as some of the fires west of there in Idaho continued to be active through most of the night. Surface conditions are OK now but are expected to get worse occasionally later this morning and in the afternoon. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 28, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	Whitefish T24 Kalispell T24 Missoula T24 Butte T8

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 29, 2007

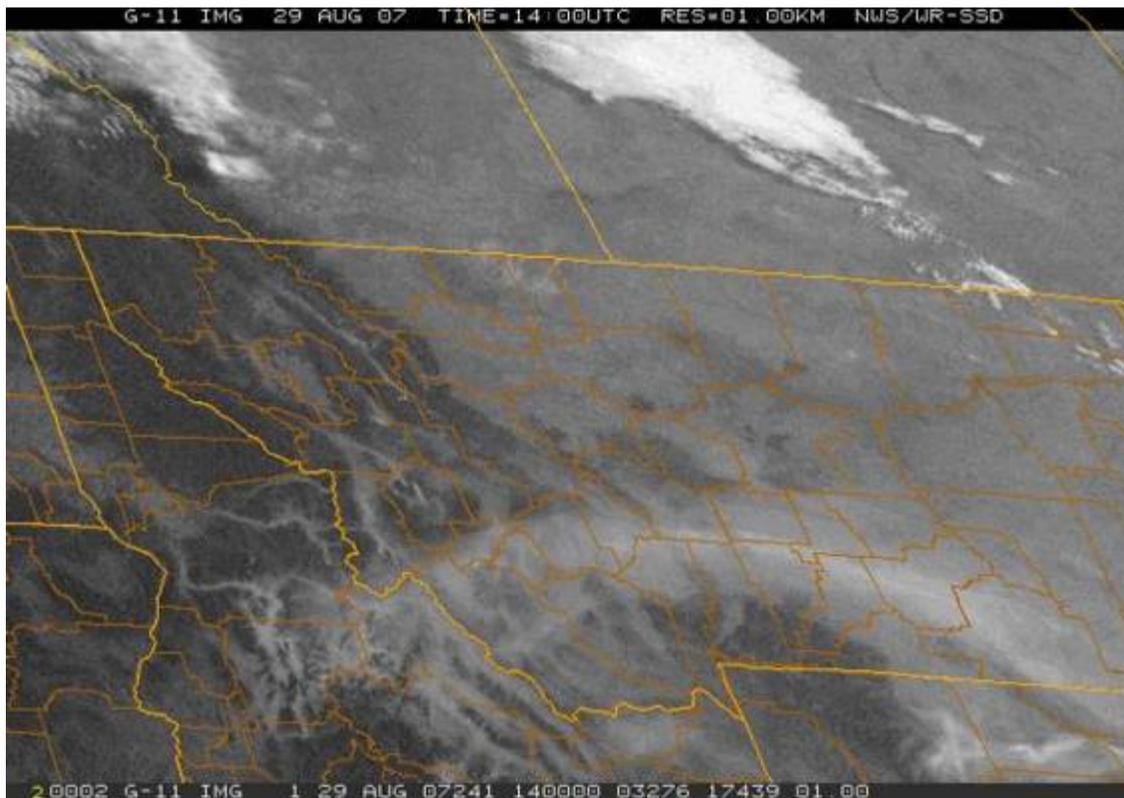
10:00 AM Wednesday

FORECAST:

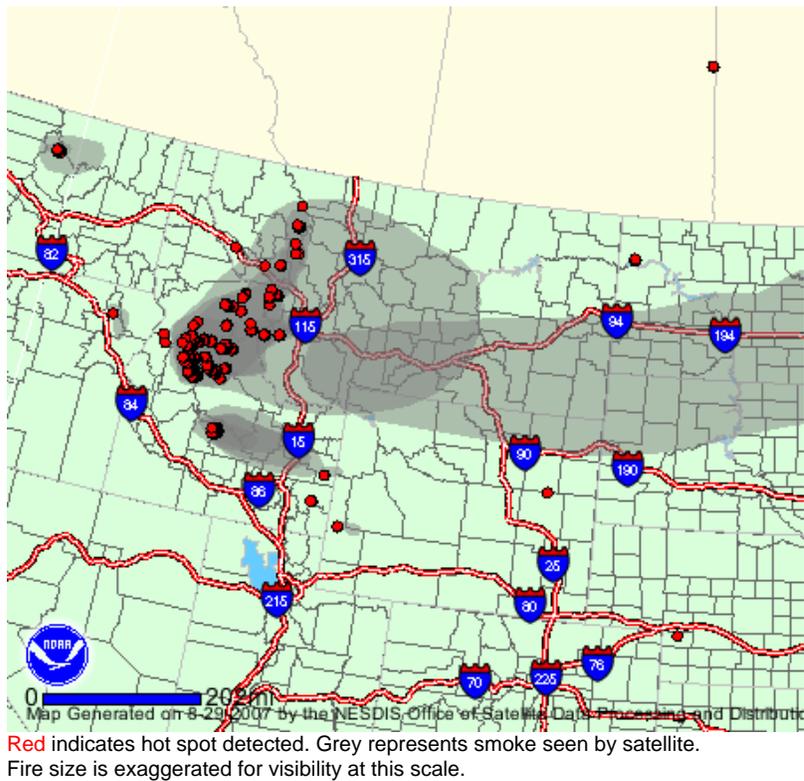
Fire activity was light in most areas yesterday but very strong nocturnal inversions in the valleys of western Montana are producing unhealthy or moderate conditions in most areas west of the divide this morning. A smoke plume aloft stretching across the southern third of the state is causing hazy skies there.

Smoke conditions in some of the valleys of western Montana could stay bad all day with the smoke and low sun angle preventing enough surface heating to mix the morning inversions out. The southern Bitterroot, the Rock Creek/ Flint Creek area, the Butte area, and the Big Hole valley in particular may see no relief today. Warmer, southwest flow later tomorrow ahead of a trough headed this way late in the week may mix these areas out by tomorrow afternoon. Smoke aloft will mix down across the southern part of the state and hazy skies will be very noticeable there. Hotter and dryer conditions over the next couple of days will produce more smoke from the local fires and direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory August 29, 2007

10:00 AM Wednesday

DISCUSSION:

Clear skies under a strong ridge have produced very intense valley inversions in many areas of western Montana. Smoke trapped under the inversions has built up to [unhealthy for sensitive](#) levels in Kalispell and Butte. Whitefish, Missoula, Hamilton, and Bozeman are at [moderate](#) right now and could get worse. The Bitterroot Valley, the Big Hole Valley, the Rock Creek and Flint Creek Valleys, and the Butte area are all packed with smoke visible on this morning's satellite photo. The smoke is aloft over southern plains east of the divide but will mix down later this morning. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 29, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially throughout the day.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Kalispell T24 Butte T24
<u>MODERATE</u>	WhitefishT24 Missoula T24 Hamilton T24

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 30, 2007

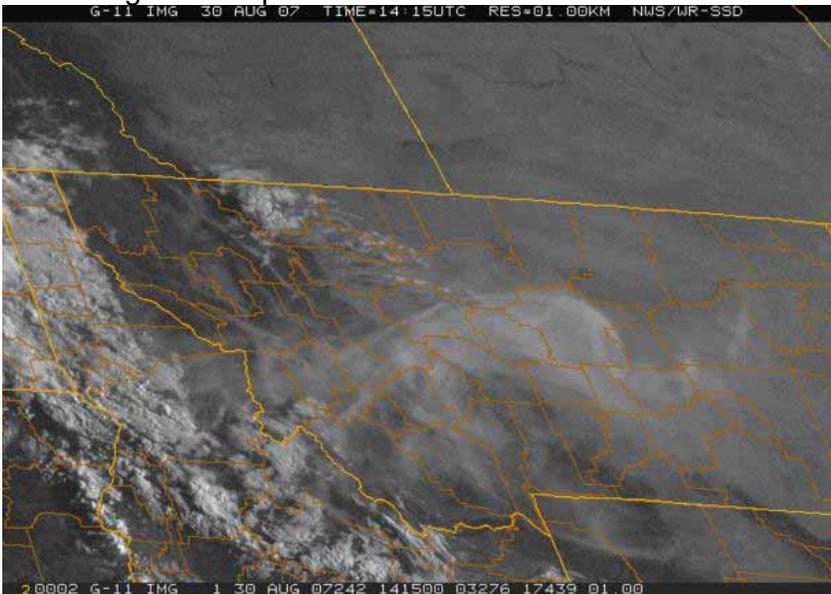
10:00 AM Thursday

FORECAST:

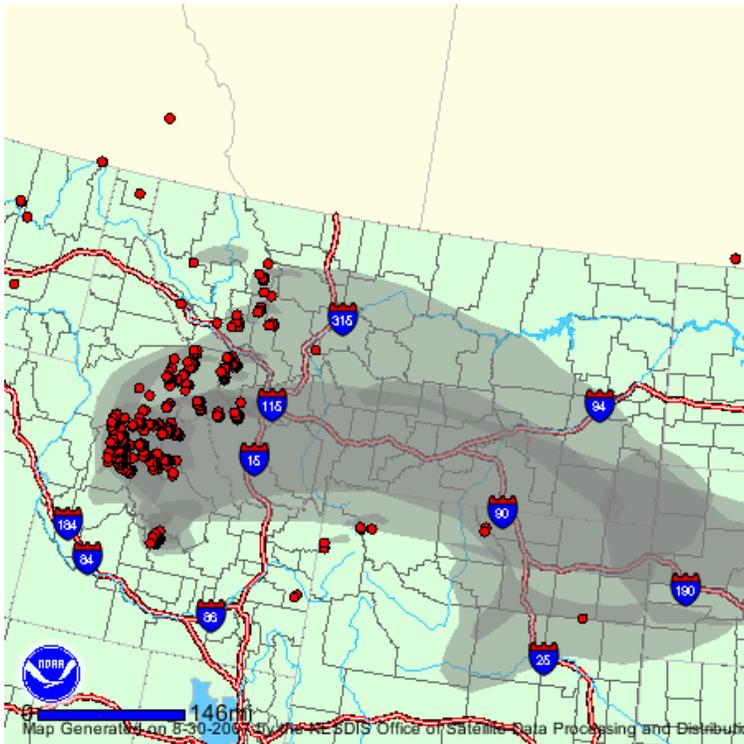
Fires in Idaho and western Montana were active into the evening last night and there is a very noticeable smoke plume aloft visible on this morning's satellite photo. Residual smoke trapped in valleys with active fires has built up to unhealthy levels in the northern Flathead, the Missoula area, the Bitterroot Valley and the area around Butte. Smoke is also visible in the Big Hole Valley, and the Rock Creek/Flint Creek Valleys.

A push of clouds and warm air from the southwest ahead of a trough approaching western Montana should allow most of the western valleys to mix out later today. Dispersion will be pretty good with convective activity through this evening and tomorrow and a good chance of wetting rains across the northwestern part of the state. Red Flag warnings for gusty winds and some dry lightning storms have been posted in some areas and some large plumes moving to the northeast are likely this afternoon. Record breaking heat is forecast over the next two days and this could produce more smoke from the local fires. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



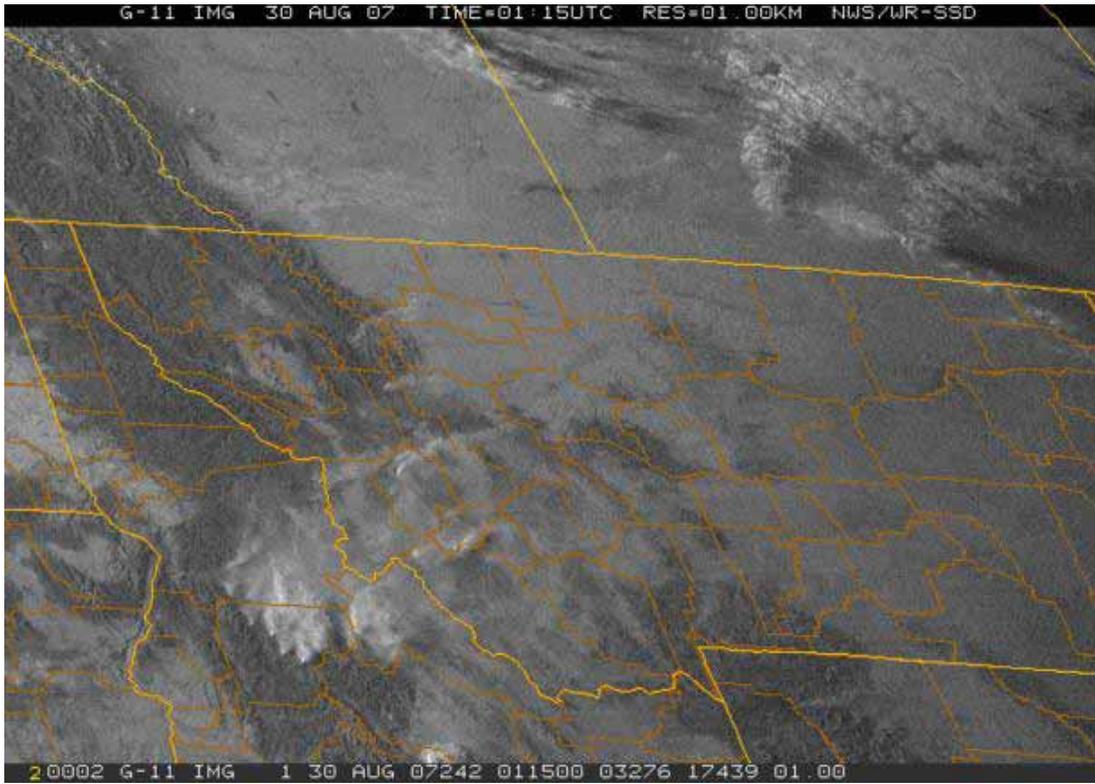
This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lq_fire2.php

This satellite photo taken at 7:15 PM last night shows the smoke plumes from the fires in Idaho and western Montana that combined into the plume aloft visible on this morning's satellite photo.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Montana DEQ Forest Fire Smoke Advisory August 30, 2007

10:00 AM Thursday

DISCUSSION:

Clear skies under a strong ridge have produced very intense valley inversions in many areas of western Montana. Smoke trapped under the inversions has built up to UNHEALTHY FOR SENSITIVE levels in Whitefish, Kalispell, Missoula, and Hamilton. Butte is at UNHEALTHY. Polson, Helena, Choteau, and Augusta are currently at MODERATE. Smoke levels in the valleys near the active fires are expected to be UNHEALTHY or worse. The inversions are keeping the smoke aloft over the central part of the state producing hazy skies. Some smoke will mix down later this morning for some strong intermittent surface impacts under the thickest parts of the plume aloft. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

John Coefield

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 30, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Butte t24
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Whitefish T1 Kalispell T1 Missoula T24 Hamilton T24
<u>MODERATE</u>	Polson T24 Helena T8 Choteau T24 Augusta T24

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines <http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

August 31, 2007

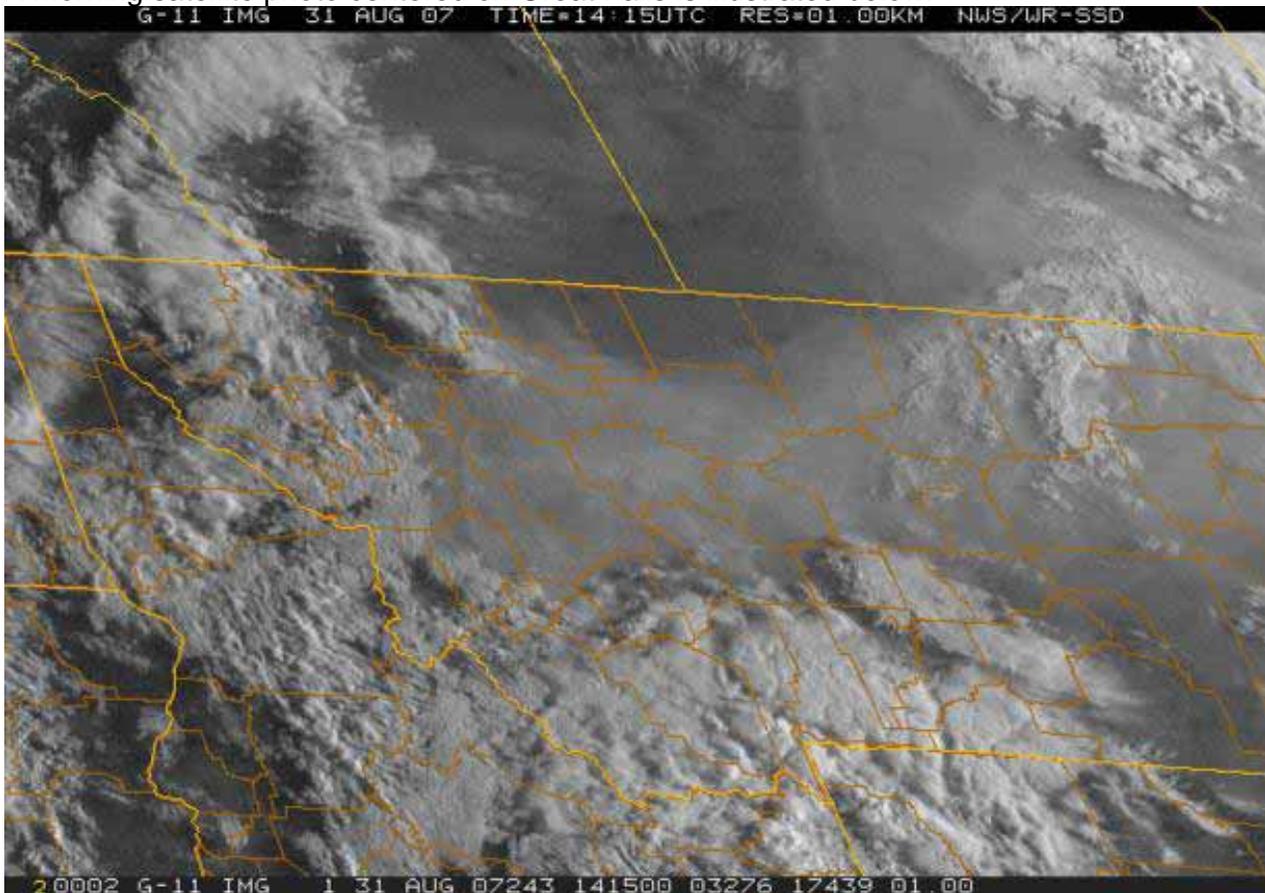
10:00 AM Friday

FORECAST:

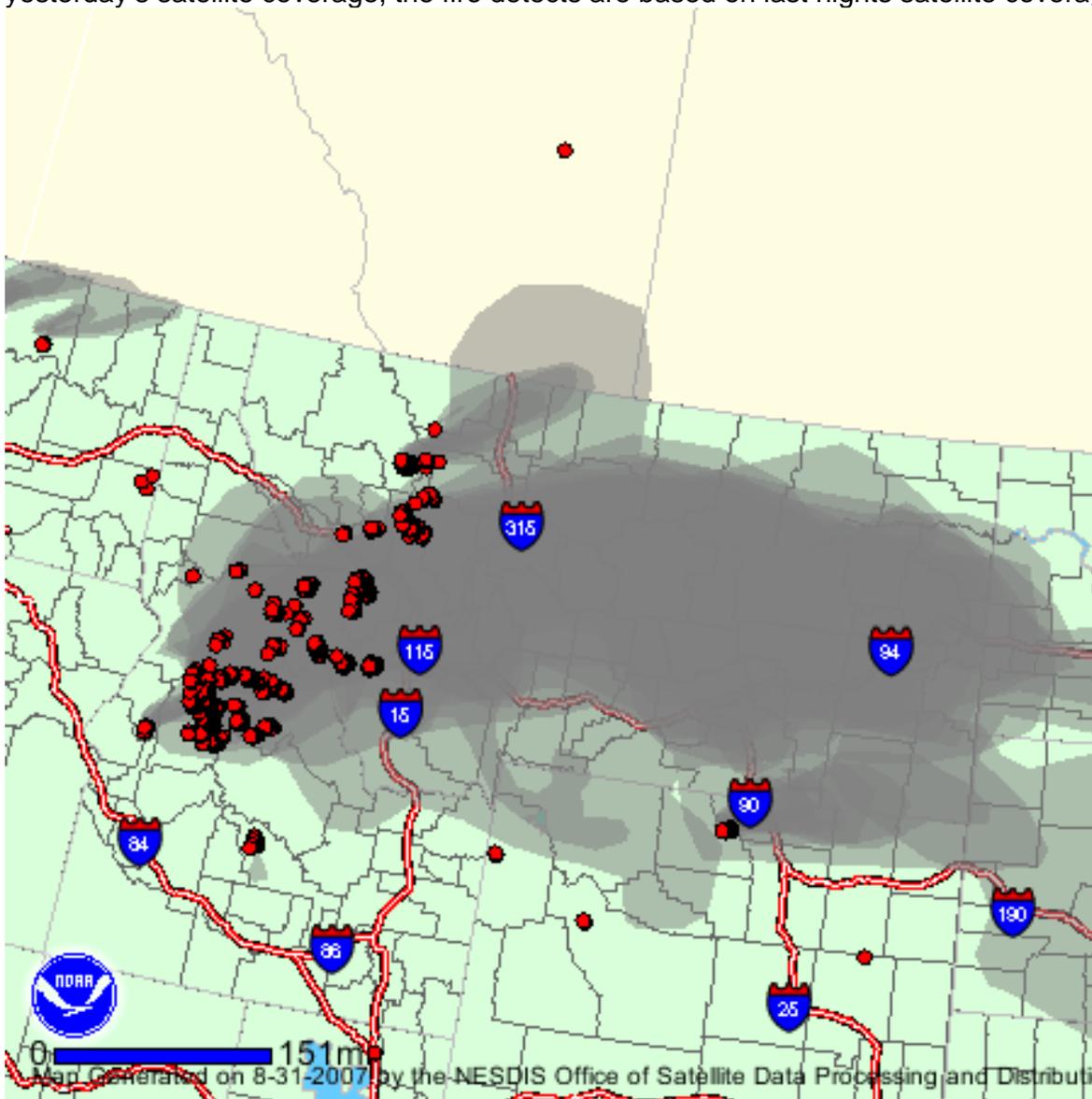
Daily dispersion rates are steadily decreasing as the sun angle lowers and the days shorten up heading into fall. This has allowed a substantial build up of smoke in the valleys with active fires. Very Unhealthy conditions are present in the Bitterroot, Missoula, Big Hole, Rock Creek/Flint Creek, and Clark Fork Valleys. East of the divide along the Front Range and out into the western plains the conditions are not as bad but still Unhealthy. A dense plume of smoke aloft is clearly visible across the central part of the state this morning. There is even more smoke below the clouds in western Montana.

A continuing push of clouds and warm air from the southwest ahead of a trough approaching western Montana should improve the dispersion later this afternoon in most areas. Convective activity along with some wetting rains in the northwest should improve conditions in the Flathead substantially. Other areas should see an improvement as well but with some Red Flag warnings for gusty winds and mostly dry thunderstorms in the southwest, smoke will continue to be a problem throughout the day today. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



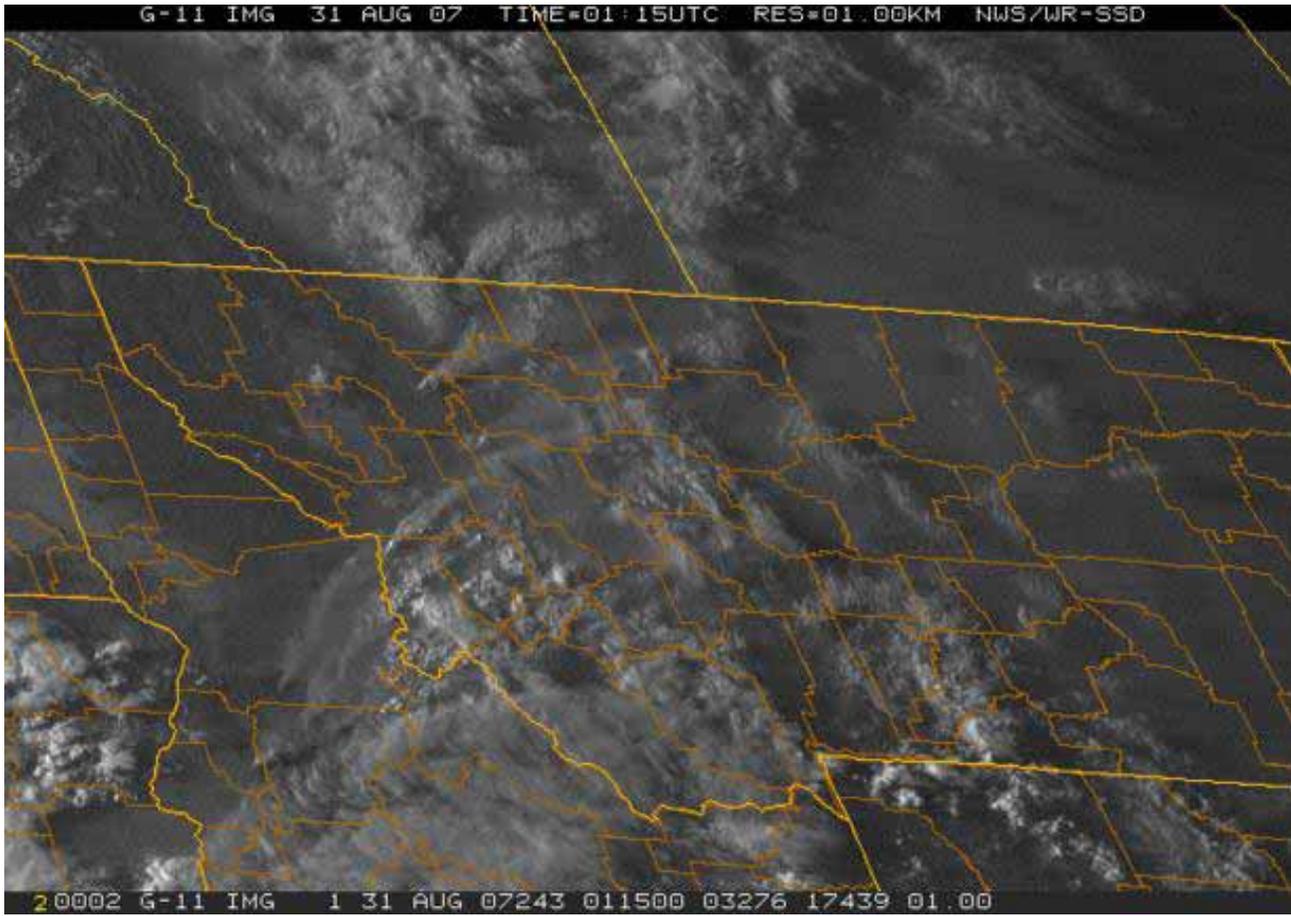
This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo taken at 7:15 PM last night shows the smoke plumes from the fires in Idaho and western Montana that combined into the plume aloft visible on this morning's satellite photo.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Montana DEQ Forest Fire Smoke Advisory August 31, 2007

10:00 AM Friday

DISCUSSION:

Increased fire activity levels have combined with strong nocturnal inversions to produce VERY UNHEALTHY levels of smoke in Missoula, Hamilton, and Butte. UNHEALTHY levels are currently impacting Whitefish, Helena, Choteau, Augusta, and Great Falls. The smoke in the northern Flathead is sloshing around and has missed Kalispell for the last several hours and they are currently at MODERATE. Smoke conditions in the Rock Creek/Flint Creek valleys and the Big Hole valley are expected to be UNHEALTHY or worse. Southwest flow will continue into the state today and with Red Flag warnings out more smoke can be expected. Dispersion should improve markedly later this afternoon along with convective activity and a good chance of measurable rain in the northwestern part of the state and the northern Rockies. Smoke will mix down and be noticeable at the surface under the plume aloft later this morning. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will

need to pay close attention to conditions in their area and use the visibility guidelines to determine current conditions.

John Coefield
 Meteorologist
 Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM August 31, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	Missoula T24 Hamilton T24 Butte T24
<u>UNHEALTHY</u>	Whitefish T24 Helena T8 Choteau T24 Augusta T8 Great Falls Vis(8)
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	
<u>MODERATE</u>	Kalispell T1

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines <http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

September 1, 2007

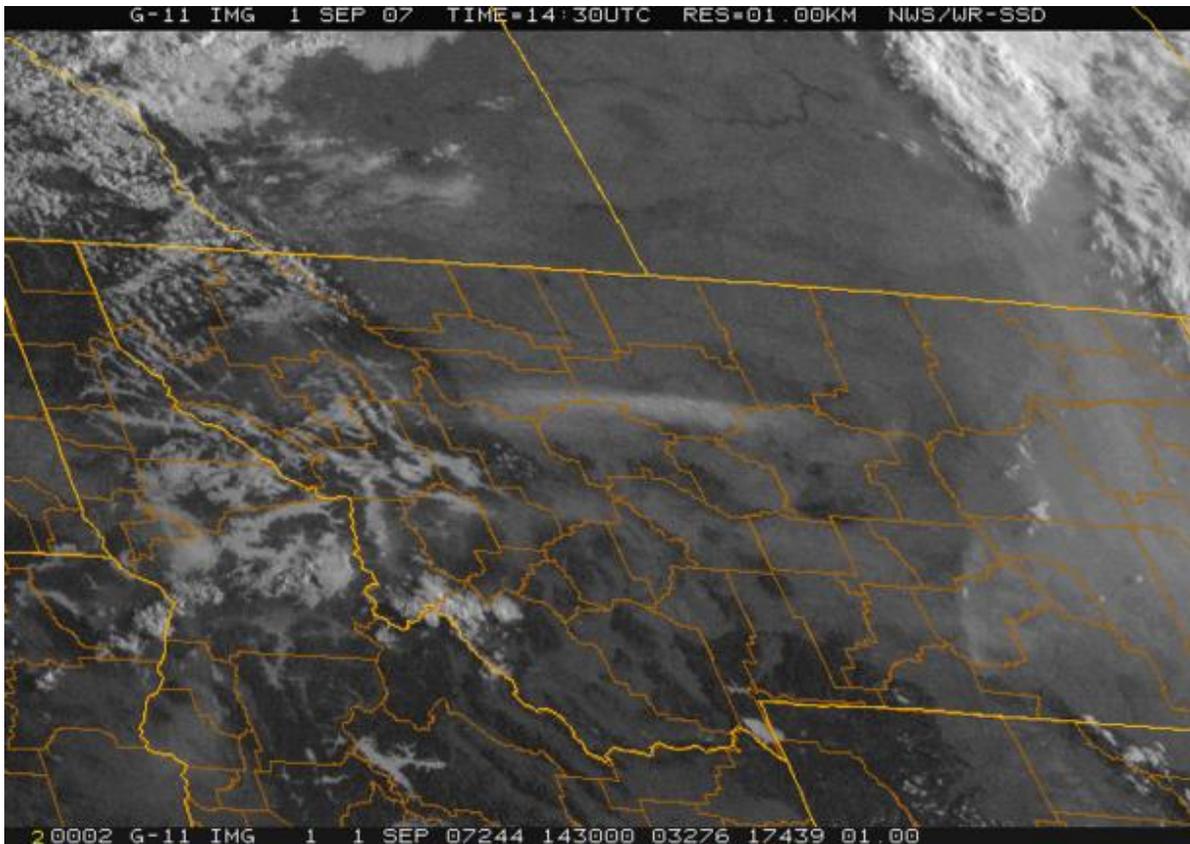
10:00 AM Saturday

FORECAST:

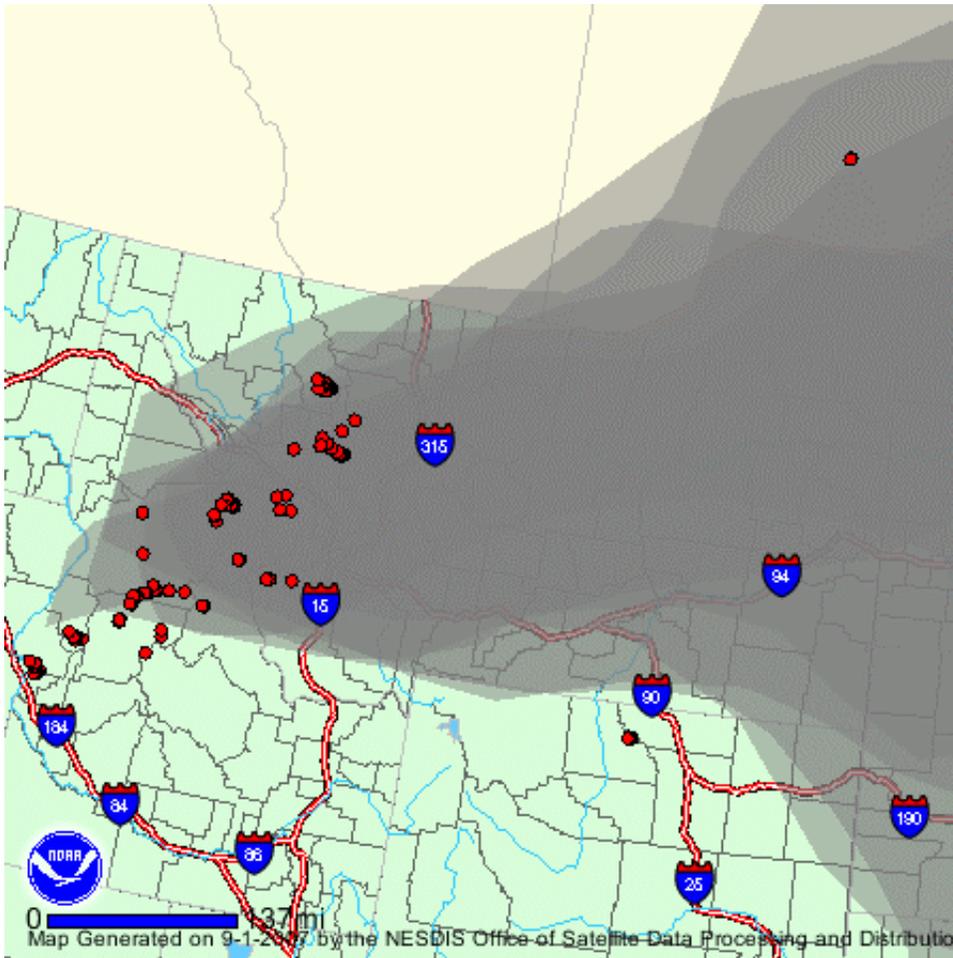
Clear skies after some measurable rain yesterday has produced very strong inversions again today and dense fog in many western valleys. Smoke has reached the surface in eastern Montana producing unhealthy levels of smoke in some areas. Current air quality information is unavailable in the AIRNOW cities due to technical difficulties with the server.

The general transport winds will be from the west today. This will clear the smoke out of eastern Montana later this morning. Particle scavenging in the fog layer may help reduce the concentration of smoke in the western Valleys. After the fog has burned off and the humidity gets below 90%, residents there should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is below: Note the plume of smoke reaching out to the east over Chouteau and Ft. Benton from the fires in the Bob Marshal Wilderness.



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Montana DEQ Forest Fire Smoke Advisory September 1, 2007

10:00 AM Saturday

DISCUSSION:

A combination of fog and smoke is trapped in most western Montana Valley this morning. Technical difficulties with AIRNOW server have prevented any updates since last evening for the AIRNOW cities. There is still lots of smoke mixed in with the fog but substantial particle scavenging should be occurring with the fog and smoke levels later this morning after the fog burns out may be much improved. Residents in western Montana should use the [visibility guidelines](#) to determine current conditions after the fog is gone. In Eastern Montana the plume of smoke has reached the surface in the Miles City and Baker area south of a frontal boundary. Conditions in Miles City are at UNHEALTHY FOR SENSITIVE but should improve by noon.

The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the visibility guidelines to determine current conditions.

John Coefield
 Meteorologist
 Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM September 1, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

NOTE: TECHNICAL DIFFICULTIES THIS MORNING (see note above)

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	Hamilton T24
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Miles City vis(6) Hamilton T24
<u>MODERATE</u>	Baker vis(1)

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines

<http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

September 02, 2007

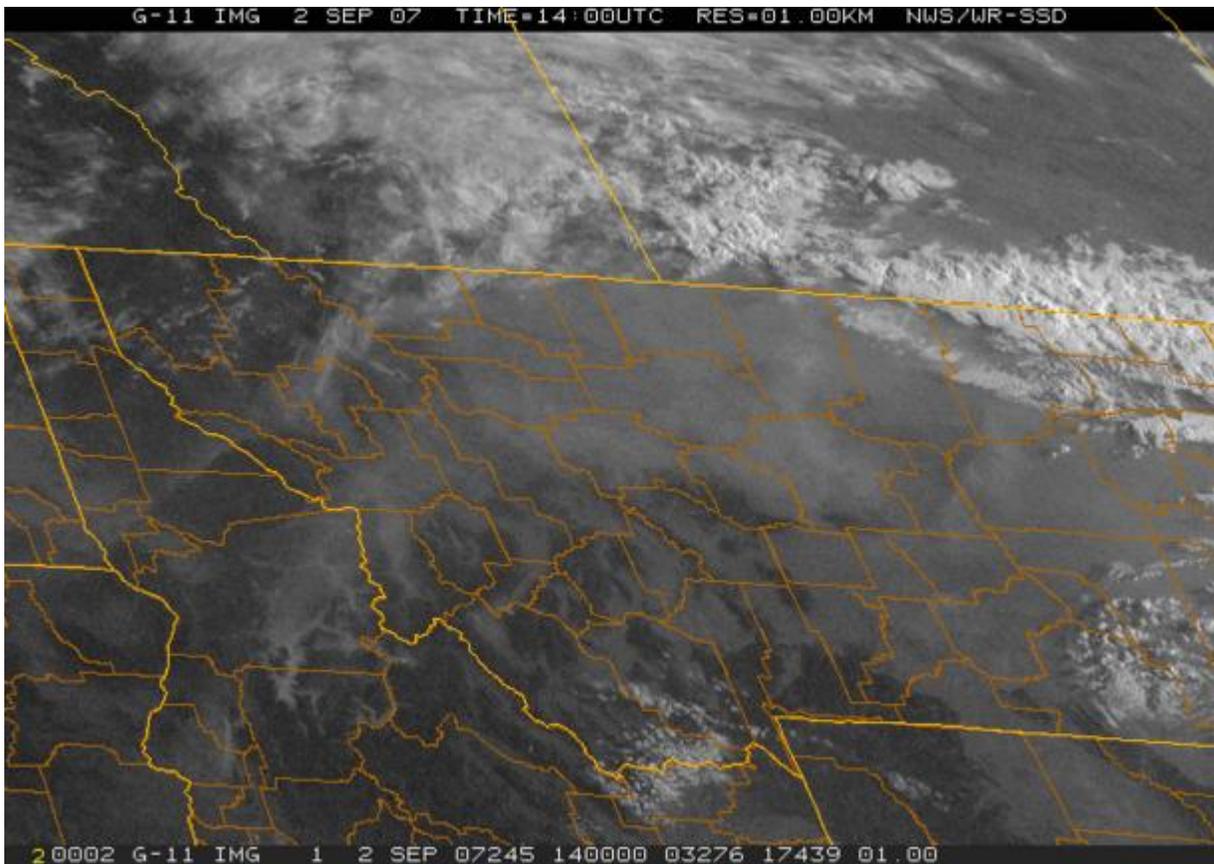
10:00 AM Sunday

FORECAST:

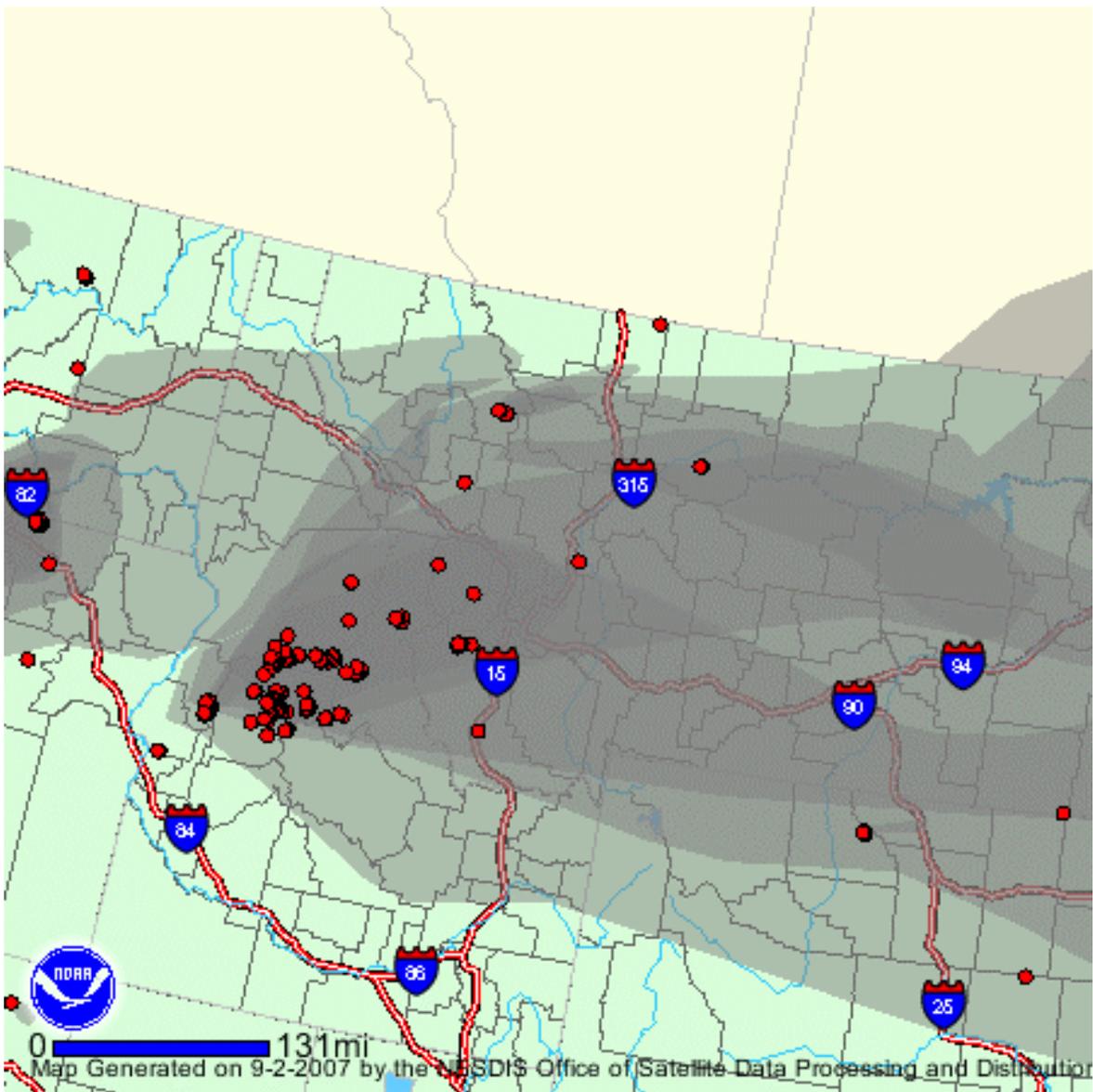
The smoke plume from yesterday's fire activity is across the northern third of the state this morning and hazy skies are noticeable there. Unhealthy levels of smoke have been trapped in the Bitterroot valley this morning and conditions in the Big Hole and Rock Creek/Flint Creek valleys are also expected to be poor. Continued technical difficulties with the AIRNOW server means no new data in the AIRNOW cities has been posted since Friday evening.

Hot and dry weather will continue today for more smoke this evening. Conditions in the western valleys should improve as the smoke mixes out this afternoon. Some smoke will be noticeable temporarily at the surface under the plume aloft as the smoke mixes down later this morning. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the VISIBILITY GUIDELINES to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

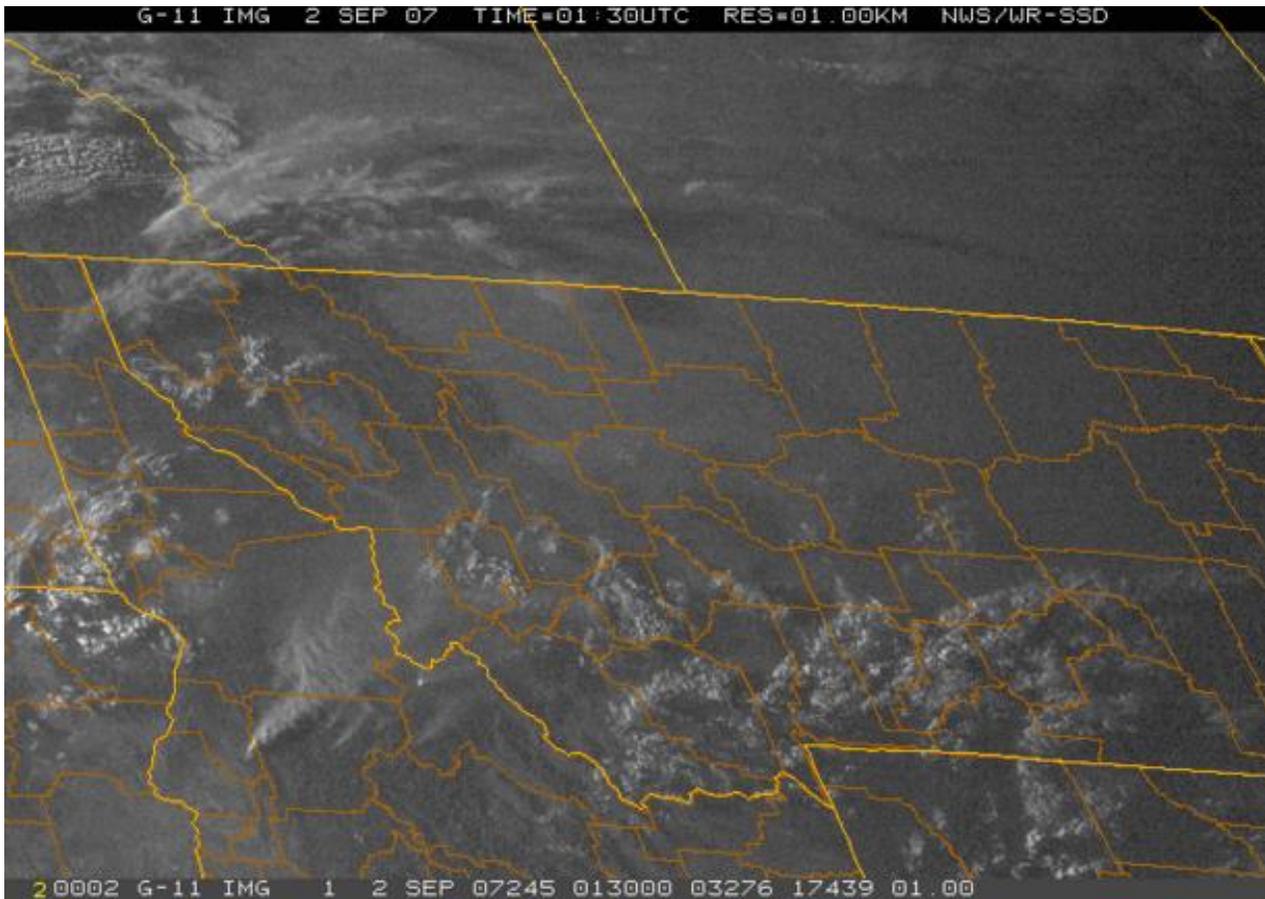


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This satellite photo taken at 7:30 PM last night shows the smoke plume moving into Montana from the fires in Idaho.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

<http://www.deq.state.mt.us/FireUpdates/SmokeCategories.asp>

Montana DEQ Forest Fire Smoke Advisory September 02, 2007

10:00 AM Sunday

DISCUSSION:

Smoke production levels in Montana have reduced substantially but the fires in Idaho continue to pump smoke into the state. A very strong inversion under the high pressure and clear skies has trapped smoke in the Bitterroot valley. Hamilton is at UNHEALTHY FOR SENSITIVE this morning. Technical difficulties with the AIRNOW server continue and no new data has been posted since Friday evening from that source. USFS monitors and airport visibility measurements are the only source of remote information for this morning's report. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the visibility guidelines to determine current conditions.

John Coefield

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

**Updated 10 AM
September 02, 2007**

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

NOTE: TECHNICAL DIFFICULTIES THIS MORNING (see note above)

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Hamilton T1(USFS)
<u>MODERATE</u>	

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local visibility guidelines <http://www.deq.state.mt.us/FireUpdates/VisibilityRanges.asp> to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

September 03, 2007

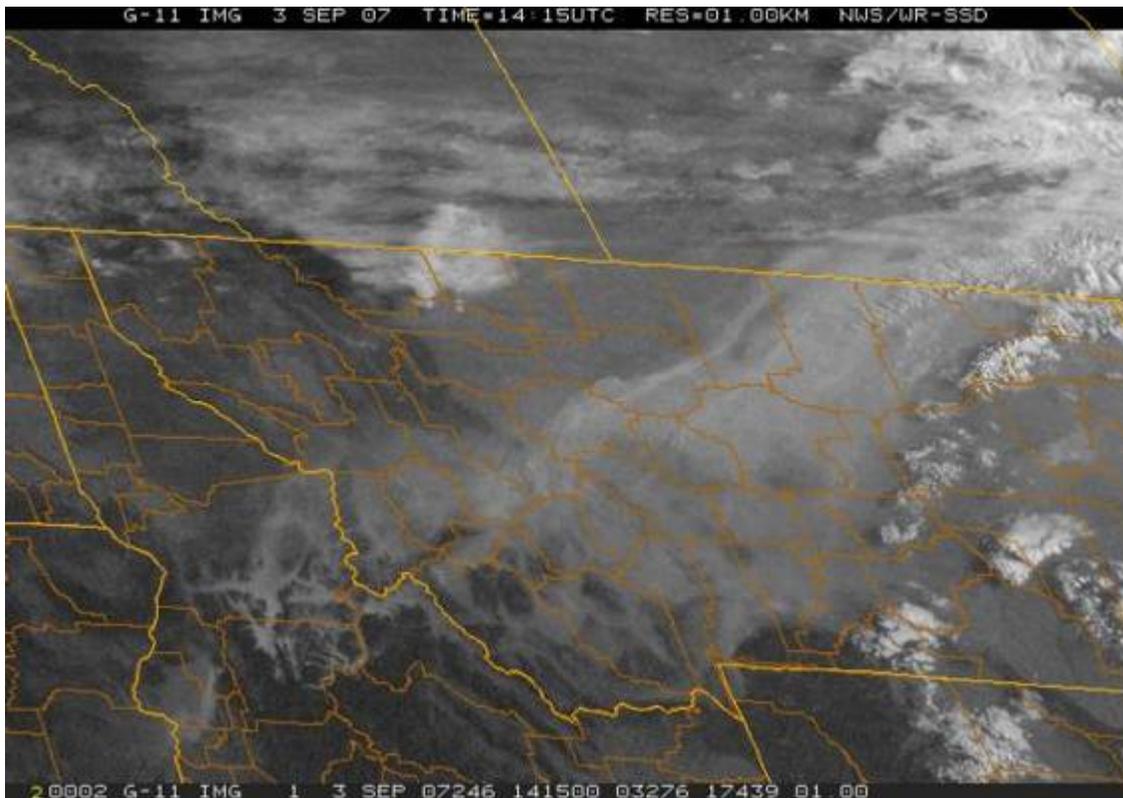
10:00 AM Monday

FORECAST:

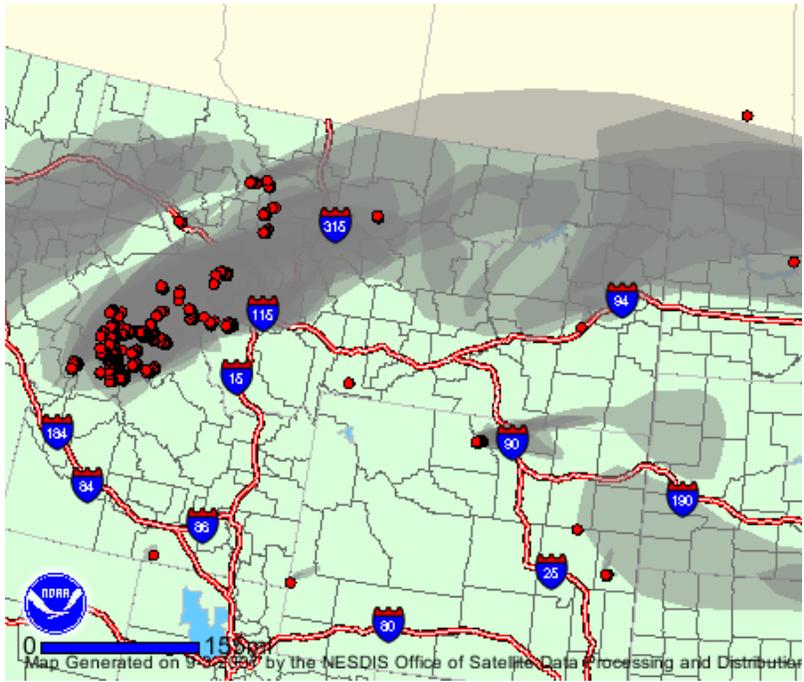
Smoke stretches across the sky this morning from southwest Montana over Lewistown and up into Canada. Skies will be very hazy there this morning. Smoke trapped in western Montana valleys by strong inversions has produced unhealthy levels of smoke in the Bitterroot, Big Hole, and Rock Creek/ Flint Creek valleys. Continued technical difficulties with the AIRNOW server means no new data in the AIRNOW cities has been posted since Friday evening.

Red Flag warnings have been posted over the active fires in Montana and Idaho for today. Large plume formation and significant fire growth are likely this afternoon. Transport winds will continue from the west-southwest and the areas seeing smoke today will continue to do so until at least tomorrow. Conditions in the western valleys should improve for a while this afternoon as the mixing height rises. Some smoke will be noticeable temporarily at the surface under the plume aloft as the smoke mixes down later this morning. Direct plume impacts from local fires could be a problem this afternoon and evening. Residents near active fires or experiencing noticeable smoke levels should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is illustrated below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lq_fire2.php

This satellite photo taken at 7:16 PM last night shows the smoke plume moving into Montana from the fires in Idaho.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

September 03, 2007

10:00 AM Monday

DISCUSSION:

There is a big plume of smoke aloft stretching across the state up into Canada from the fires yesterday. This will leave the skies hazy over most of that area. Smoke is trapped in the Bitterroot, Big Hole, and Rock Creek/Flint Creek valleys this morning and conditions there are [unhealthy](#) this morning. [Moderate](#) levels of smoke are reported via NWS visibility monitors in southwest Montana including Dillon and Butte. Technical difficulties with the AIRNOW server continue and no new data has been posted since Friday evening from that source. USFS monitors and airport visibility measurements are the only source of remote information for this morning's report. The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM

September 03, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

NOTE: TECHNICAL DIFFICULTIES THIS MORNING (see note above)

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Hamilton T24(USFS) Big Hole Valley(est) Rock Creek/Flint Creek Valleys(est)
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Butte Vis(3) Dillon Vis(1)

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

September 4, 2007

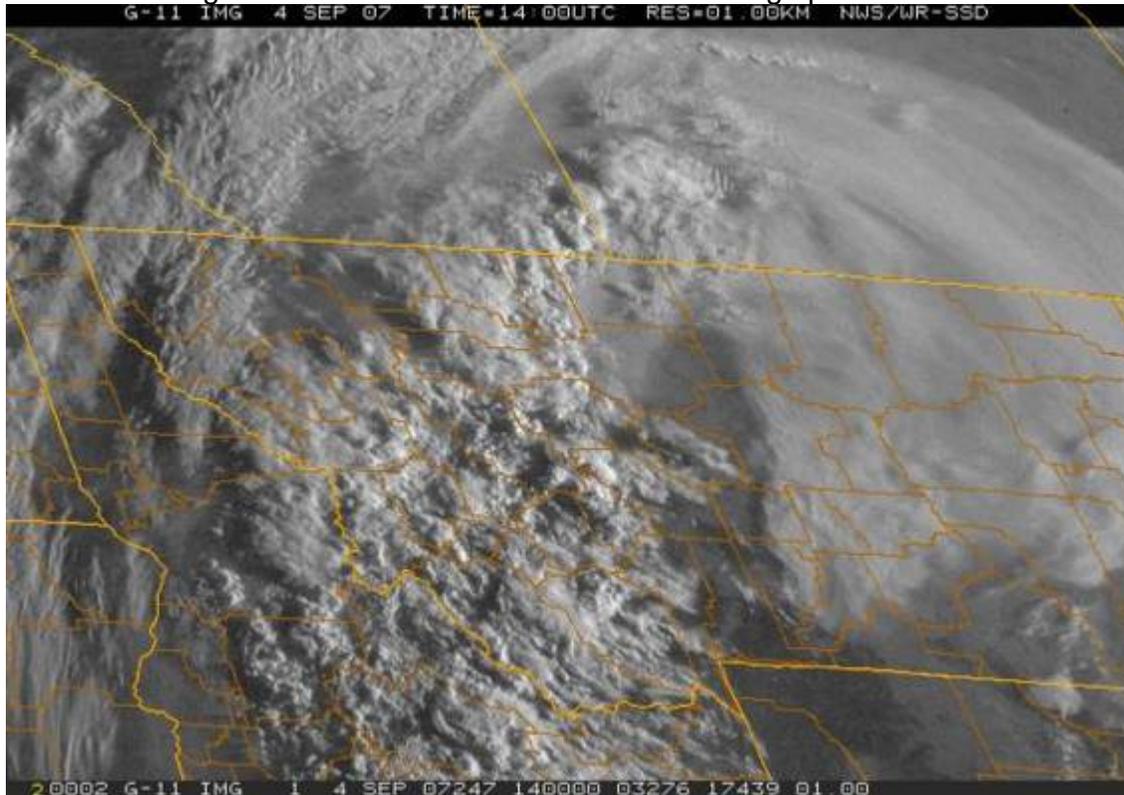
10:00 AM Tuesday

FORECAST:

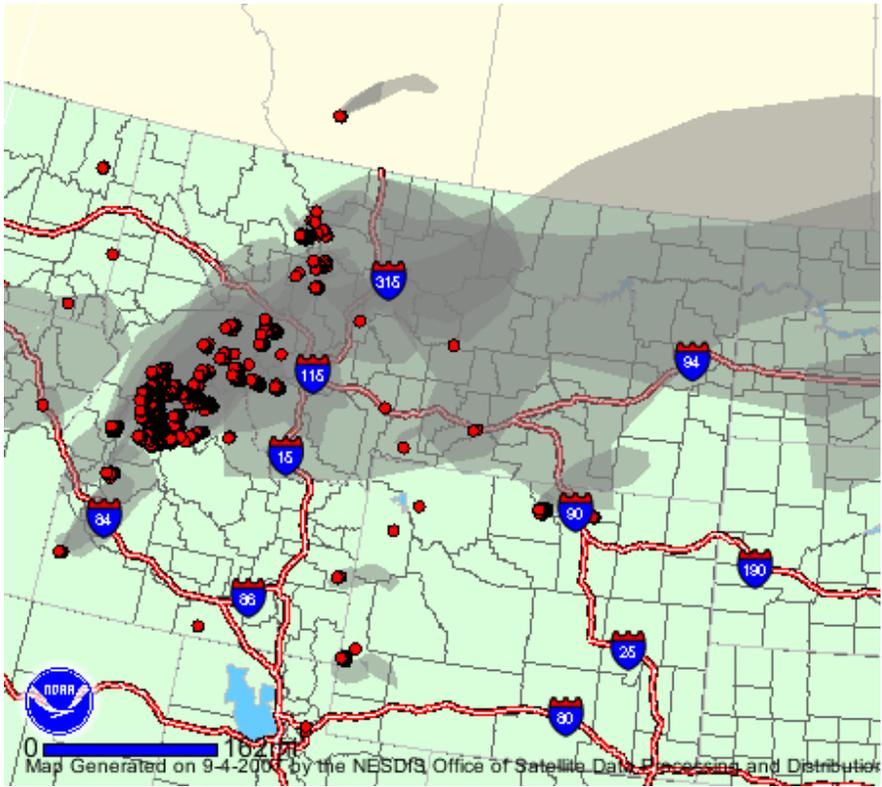
Smoke is trapped in western Montana valley this morning and along the Front Range producing unhealthy smoke levels in many areas. There is big plume of smoke aloft over the eastern half of the state from yesterday's fire activity.

South to southwest winds will be switching around to the northwest later today and tonight ahead of a frontal passage. This should clear the current smoke out of most areas later this evening. Red Flag warning have been posted again today and some areas could see large plume development again this afternoon. Scattered thunderstorms and showers could produce beneficial rains over some of the active fires today and the dispersion should be pretty good in most areas allowing the trapped smoke to mix out this afternoon. Residents noticing smoke from local fires or residual smoke from fires upwind of their location should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is below: Note the plume of smoke covering the eastern half of the state and reaching up into Canada.



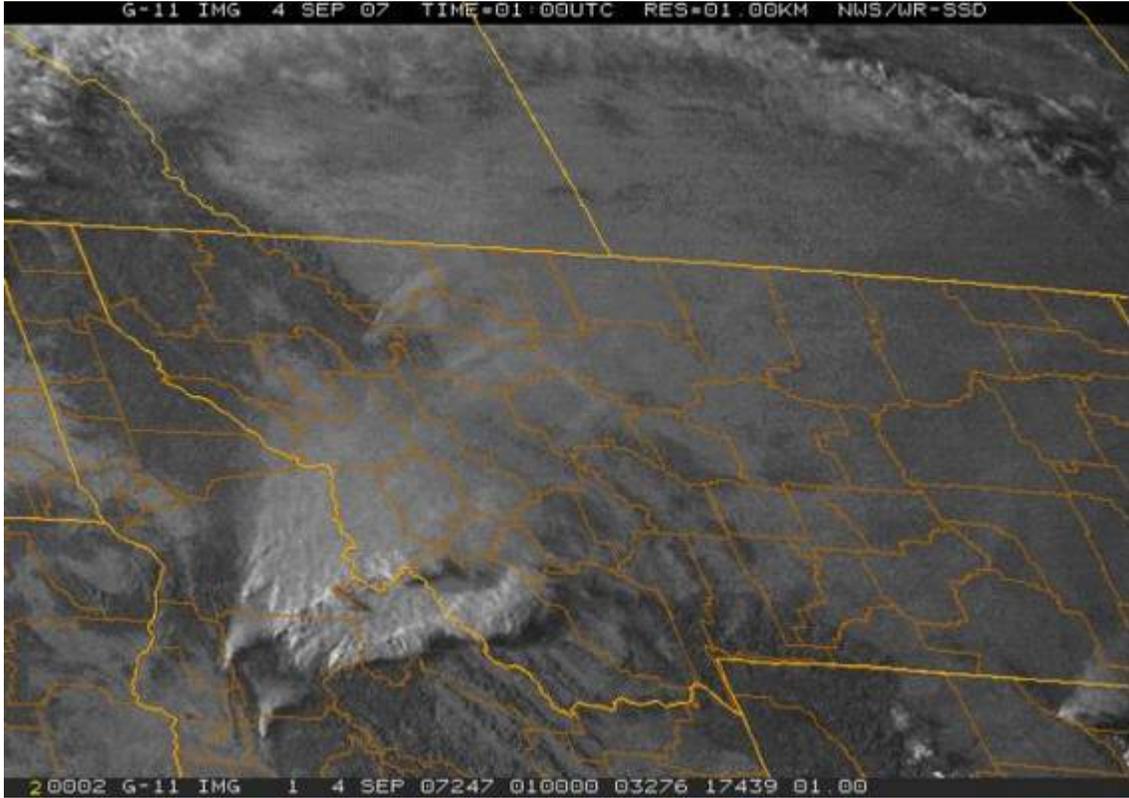
This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite.
 Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lq_fire2.php

This satellite photo taken last night at 7 Pm shows the dramatic plume of smoke from the fires in Idaho and Montana that produce the plume over eastern Montana on this morning's satellite photo above.



This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

September 4, 2007

10:00 AM Tuesday

DISCUSSION:

There is big plume of smoke aloft across the eastern half of Montana this morning. This will produce very hazy skies in that area today and there will be some smoke mixing down to the surface there temporarily later today. The smoke left behind at the surface is causing a lot of problems today. [UNHEALTHY](#) concentrations are currently impacting Kalispell, Missoula, Hamilton, Butte, Choteau, and Great Falls. White Fish is at [UNHEALTHY FOR SENSITIVE](#). The Southern Bitterroot is likely at [VERY UNHEALTHY](#) this morning and Hamilton could easily reach that level before noon today. The Big Hole and Rock Creek/Flint Creek valley are also likely at [VERY UNHEALTHY](#). Conditions along the Front Range and in Great Falls should improve today. The northern Flathead and Missoula valleys will also likely improve.

The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM September 4, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Kalispell T1 Missoula T24 Hamilton T24 Butte T24 Choteau T24 Great Falls Vis(2)
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Whitefish T8
<u>MODERATE</u>	

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

September 5, 2007

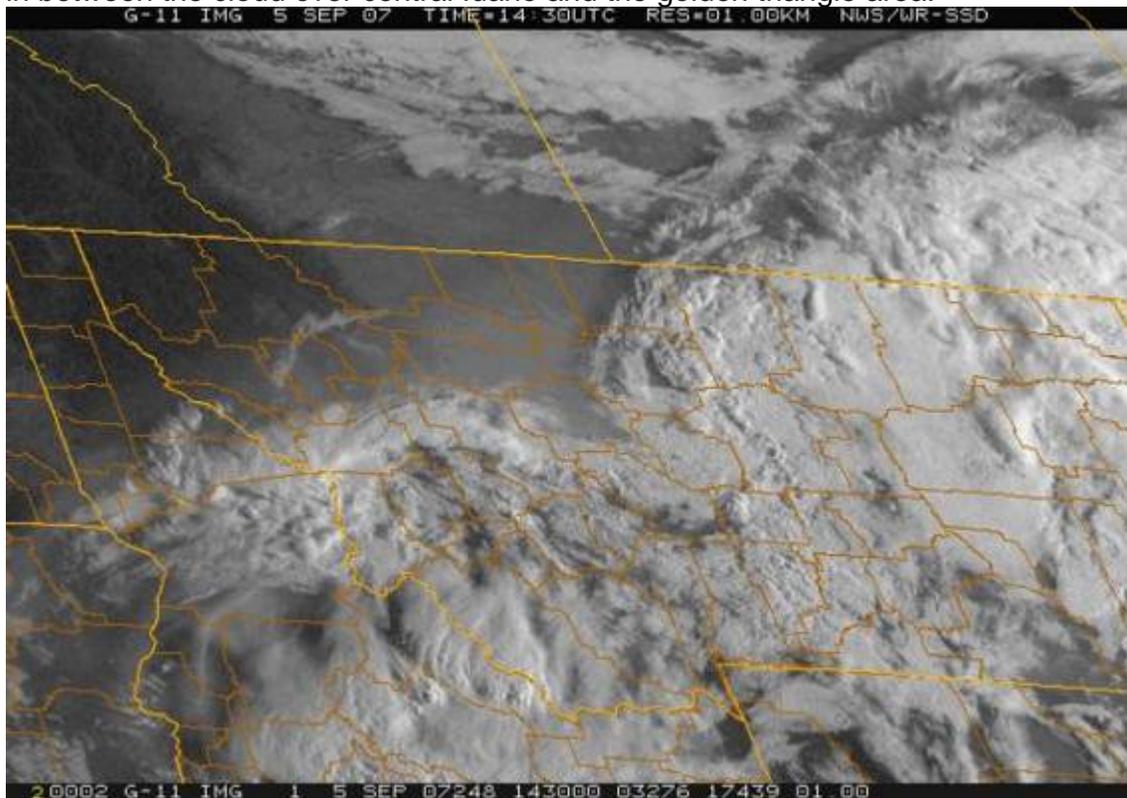
10:00 AM Wednesday

FORECAST:

Smoke is trapped in western Montana valleys this morning under the cloud cover producing unhealthy smoke levels in many areas.

Smoke will continue to rotate around the low pressure in southern Idaho bringing smoke into western Montana. Dispersion will be pretty good this afternoon with scattered showers and some convective activity. Cooler temperatures and higher humidity should reduce the smoke production on the fires that did not receive rain last night. This should allow the smoke levels in the western valleys to improve through the day. Residents noticing smoke from local fires or residual smoke from fires upwind of their location should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is below: Note the smoke visible in between the cloud over central Idaho and the golden triangle area.



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

NO GRAPHIC AVAILABLE FROM NOAA TODAY

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lg_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory September 5, 2007

10:00 AM Wednesday

DISCUSSION:

There is still a lot of smoke hanging around this morning under the cloud cover. Kalispell, Missoula Hamilton, and Butte are at [UNHEALTHY](#), and Whitefish and Helena are at [UNHEALTHY FOR SENSITIVE](#). Smoke conditions in the Big Hole Valley and Flint Creek/Rock Creek valley are also probably [UNHEALTHY](#). Slow improvement is expected in most areas through the day.

The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires and experiencing impacts from residual smoke will need to pay close attention to conditions in their area and use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM September 5, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day.

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Missoula T24 Kalispell T24 Butte T24 Hamilton T24
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Whitefish T1 Helena T24
<u>MODERATE</u>	

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

September 6, 2007

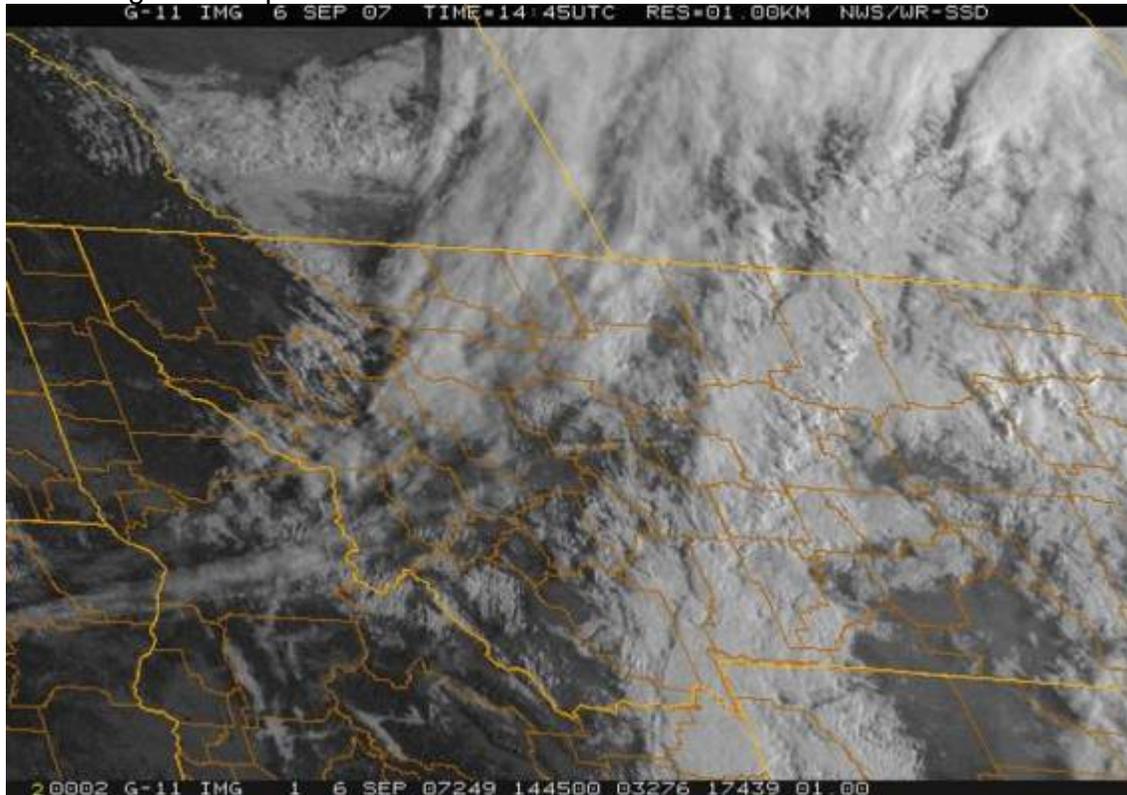
10:00 AM Thursday

FORECAST:

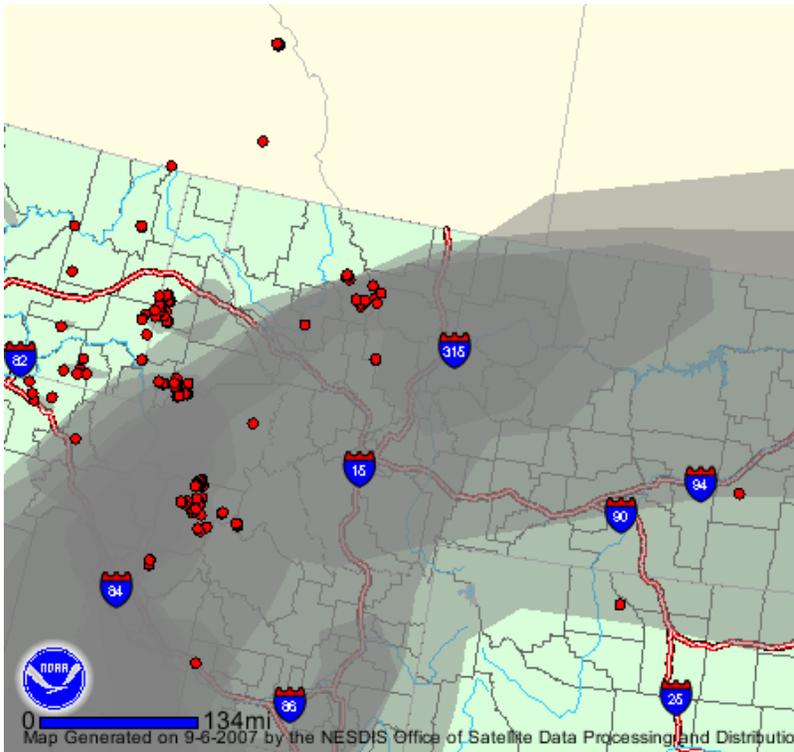
Smoke levels are much improved today but there is still some smoke stuck in the northern Flathead Valley.

A strong push of air from the northwest is pushing out the residual smoke in most areas. The clear air aloft hasn't made it's way down to the surface yet in some western valley but is expected to do so by this afternoon for much improved visibility and fresher smelling air across the western half of the state. Smoke production was minimal yesterday and should be light again today with good to excellent dispersion. Residents noticing smoke from local fires should use the [VISIBILITY GUIDELINES](#) to determine smoke levels in their area and guide their activity decisions.

A morning satellite photo centered on Great Falls is below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite.
Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lq_fire2.php

This morning's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory September 6, 2007

10:00 AM Thursday

DISCUSSION:

Conditions are generally much improved this morning as cooler wetter weather has sharply reduced the fire activity and a push of air from the northwest is moving smoke out of many areas. There is still some smoke sloshing around the northern Flathead Valley and Kalispell is at [UNHEALTHY FOR SENSITIVE](#) right now. [MODERATE](#) levels of smoke are still impacting areas around Whitefish, Missoula, Hamilton, and Great Falls. Conditions are expected to steadily improve through the day with lots of blue sky and much sweeter air.

The advisories in the table below represent conditions between midnight and 8 AM and may change substantially through the day. Residents downwind of the active fires noticing smoke impacts should use the [visibility guidelines](#) to determine current conditions.

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports since midnight of the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Updated 10 AM September 6, 2007

These advisories represent conditions between midnight and 8 AM and may change substantially through the day

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	Kalispell T8
MODERATE	Whitefish T8 Missoula T8 Hamilton T24 Great Falls Vis(1)

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

Local impacts in areas immediately adjacent to active fires are expected to exceed some or all of the advisory levels. DEQ recommends the use of local [visibility guidelines](#) to evaluate possible health risks and make informed activity decisions.

Montana DEQ Forest Fire Smoke Advisory

September 10, 2007

Daily Summary

Strong radiational inversions and continued smoke production from fires in the Flathead River drainages combined to produce a lot of smoke impacts in the Flathead Valley.

More smoke pushed into the western part of the state through the day producing unhealthy levels of smoke in several areas

A morning satellite photo centered on Great Falls is below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

No NOAA analysis today.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

Here is a MODIS satellite photo taken at 2:18 pm.



Today's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

September 10, 2007

Daily Summary

DISCUSSION:

The advisories in the table below represent conditions for the 24 hour period from midnight to midnight

John Coefield

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports for the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Daily summary September 10, 2007

These advisories represent conditions from midnight to midnight for this day

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Kalispell T24
UNHEALTHY FOR SENSITIVE GROUPS	Whitefish T24 Missoula T24 Butte T24 Helena T24
MODERATE	

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

Montana DEQ Forest Fire Smoke Advisory

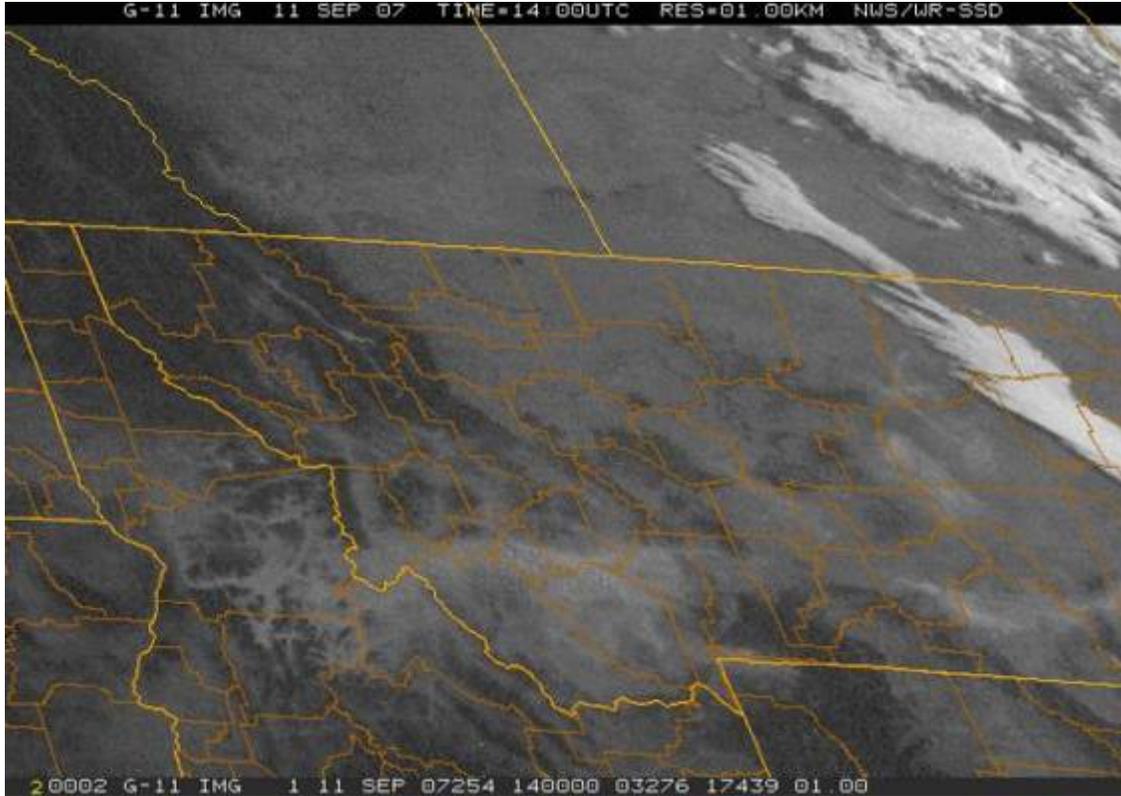
September 11, 2007

Daily Summary

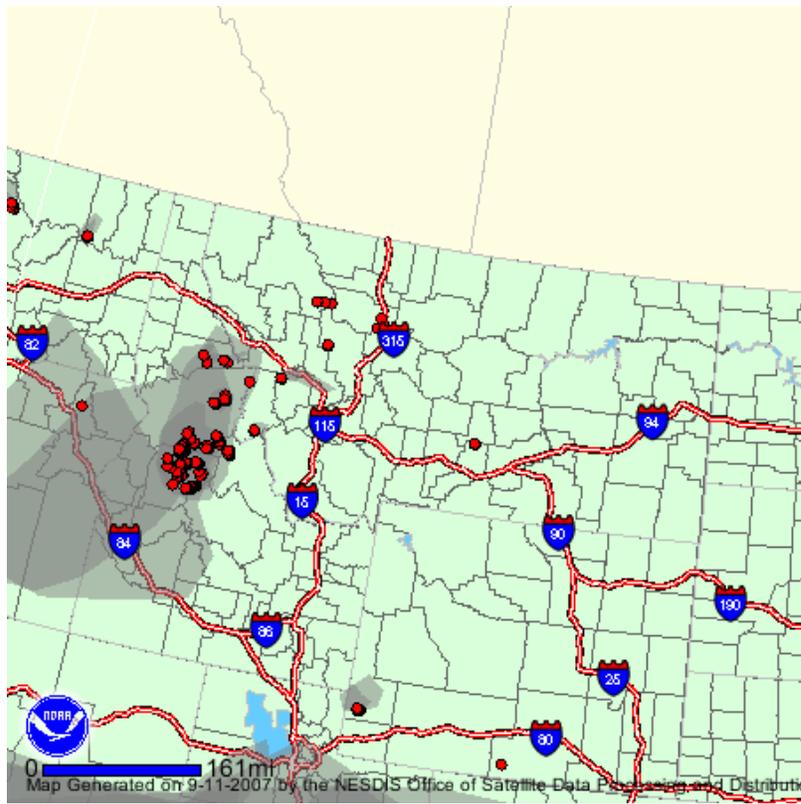
Residual smoke from fires in Idaho blanketed the western and southwestern part of the state and morning inversions and continued smoke production from fires in the Flathead River drainages combined to produce a lot of smoke impacts in the Flathead Valley.

More smoke pushed into the western part of the state through the day producing unhealthy levels of smoke in several areas

A morning satellite photo centered on Great Falls is below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

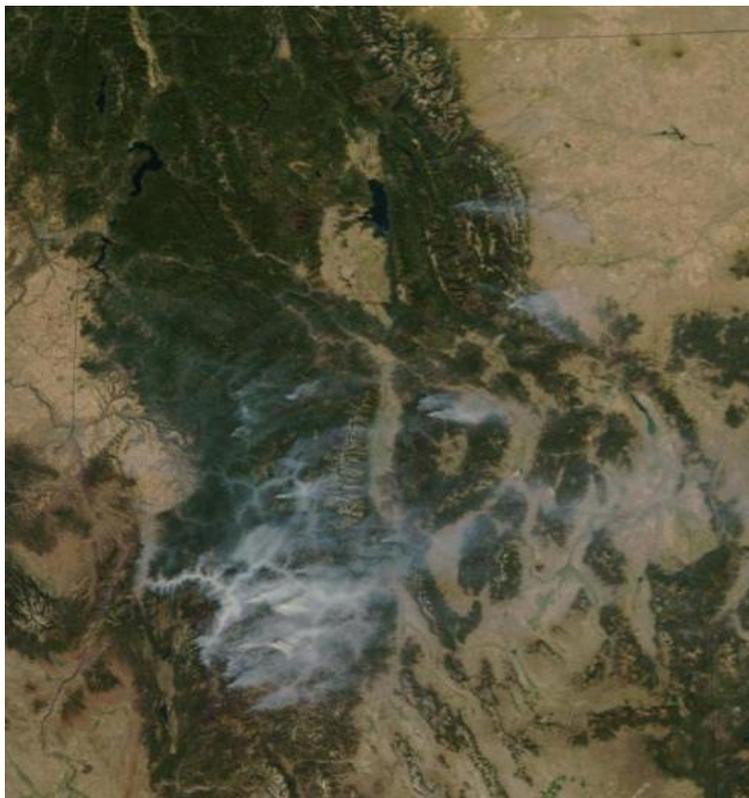


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

Here is a MODIS satellite photo taken at 3:00 pm.



Today's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

September 11, 2007

Daily Summary

DISCUSSION:

The advisories in the table below represent conditions for the 24 hour period from midnight to midnight

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports for the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Daily summary September 11, 2007

These advisories represent conditions from midnight to midnight for this day

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Kalispell T24 Whitefish T24 Missoula T24 Butte T24
UNHEALTHY FOR SENSITIVE GROUPS	Dillon Vis
MODERATE	Bozeman Vis Livingston Vis

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

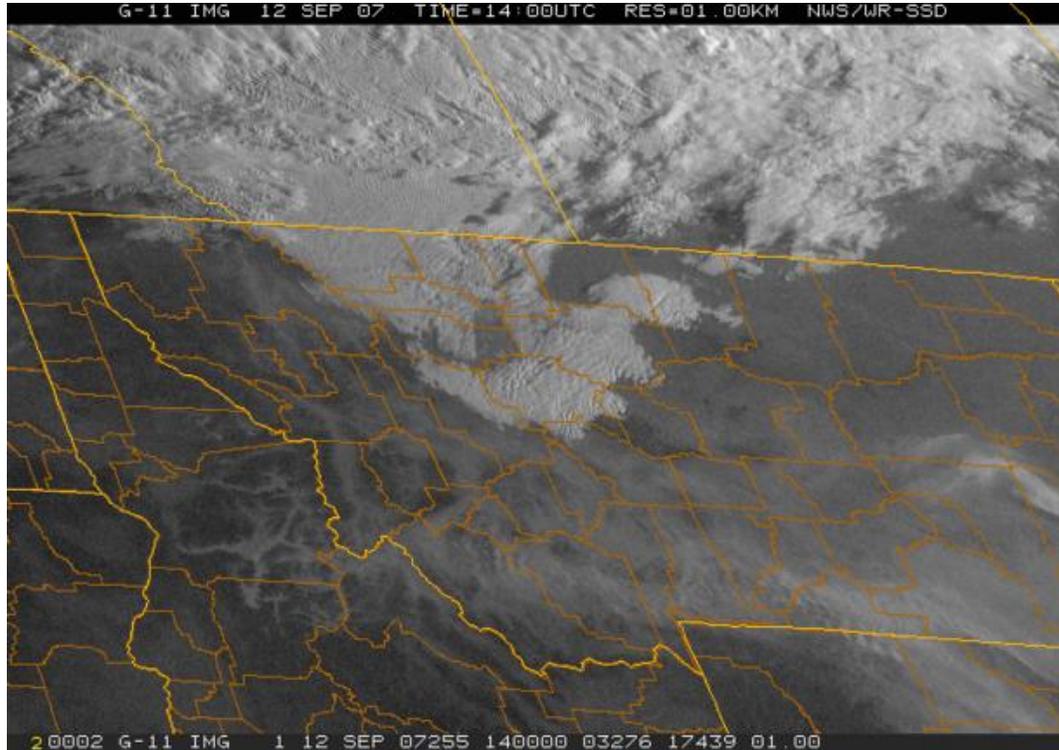
Montana DEQ Forest Fire Smoke Advisory

September 12, 2007

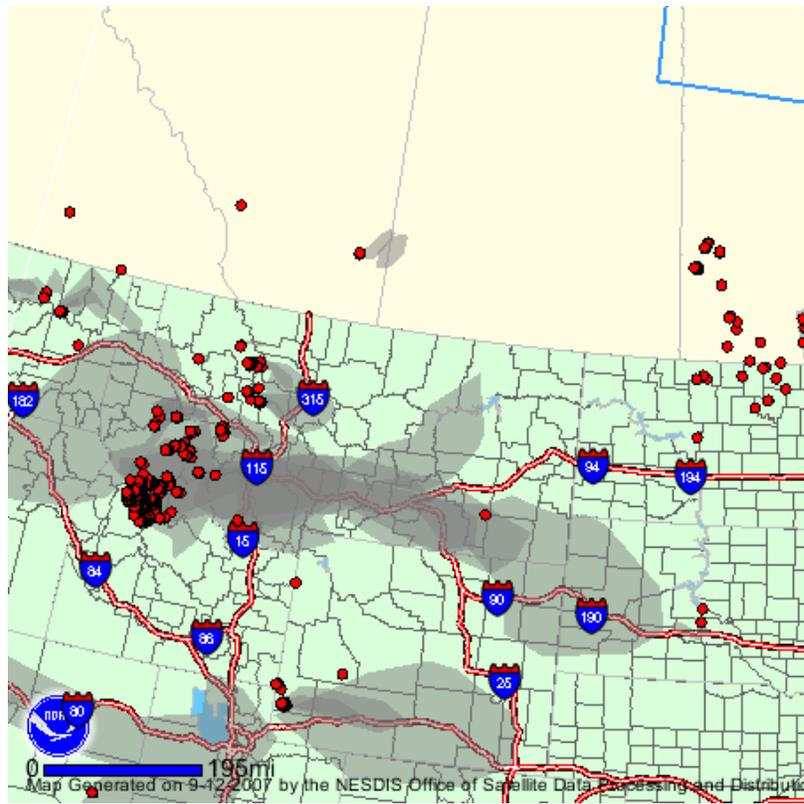
Daily Summary

Smoke continued to pour into the state from Idaho and residual smoke from local fires trapped under inversions produced very high levels of particulate in the Flathead Valley.

A morning satellite photo centered on Great Falls is below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

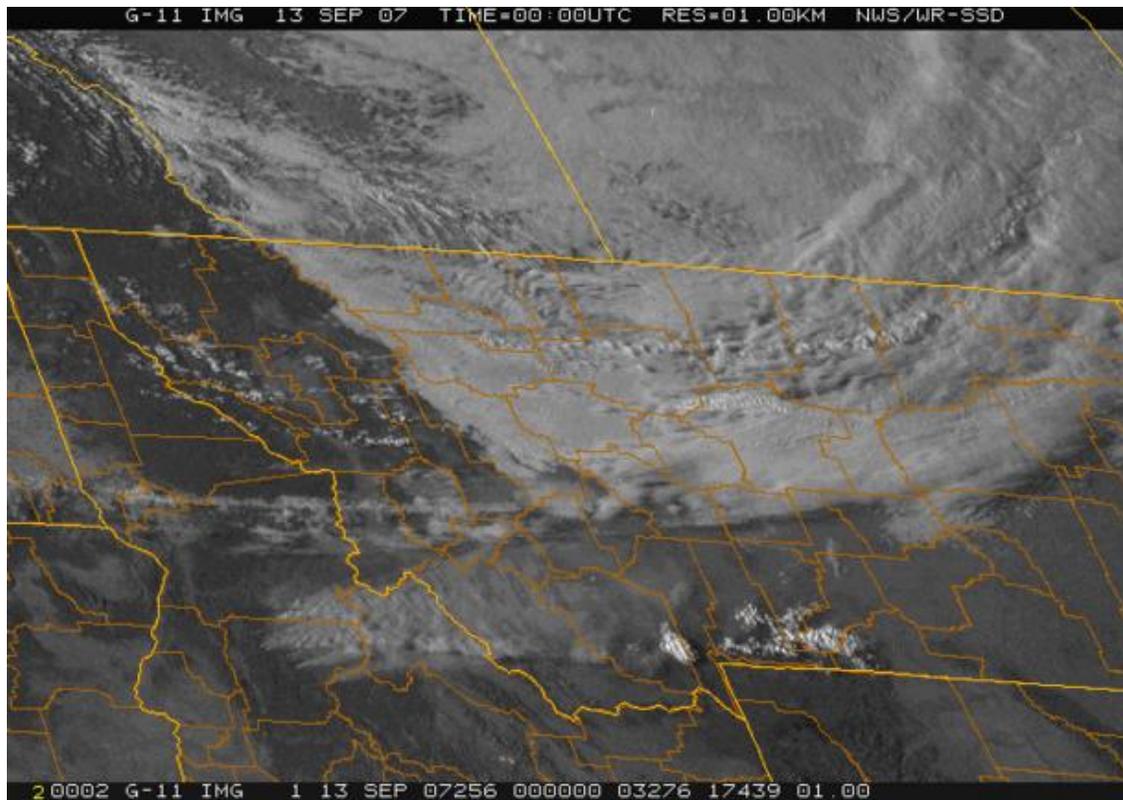


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lq_fire2.php

Here is a MODIS satellite photo taken at 12:26pm.





This evening picture was taken at 6:00 PM

Today's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory September 12, 2007 Daily Summary

DISCUSSION:

The advisories in the table below represent conditions for the 24 hour period from midnight to midnight

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports for the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Daily summary September 12, 2007

These advisories represent conditions from midnight to midnight for this day

HAZARDOUS	
VERY UNHEALTHY	Butte T24 Kalispell T24
UNHEALTHY	Whitefish T24 Missoula T24 Hamilton T1 Dillon Vis Livingston Vis
UNHEALTHY FOR SENSITIVE GROUPS	Helena T24 Bozeman Vis
MODERATE	

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

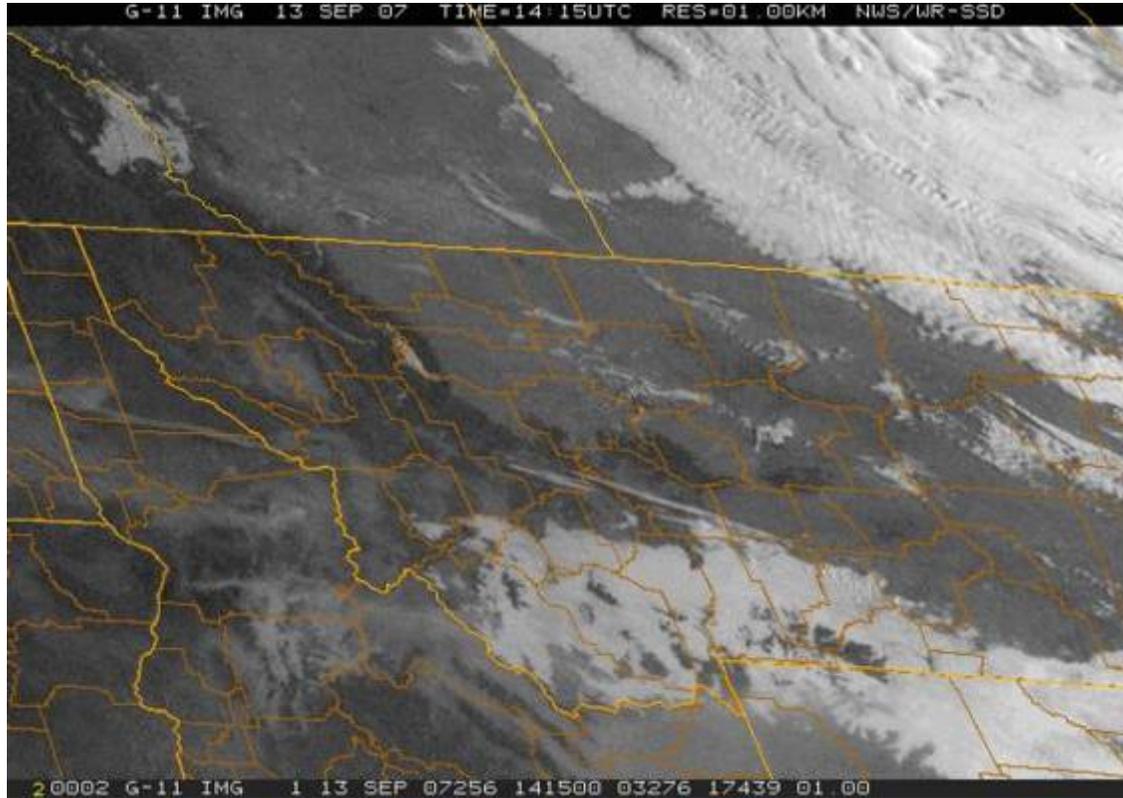
Montana DEQ Forest Fire Smoke Advisory

September 13, 2007

Daily Summary

Smoke continued to pour into the state from Idaho and residual smoke from local fires trapped under inversions produced very high levels of particulate in the Flathead Valley.

A morning satellite photo centered on Great Falls is below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

Here is a MODIS satellite photo taken at 2:48pm.



Today's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

September 13, 2007

Daily Summary

DISCUSSION:

The advisories in the table below represent conditions for the 24 hour period from midnight to midnight

John Coefield
Meteorologist
Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports for the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Daily summary September 13, 2007

These advisories represent conditions from midnight to midnight for this day

HAZARDOUS	
VERY UNHEALTHY	Helena T24
UNHEALTHY	Kalispell T24 Missoula T24
UNHEALTHY FOR SENSITIVE GROUPS	Whitefish T24 Hamilton T1 Butte T24
MODERATE	

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

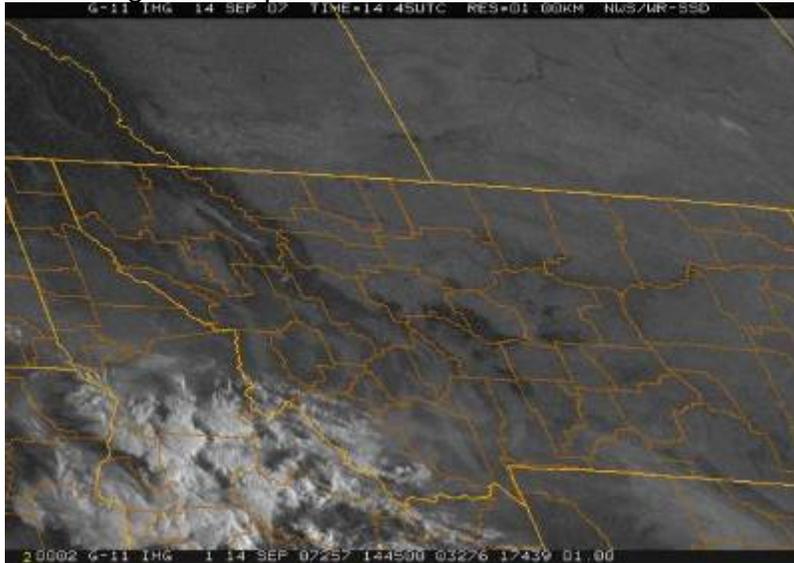
Montana DEQ Forest Fire Smoke Advisory

September 14, 2007

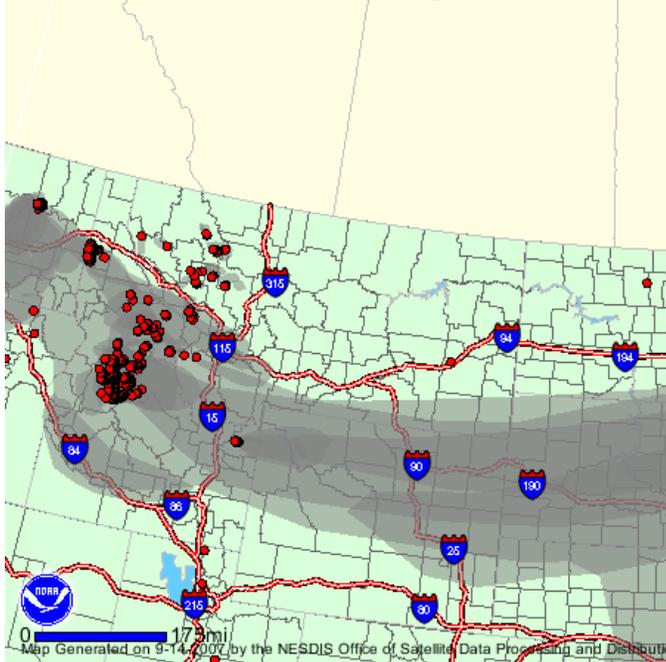
Daily Summary

Very poor dispersion and almost no net transport winds kept smoke levels high in many communities.

A morning satellite photo centered on Great Falls is below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite.
Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

Here is a MODIS satellite photo taken at 1:53pm.



Today's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory September 14, 2007 Daily Summary

DISCUSSION:

The advisories in the table below represent conditions for the 24 hour period from midnight to midnight

John Coefield
Meteorologist
Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports for the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Daily summary September 14, 2007

These advisories represent conditions from midnight to midnight for this day

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Whitefish T24 Kalispell T24 Butte T24 Helena T24

<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Missoula T24 Hamilton T24
<u>MODERATE</u>	

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

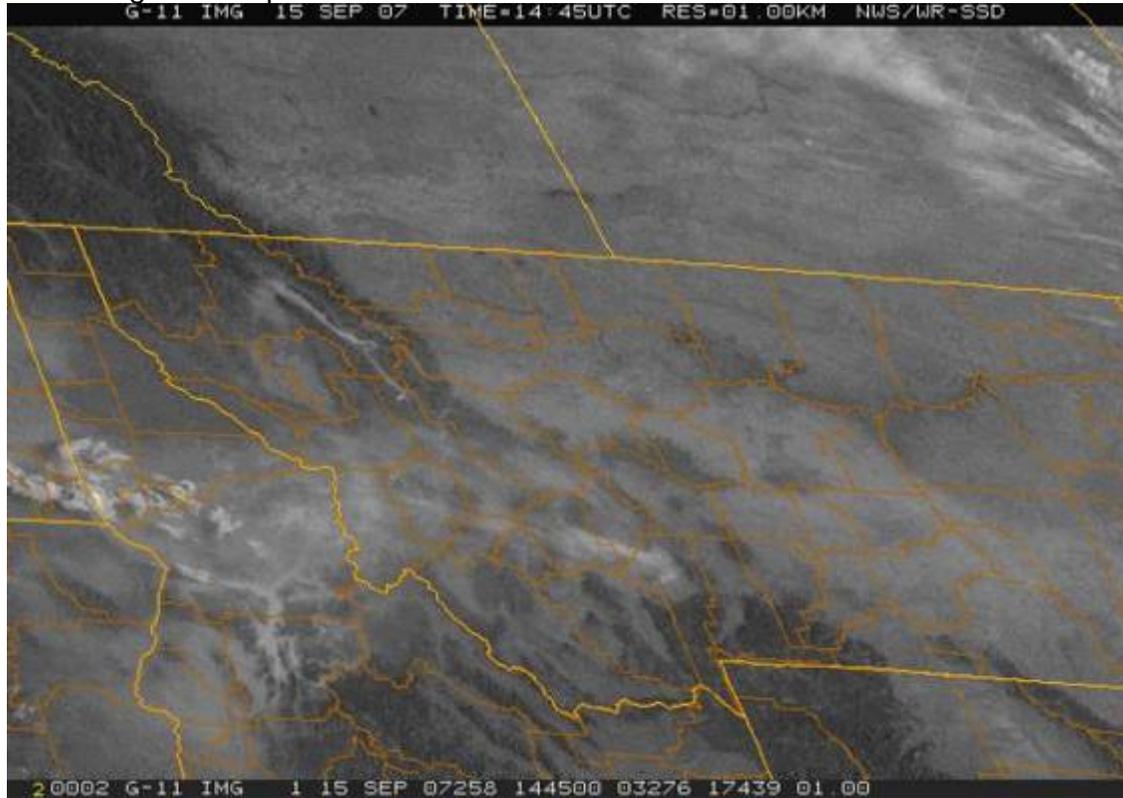
Montana DEQ Forest Fire Smoke Advisory

September 15, 2007

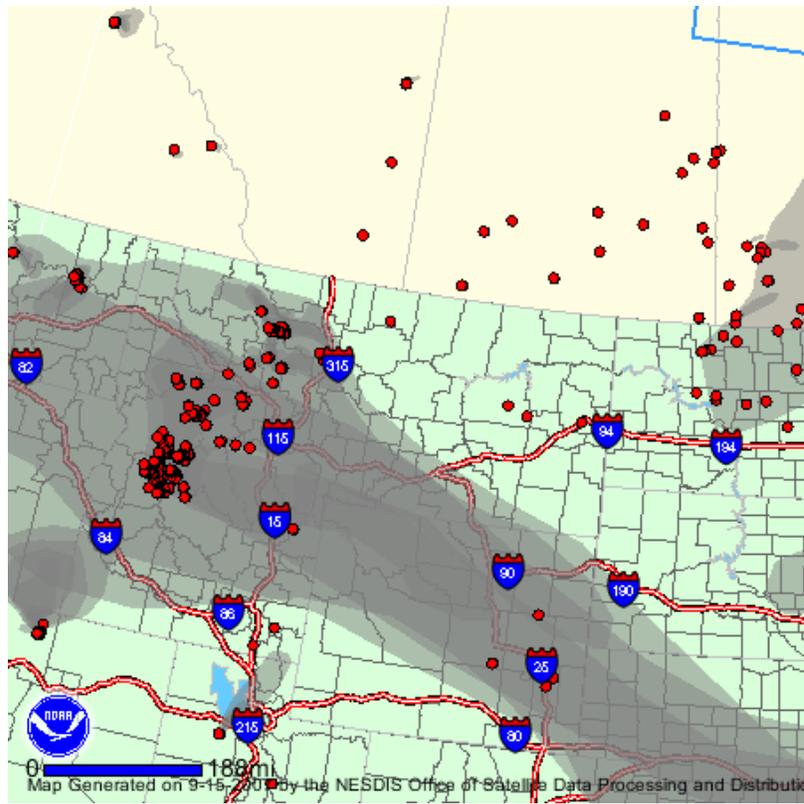
Daily Summary

Smoke from Idaho and residual smoke from local fires trapped under inversions kept smoke concentrations at Unhealthy levels in many communities.

A morning satellite photo centered on Great Falls is below:



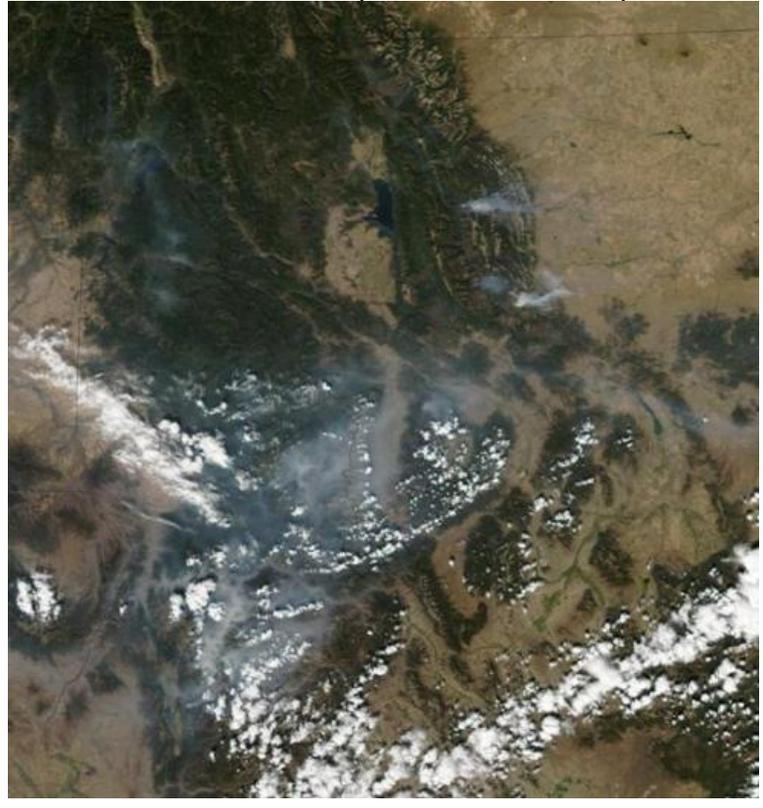
This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:
http://activefiremaps.fs.fed.us/lq_fire2.php

Here is a MODIS satellite photo taken at 2:36pm.



Today's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

September 15, 2007

Daily Summary

DISCUSSION:

The advisories in the table below represent conditions for the 24 hour period from midnight to midnight

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports for the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Daily summary September 15, 2007

These advisories represent conditions from midnight to midnight for this day

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Whitefish T24 Kalispell T24 Missoula T24 Hamilton T24 Butte T24 Helena T24
UNHEALTHY FOR SENSITIVE GROUPS	
MODERATE	Libby T24

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

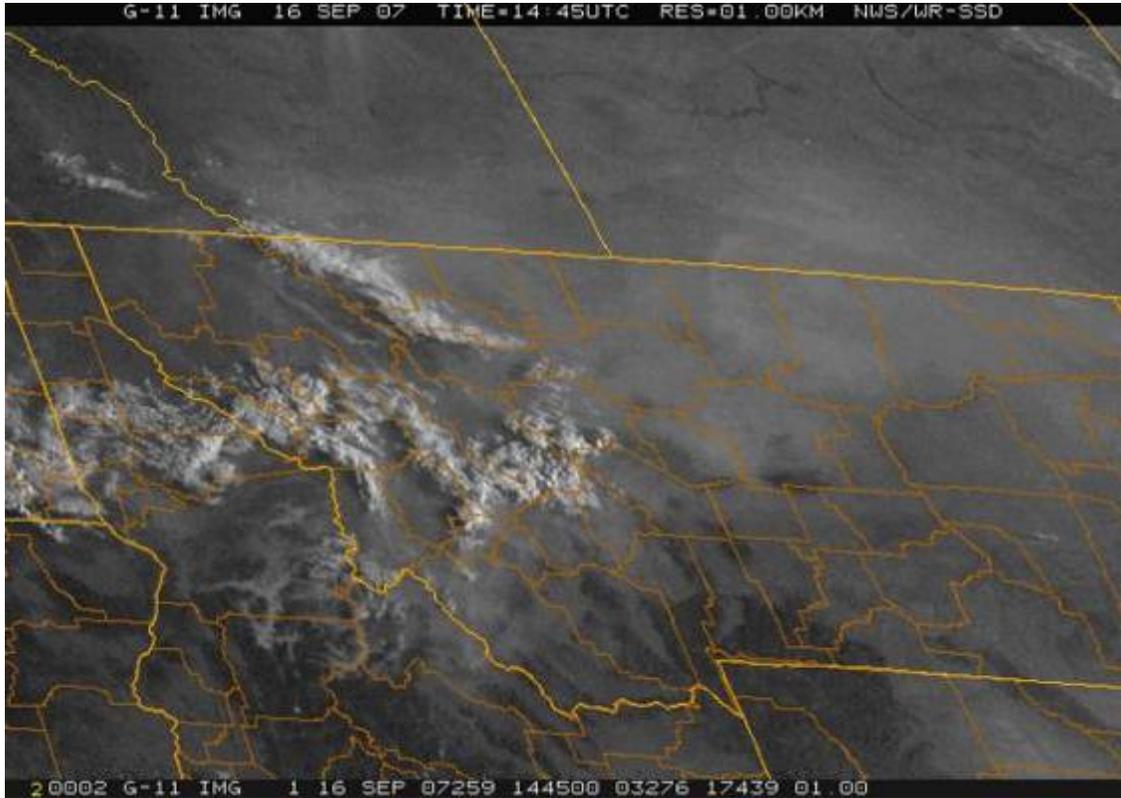
Montana DEQ Forest Fire Smoke Advisory

September 16, 2007

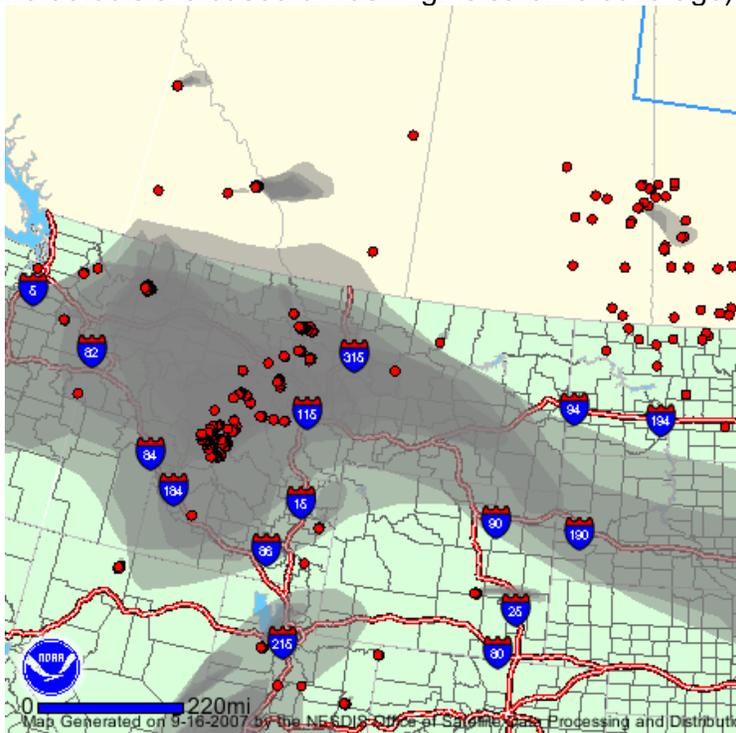
Daily Summary

Smoke levels improved late in the day in some areas as convective activity improved dispersion rate but Unhealthy smoke conditions were widespread.

A morning satellite photo centered on Great Falls is below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

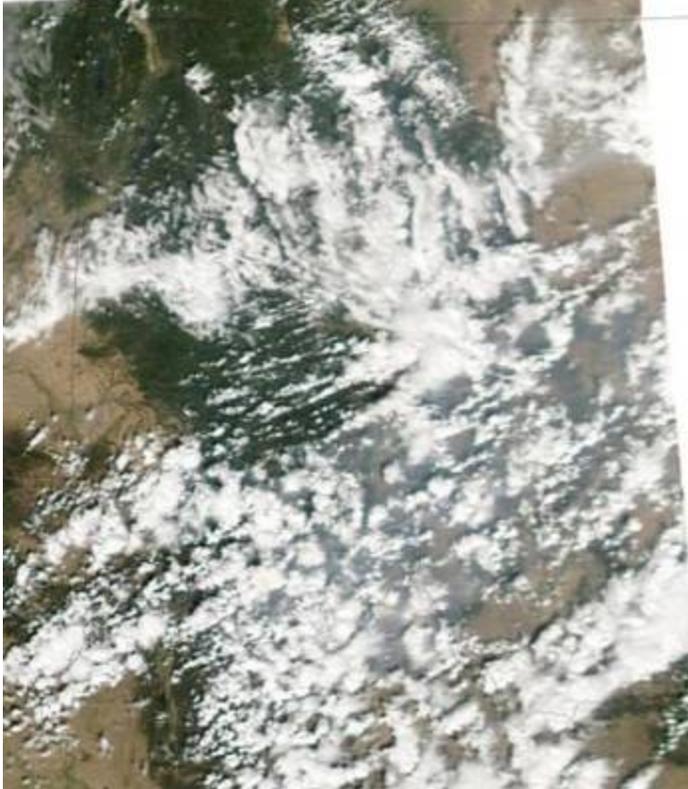


Red indicates hot spot detected. Grey represents smoke seen by satellite.
Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

Here is a MODIS satellite photo taken at 3:19pm.



Today's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

September 16, 2007

Daily Summary

DISCUSSION:

The advisories in the table below represent conditions for the 24 hour period from midnight to midnight

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports for the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Daily summary September 16, 2007

These advisories represent conditions from midnight to midnight for this day

<u>HAZARDOUS</u>	
<u>VERY UNHEALTHY</u>	
<u>UNHEALTHY</u>	Whitefish T24 Kalispell T24 Missoula T24 Hamilton T24 Butte T24 Helena T24
<u>UNHEALTHY FOR SENSITIVE GROUPS</u>	Libby T24 Dillon Vis Bozeman Vis Great Falls Vis
<u>MODERATE</u>	

T1(x) One-hour TEOM or BAM value (number of values)
 T8(x) Eight-hour average TEOM or BAM value(number of values)
 T24 24 hour average TEOM or BAM value
 Vis(x) Visibility value(number of hours)
 Vis(am/pm) Visibility value from twice/day reporting stations
 (est) estimate

Montana DEQ Forest Fire Smoke Advisory

September 17, 2007

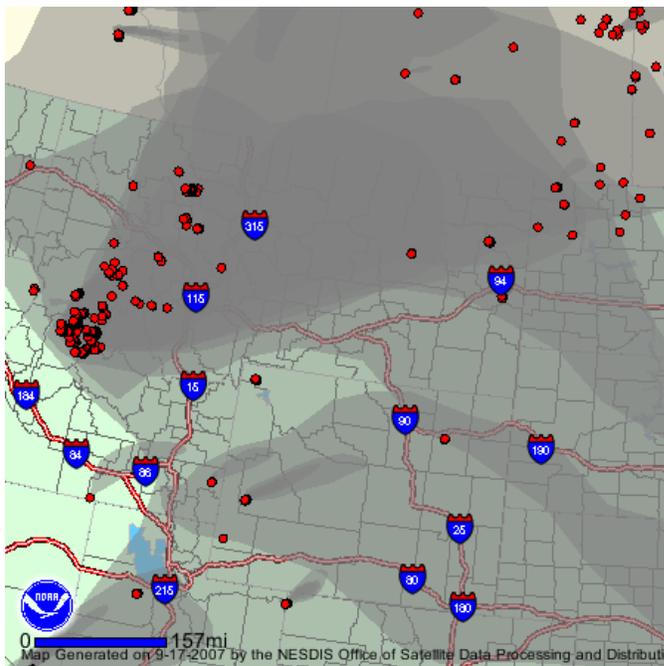
Daily Summary

Smoke levels have started to improve in many areas as showers have started to move through the state. Unhealthy levels were still a problem in a couple of locations.

A morning satellite photo centered on Great Falls is below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).

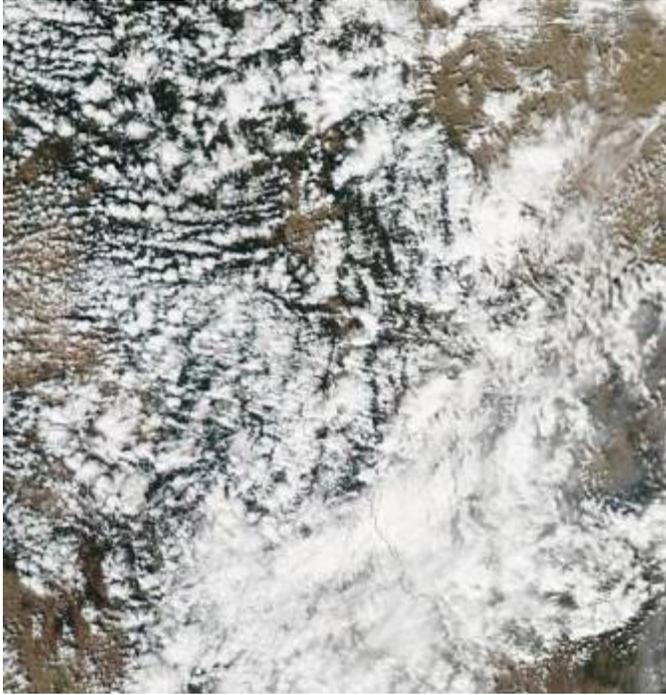


Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

Here is a MODIS satellite photo taken at 3:19pm.



Today's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory September 17, 2007

Daily Summary

DISCUSSION:

The advisories in the table below represent conditions for the 24 hour period from midnight to midnight

John Coefield
Meteorologist
Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports for the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5 BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Daily summary September 17, 2007

These advisories represent conditions from midnight to midnight for this day

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	Kalispell T24 Dillon Vis
UNHEALTHY FOR SENSITIVE GROUPS	Whitefish T24 Missoula T24 Hamilton T24 Butte T24 Helena T24

<u>MODERATE</u>	Bozeman Vis

- T1(x) One-hour TEOM or BAM value (number of values)
- T8(x) Eight-hour average TEOM or BAM value(number of values)
- T24 24 hour average TEOM or BAM value
- Vis(x) Visibility value(number of hours)
- Vis(am/pm) Visibility value from twice/day reporting stations
- (est) estimate

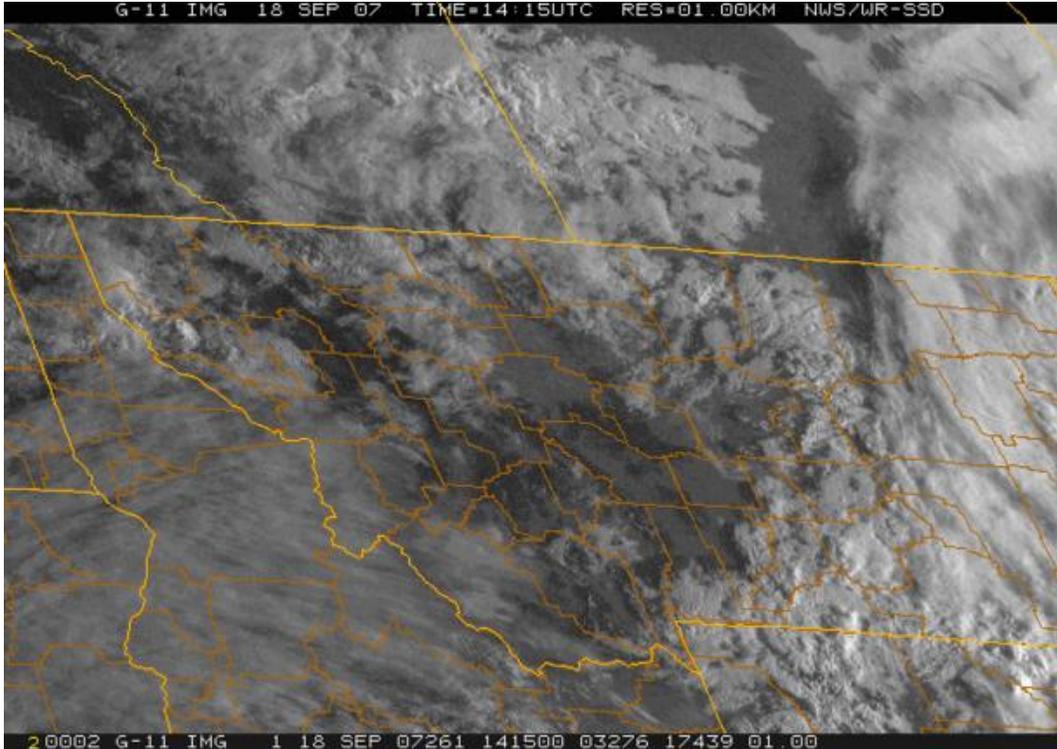
Montana DEQ Forest Fire Smoke Advisory

September 18, 2007

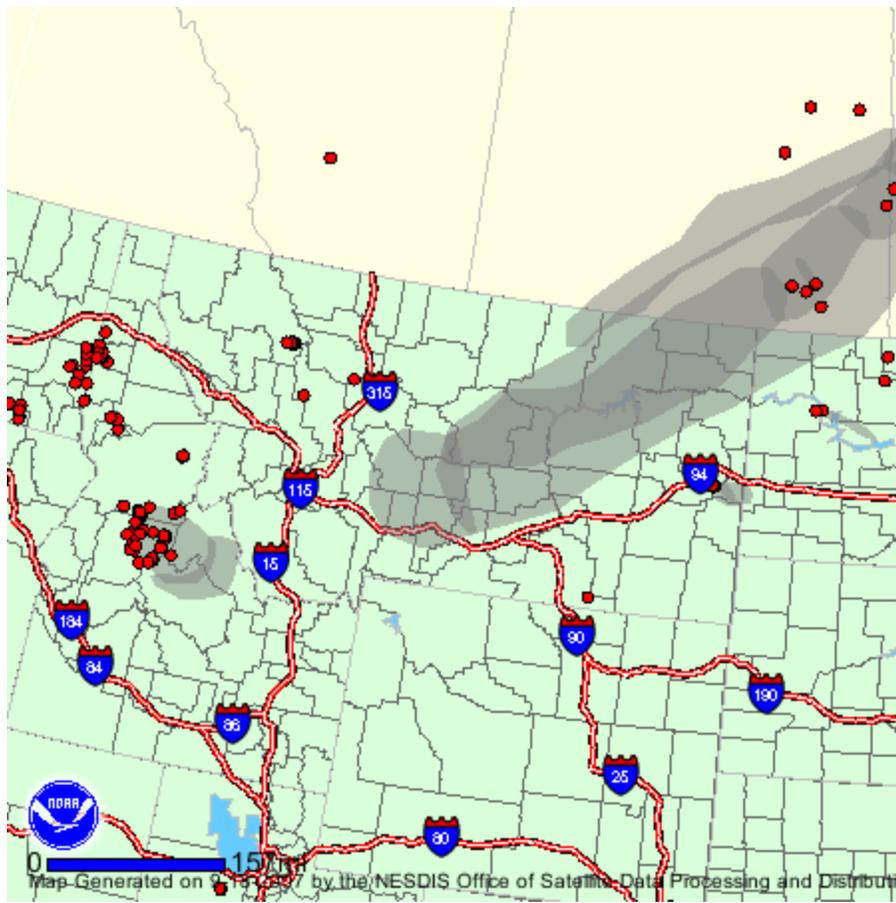
Daily Summary

Smoke levels improved dramatically as rain showers reduced fire activity levels and dispersion improved as well.

A morning satellite photo centered on Great Falls is below:



This morning's analysis from NOAA's satellite services division shows the active fires in Montana and the smoke plumes combining and spreading downwind (the analyzed smoke is based on yesterday's satellite coverage, the fire detects are based on last night's satellite coverage).



Map Generated on 9/19/2007 by the NESDIS Office of Satellite Data Processing and Distribution

Red indicates hot spot detected. Grey represents smoke seen by satellite. Fire size is exaggerated for visibility at this scale.

To identify individual fires on graphic above go here:

http://activefiremaps.fs.fed.us/lq_fire2.php

Today's smoke report is below, comparing particulate levels where we have information to MDEQ's Forest Fire health advisory levels.

Montana DEQ Forest Fire Smoke Advisory

September 18, 2007

Daily Summary

DISCUSSION:

The advisories in the table below represent conditions for the 24 hour period from midnight to midnight

[John Coefield](#)

Meteorologist

Montana Department of Environmental Quality

Locations and severity of forest fire smoke reports for the date above at reporting stations.

Real time particulate information is currently available in most of the larger urban areas from several different sources including: DEQ run PM-10 BAMS and PM2.5

BAMS, CS&KT run PM-10 TEOMS, NWS ASOS visibility monitors, and USFS remote access Nephelometers and BAMS.

Daily summary September 18, 2007

These advisories represent conditions from midnight to midnight for this day

HAZARDOUS	
VERY UNHEALTHY	
UNHEALTHY	
UNHEALTHY FOR SENSITIVE GROUPS	Kalispell T24 Butte T24 Helena T24
MODERATE	Whitefish T24 Hamilton T24

T1(x) One-hour TEOM or BAM value (number of values)
T8(x) Eight-hour average TEOM or BAM value(number of values)
T24 24 hour average TEOM or BAM value
Vis(x) Visibility value(number of hours)
Vis(am/pm) Visibility value from twice/day reporting stations
(est) estimate

**2008 MONTANA
NATURAL EVENTS ACTION PLAN**

- for the -

**MITIGATION OF PUBLIC HEALTH
IMPACTS CAUSED BY SMOKE FROM
WILDFIRE EVENTS**

Department Hearing

December 7, 2007

Montana Department of Environmental Quality
Permitting & Compliance Division
1520 East Sixth Avenue
Helena, Montana 59620

WEBSITE LOCATION:

<http://www.deq.mt.gov/meetings.asp>

For Information Regarding The NEAP, Contact:

Montana Department of Environmental Quality
Air Quality Policy & Planning Program
1520 East Sixth Avenue
Helena, Montana 59620

(406) 444-7916

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LIST OF CONTACTS AND LINKS

Montana Department of Environmental Quality

Air Monitoring Program (AMP): Elton Erp, 841-5260.
Air Quality Policy & Planning (AQPP): Bob Habeck, 444-7305.
Air Permitting Program (APP): Dave Klemp, 444-0286.
Air Compliance Program (ACP): Dan Walsh, 444-9786.
DEQ State Meteorologist: John Coefield, 444-5272.
Public Information Officer (DEQ PIO): Lisa Peterson, 444-2929.

Montana Department of Public Health and Human Services

Preparedness Coordinator (PC): Jim Murphy, 444-4016.
State Epidemiologist (SE): Todd Damrow, 444-3986.
State Medical Officer (SMO): Dr. Steve Helgerson, 444-1286.
Public Information Officer (DPHHS PIO): John Ebelt, 444-2596.
After Hours Emergency Contact: 461-2042.

Other Affected Parties

County Air Pollution Control Programs:

Butte-Silver Bow County: Dan Powers, 497-5020.
Cascade County: Sandy Johnson, 454-6950.
Flathead County: Joe Russell, 751-8130.
Lewis & Clark County: Kathy Moore, 457-8926.
Lincoln County: Kathy Hooper, 293-7781 ext 230.
Missoula County: Ben Schmidt, 258-3369.
Yellowstone County: Ted Kylander, 256-2770.

County Health Officers: MACO or MLCT directories for contacts.

County Disaster and Emergency Relief Officers: MACO or MLCT directories for contacts.

State Disaster and Emergency Services Division: Monique Lay, 841-3963.

State Office of Public Instruction: Kathy Bramer, 444-3161.

State Department of Labor and Industry: Sandra Mihalik, 444-6418.

U.S. EPA Montana Office: Betsy Wahl, 441-1130 ext 234.

U.S. Forest Service Region 1: Thomas Dzomba, 329-3672.

Bureau of Land Management: Karen Michaud, 896-2911.

National Park Service: Contact individually.

Fish and Wildlife Service: Contact individually.

Private Commercial Land Owners: Contact individually.

Private Non-Commercial Land Owners: Contact individually.

INTERNET LINKS

American Lung Association	http://www.lungusa.org
Centers For Disease Control	http://www.cdc.gov/
FEMA	http://www.fema.gov
Montana DEQ Smoke Update	http://www.deq.mt.gov/
Montana Disaster & Emergency Services	http://dma.mt.gov/des/
Montana Fire Recovery Information	http://newslinks.mt.gov/recovery.shtml
Montana / Idaho Airshed Group	http://www.smokemu.org/
National Highway Traffic Safety Admin	http://www.nhtsa.dot.gov/
National Interagency Fire Center NIFC Safety	http://www.nifc.gov/safety_study/
National Interagency Fire Center (NIFC)	http://www.nifc.gov
National Park Service	http://www.nps.gov/nifc/fire/fir_wildland.cfm
Northern Rockies Coordination Center	http://gacc.nifc.gov/nrcc
National Wildfire Coordinating Group (NWCG)	http://www.nwcg.gov
National Wildland/Urban Interface (FIREWISE)	http://www.firewise.org/
National Wildand Coordinating Group	http://www.nwcg.gov/
OSHA	http://www.osha.gov
U.S. Fish & Wildlife Service Fire Management	http://www.fws.gov/fire
United States Forest Service Fire & Aviation	http://www.fs.fed.us/fire/safety
Weather & Satellite Image Links	http://www.osei.noaa.gov/Events/Fires/

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GLOSSARY

Exceptional Event. An event that affects air quality, is not reasonably controllable or preventable, is an event caused by human activity that is unlikely to recur at a particular location or a natural event, and is determined by EPA in accordance with 40 CFR 50.14 to be an exceptional event. It does not include stagnation of air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or air pollution relating to source noncompliance.

Fire Management Plan. A strategic plan that defines a program to manage wildland and prescribed fires and documents the Fire Management Program in the approved land use plan. The plan is supplemented by operational procedures such as preparedness plans, preplanned dispatch plans, prescribed fire plans, and prevention plans.

Natural Event. An event in which human activity plays little or no direct causal role.

Policy. EPA policies including Guideline on the Identification and Use of Air Quality Data Affected by Exceptional Events (1986); a memorandum dated May 30, 1996 regarding Areas Affected by PM-10 Natural Events; a Note dated August 17, 1998 regarding Implementation of the PM-10 Natural Events Policy; and a note dated October 20, 1003 regarding policy on PM-2.5 Natural Events issues.

Prescribed Fire. Any fire ignited by management actions to meet specific objectives. A written, approved fire management plan must exist, and NEPA requirements must be fulfilled, prior to ignition.

Program. Reference to the Montana / Idaho State Airshed Group.

Regulations. EPA rules as outlined in 40 CFR Part 50, Appendixes K, I and N.

Wildfire. Any unwanted wildland fire.

Wildfire Event. Any individual wildfire, or collection of wildfires that is determined to impact air quality, public health, and/or visibility.

Wildland Fire. Any non-structure fire, other than prescribed fire, that occurs on wildland.

Wildfire Season. The period beginning on May 1 and ending September 30 of any year.

ACRONYMS

ACP	Air Compliance Program, DEQ
AIRS	Aerometric Information Retrieval System
AIRS-AQS	Aerometric Information Retrieval System – Air Quality Subsystem
AMP	Air Monitoring Program, DEQ
APP	Air Permitting Program, DEQ
AQCR	Air Quality Control Region
AQPP	Air Quality Policy & Planning Program, DEQ
BACM	Best Available Control Measures
BACT	Best Available Control Technology
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
DC	Disaster Coordinator
DEQ	Montana Department of Environmental Quality
DPHHS	Department of Public Health and Human Sciences
EPA	United States Environmental Protection Agency
NAAQS	National Ambient Air Quality Standard
NAMS	National Air Monitoring Station
NEAP	Natural Events Action Plan
O ₃	Ozone
PIO	Public Information Officer
PM	Particulate Matter
PM-2.5	Particulate Matter with an aerometric diameter equal to 10 microns or less
PM-10	Particulate Matter with an aerometric diameter equal to 2.5 microns or less
PSA	Public Service Announcement
RACM	Reasonably Available Control Measures
SE	State Epidemiologist
SLAMS	State and Local Air Monitoring Station
SMO	State Medical Officer

1.0 INTRODUCTION

Federal, state, and local agencies have limited abilities to control particulate matter (PM) emissions caused by wildfires. Particulate Matter with an aerometric diameter equal to 10 microns or less (PM-10) and 2.5 microns or less (PM-2.5) monitoring values recorded during a wildfire event may be sufficient to cause violations of the National Ambient Air Quality Standards (NAAQS) and result in a U.S. Environmental Protection Agency (EPA) designation of nonattainment. Inclusion of such values into the monitoring data record may result in an inappropriate estimate of expected historical daily and annual values. Additionally, PM emissions from wildfires often leads to conditions of reduced air quality, public health, and visibility impairment.

Historically, EPA adopted 40 CFR Part 50, Appendixes K, I, and N (Regulations) for making appropriate data adjustments to standard air quality monitoring data for exceptional events and trends. The Regulations are applicable whenever the interpretation of NAAQS data is affected by uncontrollable events caused by natural sources of PM-10 and/or PM-2.5.

On March 22, 2007 (72 FR 13560), EPA publish the final rule addressing the treatment of data influenced by exceptional events, or "Exceptional Events Rule". Revisions to 40 CFR Parts 50 and 51 were made to outline the process whereby states may petition EPA to exclude or "flag" data from regulatory determinations relating to exceedances or violations of NAAQS. States must adequately demonstrate that an exceptional event has caused an exceedance or violation of a NAAQS. The Exceptional Events Rule became effective on May 21, 2007 and is attached as Appendix A.

Mitigation requirements outlined in 40 CFR Part 51.930 - Subpart Y require states to take appropriate and reasonable actions to protect public health from exceedances or violations of the NAAQS. At a minimum, states must: (1) provide for prompt public notification whenever air quality concentrations exceed or are expected to exceed an applicable NAAQS; (2) provide for public education concerning actions that individuals may take to reduce exposures to unhealthy levels of air quality during and following an exceptional event; and (3) provide for the implementation of appropriate measures to protect public health from exceedances or violations of NAAQS caused by exceptional events.

The Montana Natural Events Action Plan (NEAP) is the planning tool to assist in mitigating public health impacts from the effects of wildfire smoke emissions and to fulfill the requirements of 40 CFR 51.930. Although other emissions caused by wildfire is carbon monoxide (CO) and ozone (O₃), these pollutants are not currently addressed by the NEAP. The Exceptional Events Rule preamble states that only particulate matter and ozone emissions will be considered under the rule.

2.0 SCOPE

The Plan facilitates coordination among federal, state, and local agencies to respond to smoke from wildfires with effective communications addressing public exposure to PM and visibility impairment. The Plan outlines strategies to educate the public about smoke from wildfire, mitigate human health impacts, and to identify and implement Best Available Control Measures (BACM) for anthropogenic sources of smoke emissions. The Plan will take effect each time a wildfire is determined to threaten air quality and/or public health. Each wildfire that is determined to cause inappropriate PM exceedances or averages shall be documented as set forth in the Plan and submitted as a separate document to the Plan. The following sections describe the historical background of wildland fire, the chemical composition of smoke, and the public health and visibility effects of smoke.

2.1 Historical Background of Wildland Fire

Wildland fire was once the most prevalent disturbance in Montana. Before the turn of the century, approximately half of western forests burned every 100 years and stands less than 40 years old made up one third of the forested landscape. Exclusion of wildland fire has resulted in high fuel accumulations and a shift in forest stand composition and age structure, but the effects of fire management on landscape structure and biological diversity have received relatively little attention until recently.

Fire scientists have long recognized that the composition and structure of Montana forests have been strongly influenced by wildland fire. This influence goes back for at least several hundred years. Since 1972, knowledge of wildland fire history in Montana has been expanded by more than a dozen detailed fire ecology studies. The vast forest ecosystems of Montana have evolved for thousands of years. Periodic wildland fires have maintained numerous species as well as a mosaic of habitats that have maximized the natural diversity of the forest community. Just under a century ago, the first professional foresters advocated practices to suppress wildland fires, deeming them wildfires. Wildfire suppression was an attempt to preserve land foresters believed could otherwise be logged or inhabited.

With the advent of large-scale logging operations and the historic wildfires of 1910, a new policy of aggressive wildfire suppression began on America's public lands. What eventually became known as the 10 a.m. policy (a goal of total extinguishment of all wildfires by 10 a.m. the morning after first reported) persisted until 1978. To this day, wildfire suppression on public land generally remains the rule. In the 1930s, the Civilian Conservation Corps, created under President Franklin D. Roosevelt, provided the human power to begin putting out large numbers of small wildfires in the West. Land managers were very successful in campaigning to prevent and suppress

wildfires. A national public relations program, starring Smokey Bear, ingrained in the popular imagination a sense of fear of wildfire and a belief that all wildland fire was bad and highly destructive.

The negative consequences of wildfire suppression can now be clearly seen. In many areas, disruption of the natural fire regime has produced overcrowded forests with vast accumulations of dry fuel. Blazes that break out under these conditions may be far more destructive than the normal wildland fires of centuries past and are often extremely difficult or impossible to control. Fire ecologists have long argued that natural, smaller-sized wildland fires are the best tool for taking out underbrush, small trees and dead wood on a regular basis. Fire ecologists have also discovered that past logging practices have made forests more vulnerable to catastrophic wildfires as foresters harvested large trees and left smaller, more fire-susceptible trees and brush behind. Although most foresters have revised those practices, it will take decades for forests to recover. This combination of heavy forest fuels and periodic drought conditions has led to disastrous and unpredictable wildfire conditions in Montana. Today, an extreme potential exists for air quality, public health, and visibility impacts caused by smoke from wildfires.

2.2 Chemical Composition of Smoke

The combustion of forest fuels from wildland fire results in the emission of hundreds, if not thousands of chemical compounds into the atmosphere in the form of smoke. Table 1 illustrates the primary constituents of smoke from forest fuels, including CO, water vapor, carbon dioxide (CO₂), PM, hydrocarbons, other organics, and nitrogen oxides.

The two products of complete oxidation (CO₂ and water vapor) make up to 90 percent of the mass emitted. The other ten percent includes virtually all of the smoke and potentially health-threatening compounds. Three products of concern to air quality regulators are CO, O₃, and PM. Suspended particulates are the greatest threat to air quality and public health because they will remain in suspension for periods ranging from a few seconds to several months. Carbon monoxide and O₃ are gases that typically are diluted by normal atmospheric conditions, and therefore may not pose a significant threat to public health.

As combustion efficiency increases, more CO₂ and water vapor are produced. As combustion efficiency decreases, the proportion of undesirable emissions such as CO and PM increase. Wildland fires of low intensity, those in which the flaming combustion phase is barely sustained, produce high CO and PM emissions. Wildland fires exhibit a wide range of combustion efficiencies throughout the course of their existence. Hence, volume and dispersion of smoke is often difficult to predict.

TABLE 1**Range of Emission Factors and Potential Effects From Components of Wildfire Smoke**

Components	Range of Emission Factors (pounds produced per ton of fuel consumed)	Potential Effects
Carbon Dioxide	2,000 to 3,500	Greenhouse gas
Water Vapor	500 to 1,500	Visibility
Carbon Monoxide	20 to 500	Health
Particulate Matter	20 to 180	Visibility & Health
Total Hydrocarbons	10 to 40	Visibility & Health
Other Organics	Unknown	Visibility & Health
Nitrogen Oxides	1 to 9	Visibility & Health
Sulfur Oxides	Trace	Visibility & Health

Source: USDA Southern Forest Fire Laboratory, n.d.

2.3 Public Health and Visibility Effects of Smoke

Particulates are responsible for two major smoke-related problems: respiratory disorders and visibility impairment. The size and content of smoke particulates have significant health implications. Fine particles, PM-2.5 and less, can be drawn into the human lung and may cause damage. Research studies indicate that on average, 90 percent of smoke particles from wildland fire are PM-10, and 70 percent of those particles are PM-2.5. For comparison, a human hair is about 70 microns in diameter.

Particulates may interact with other air pollutants to affect human health. Excessive particulates may interact with emissions such as sulfur dioxide from urban and industrial centers. Sulfur compounds in the air commonly come from pulp mills and from coal-burning power plants. This interaction creates synergistic effects potentially damaging to human health when inhaled. Smoke particles from wildland fire also have a size range near the wavelength of visible light (0.4 - 0.7 micrometers), making particulates excellent light scatterers. Visibility impairment caused by smoke from wildfires may create unsafe conditions for operating vehicles, trains, or aircraft.

3.0 DEQ ACTIONS FOR WILDFIRE EVENTS

For each wildfire event, the Plan requires specific actions to be performed by the Department of Environmental Quality (DEQ), the Department of Public Health and Human Services (DPHHS), and other affected public and private agencies. Organization charts for DEQ and DPPHS are included as Appendix B. A Memorandum of Understanding has been entered into between DEQ and DPHHS and is included as Appendix C.

Other affected parties may include, but are not limited to federal and local health agencies; federal, state, and local disaster and emergency relief agencies; state departments of Labor & Industry and Office of Public Instruction; U.S. Forest Service; National Park Service; Fish and Wildlife Service; Bureau of Land Management; private residential land owners; and private commercial land owners. For each wildfire event, DEQ must ensure the performance of each action as set forth below.

3.1 Action 1: Conduct Routine Ambient Monitoring

Montana has established a network of State and Local Air Monitoring Stations (SLAMS) for NAAQS pollutants, using criteria set by EPA for monitor station location and operation. EPA has also established an additional network of monitors called National Air Monitoring Stations (NAMS). During a wildfire event, continuous PM monitors and National Weather Service airport visibility monitors will be utilized by DEQ to assess PM concentration and geographic extent of smoke. Figure 1 illustrates the communities with continuous PM and airport visibility monitors by each Air Quality Control Region (AQCR).

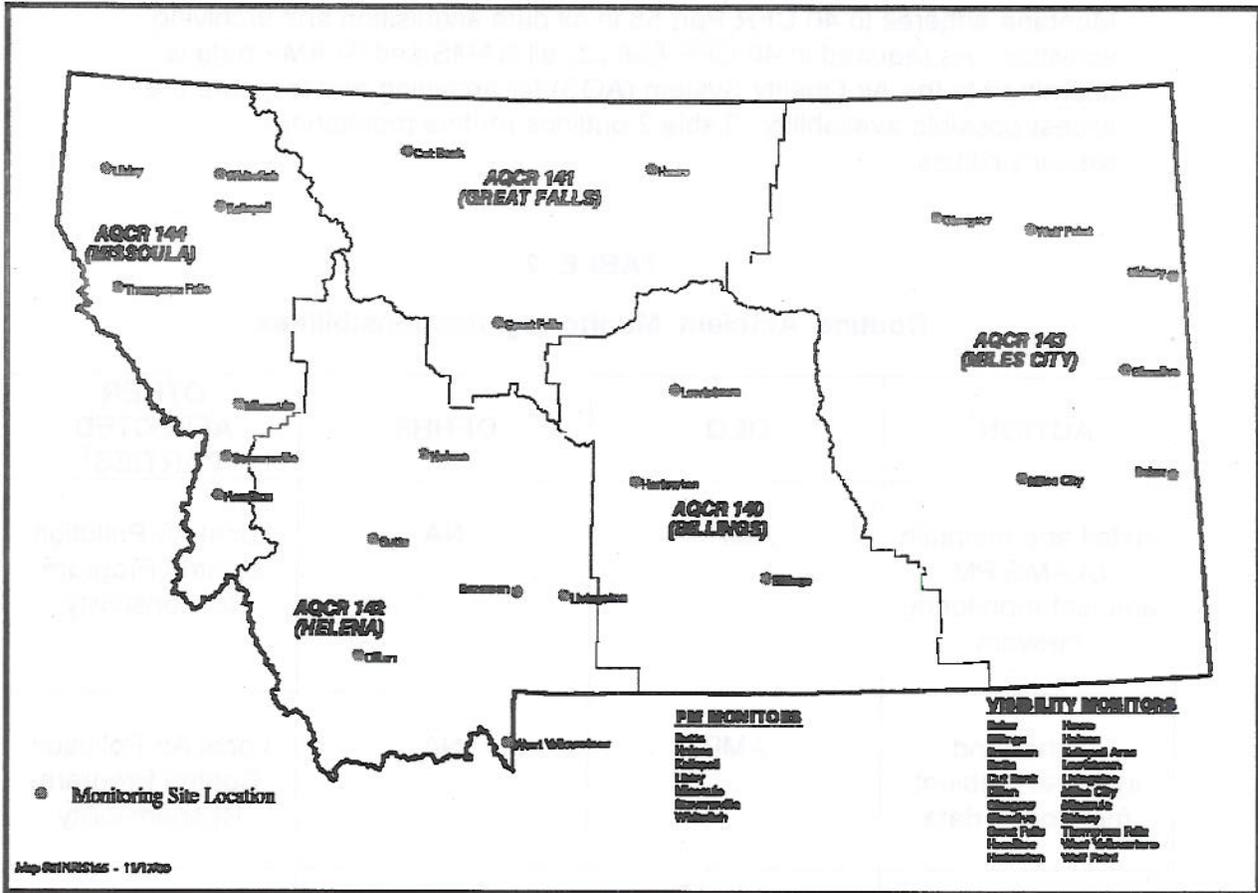


FIGURE 1
Continuous PM and Airport Visibility Monitoring Site Locations by AQCR

Montana's monitoring objectives and the spatial scale of PM monitoring stations are examined to determine whether they represent the air quality conditions of the local area. Background information, such as maps, climatological summaries, emission inventories, traffic counts, and modeling results are gathered and reviewed. The final evaluation of ambient air monitoring placement locations is determined at DEQ's annual network review. Not all communities with PM monitors have continuous monitoring capability. In general, only those communities with residential wood smoke problems received continuous monitors to evaluate air quality in real time. Although continuous PM monitoring information represents local air quality conditions, the relationship between monitoring site locations adequately characterizes regional conditions.

Montana adheres to 40 CFR Part 58 in all data acquisition and archiving activities. As required in 40 CFR §58.35, all NAMS and SLAMS data is submitted to the Air Quality System (AQS) for archiving and to insure the widest possible availability. Table 2 outlines routine monitoring responsibilities.

TABLE 2
Routine Ambient Monitoring Responsibilities

ACTION¹	DEQ	DPHHS	OTHER AFFECTED PARTIES²
Install and maintain SLAMS PM ambient monitoring network	AMP ³	NA	Local Air Pollution Control Program Responsibility ⁴
Gather and interpret ambient monitoring data	AMP	NA	Local Air Pollution Control Program Responsibility
Enter monitoring data into AQS	AMP	NA	Local Air Pollution Control Program Responsibility
Answer routine public questions regarding smoke and visibility ambient monitoring	AMP	NA	As Needed

1 - Action sequence does not connote priority.

2 - Other affected parties may include, but is not limited to federal and local health agencies; federal, state, and local disaster and emergency relief agencies; state departments of Labor & Industry and Office of Public Instruction; U.S. Forest Service; National Park Service; Fish and Wildlife Service; Bureau of Land Management; private residential land owners; and private commercial land owners.

3 - Air Monitoring Program (AMP), DEQ.

4 - Applicable only to counties with state-delegated air pollution control programs with monitoring responsibilities.

3.2 Action 2: Conduct Public Education / Outreach

The purpose of this action is to inform the public about PM and visibility impairment caused by smoke from wildfires. The Department intends to implement public education / outreach actions whenever a wildfire event occurs to notify the public of appropriate actions that could reduce personal exposure to smoke and mitigate visibility impairment. These actions would not constitute medical advice or public health advisories based upon monitored values. Additionally, routine wildfire information such as size, location, evacuations, travel restrictions, etc. are not addressed by the Plan.

The DEQ website is the primary outreach tool for informing the public of health effects caused by smoke from wildfires. The website is entitled "DEQ & Smoke – Smoke Management in Montana – Forest Fire Air Quality updates". The website provides the reader with a narrative of current air quality conditions and a timely meteorological forecast. The website also includes, but is not limited to, links to visibility ranges and smoke categories. These links provide the public with a discussion of health effects and cautionary statements for taking actions to avoid negative health effects.

The DEQ & Smoke – Smoke Management in Montana – Forest Fire Air Quality updates website is found at:

<http://deq.mt.gov/FireUpdates/index.asp>

The Montana / Idaho State Airshed Group is a state-certified basic smoke management program that works to minimize smoke impacts from prescribed burning while allowing burners to achieve their forest health objectives. Although the Department may curtail prescribed burning during wildfires, airsheds may remain open to prescribed burning, depending upon the individual circumstances. Thus, the DEQ open burning hotline is another tool to communicate to the public the necessity of not contributing additional smoke to the airshed from prescribed burning. Sections 3.5 and 3.6 discuss the state's smoke management program, seasons of operation, and open burning hotline procedures.

Table 3 outlines public education / outreach responsibilities. Appendix D contains examples of public education / outreach information:

TABLE 3
PUBLIC EDUCATION / OUTREACH RESPONSIBILITIES

ACTION ¹	DEQ	DPHHS	OTHER AFFECTED PARTIES ²
Information distribution (literature)	AQPP ³ DEQ PIO ⁴	Disaster Coordinator Epidemiologist Medical Officer DPHHS PIO ⁵	As Needed
Prepare and Broadcast PSAs ⁶	AQPP DEQ PIO	Disaster Coordinator Epidemiologist Medical Officer DPHHS PIO	As Needed
Community events to raise awareness of health hazards of smoke	As Needed	As Needed	As Needed
Answer routine public questions regarding smoke	AQPP DEQ PIO	Disaster Coordinator Epidemiologist Medical Officer DPHHS PIO	As Needed
Outdoor burning hotline	AQPP	NA	NA

1 - Action sequence does not connote priority.

2 - Other affected parties may include, but is not limited to federal and local health agencies; federal, state, and local disaster and emergency relief agencies; state departments of Labor & Industry and Office of Public Instruction; U.S. Forest Service; National Park Service; Fish and Wildlife Service; Bureau of Land Management; private residential land owners; and private commercial land owners.

3 - Air Quality Policy & Planning (AQPP), DEQ.

4 - Public Information Officer (DEQ PIO).

5 - Public Information Officer (DPHHS-PIO).

6 - Public Service Announcements (PSAs).

3.3 Action 3: Conduct Data Gathering of Ambient PM Concentrations

As required by the Plan, information for each wildfire event must be gathered to demonstrate that ambient monitoring values were affected by a natural event. Table 4 outlines the data gathering responsibilities.

TABLE 4

Data Gathering of Ambient PM Concentrations Responsibilities

ACTION¹	DEQ	DPHHS	OTHER AFFECTED PARTIES²
Monitor smoke complaints	ACP ³	NA	As Needed
Monitor visibility impairment classes	AQPP ⁴ AMP ⁵	NA	As Needed
Collect and evaluate ambient monitoring values	AQPP AMP	NA	As Needed
Answer routine public questions regarding smoke and the data collected.	AQPP AMP	NA	As Needed
Conduct individual exposure monitoring	NA	As Needed	As Needed
Answer routine questions regarding occupational exposure and indoor air monitoring	NA	NA	State Department of Labor & Industry

1 - Action sequence does not connote priority.

2 - Other affected parties may include, but is not limited to federal and local health agencies; federal, state, and local disaster and emergency relief agencies; state departments of Labor & Industry and Office of Public Instruction; U.S. Forest Service; National Park Service; Fish and Wildlife Service; Bureau of Land Management; private residential land owners; and private commercial land owners.

3 - Air Compliance Program (ACP), DEQ.

4 – Air Quality Policy & Planning (AQPP), DEQ.

5 – Air Monitoring Program (AQM), DEQ.

3.4 Action 4: Issue Public Health Advisories Based on Measured Concentrations

The purpose of the public health advisory process is to inform the public about specific PM emissions based upon monitored values and to provide periodic information on air quality and visibility impairment. Health advisories issued under this process shall provide specific instructions to the public for taking actions to minimize exposure to high concentrations of PM. The public health advisory action employs various actions depending on the concentration of PM. The actions are not intended to replace the need to control the wildfire event, but are intended to mitigate adverse health effects. Table 5 summarizes the public health advisory responsibilities.

TABLE 5
Issuing Public Health Advisories Based on Measured Concentrations Responsibilities

ACTION¹	DEQ	DPHHS	OTHER AFFECTED PARTIES²
Provide ambient monitoring data on Internet website	AQM ³ AQPP ⁴	NA	As Needed
Provide ambient monitoring data to public health officials	AQM AQPP	NA	Local Air Pollution Control Program Responsibility ⁵
Issue health advisories	NA	NA	Local Health Departments ⁶
Answer routine public questions regarding smoke and health effects	As Needed	As Needed	Local Health Departments

1 - Action sequence does not connote priority.

- 2 - Other affected parties may include, but is not limited to federal and local health agencies; federal, state, and local disaster and emergency relief agencies; state departments of Labor & Industry and Office of Public Instruction; U.S. Forest Service; National Park Service; Fish and Wildlife Service; Bureau of Land Management; private residential land Owners; and private commercial land owners.
- 3 - Air Monitoring Program (AMP), DEQ.
- 4 - Air Quality Policy & Planning (AQPP), DEQ
- 5 - Applicable only to counties with state-delegated air pollution control programs with monitoring responsibilities.
- 6 - Applicable to all local health departments with statutory authority.

3.5 Action 5: Conduct BACM Determination and Implementation

Section 190 of the Clean Air Act Amendments of 1990 require EPA to issue technical guidance for Reasonable Available Control Measures (RACM) and BACM for agricultural and prescribed silvicultural burning. Many of the techniques outlined in EPA's BACM document for prescribed burning (EPA-450/2-92-003) have been incorporated into the Montana / Idaho State Airshed Group (Program). The state air quality permit references the term Best Available Control Technology (BACT) that is required year-round and primarily describes burning conditions associated with good atmospheric ventilation.

Appendix E outlines the Program and some of the BACM techniques. Table 6 outlines the BACM determination and implementation responsibilities.

TABLE 6
BACM Determination and Implementation Responsibilities

ACTION ¹	DEQ	DPHHS	OTHER AFFECTED PARTIES ²
Implement and manage smoke management plan for major open burning	AQPP ³ APP ⁴	NA	NA
Answer routine public questions regarding smoke management program	AQPP APP	NA	As Needed

1 - Action sequence does not connote priority.

- 2 - Other affected parties may include, but is not limited to federal and local health agencies; federal, state, and local disaster and emergency relief agencies; state departments of Labor & Industry and Office of Public Instruction; U.S. Forest Service; National Park Service; Fish and Wildlife Service; Bureau of Land Management; private residential land owners; and private commercial land owners.
- 3 - Air Quality Policy & Planning (AQPP), DEQ.
- 4 - Air Permitting Program (APP) DEQ.

During a wildfire event, the Program will work to mitigate the effects of additional anthropogenic smoke emissions from prescribed burning on existing smoke conditions. The Program seeks to inform the public about the requirements for major and minor open burners as administered by DEQ under Montana law and the voluntary activities associated with membership in the Montana / Idaho Airshed Group (Airshed Group). A summary of smoke management activities by season is outlined below:

SMOKE MANAGEMENT ACTIVITIES BY SEASON

Spring:

- March 1st, general open burning may be conducted.
- All burners are required to implement BACT.
- No DEQ-sponsored dispersion forecasting for general public use.
- Individual burners may utilize in-house meteorological services.
- Airshed Group members bound by self-imposed restrictions issued by monitoring unit.

Summer:

- General open burning may be conducted.
- All burners are required to implement BACT.
- No DEQ-sponsored dispersion forecasting for general public use.
- Individual burners may utilize in-house meteorological services.
- Airshed Group members bound by self-imposed restrictions issued by monitoring unit.

Fall:

- General open burning may be conducted.
- DEQ sponsors dispersion forecasting recommendations.
- Minor burners are required to call DEQ for dispersion forecast.
- Airshed Group members bound by DEQ restrictions issued by monitoring unit.

Winter:

- General open burning mostly restricted.
- Burners may seek special DEQ permission to burn.

- No DEQ-sponsored dispersion forecasting for general public use.
- Airshed Group members bound by DEQ restrictions issued by monitoring unit.

MONTANA OPEN BURNING RULES

In Montana, prescribed wildland open burning, including Wildland Fire Use, is generally conducted by burners who are burning quantities sufficient to generate emissions that qualify them as major open burners. Major open burning requires a permit in Montana. Major open burners apply to DEQ for a permit to burn and are required to submit certain information regarding planned fires and the requisite fee.

A major open burner is required to conform to BACT requirements and any other conditions set forth in the permit. BACT is essentially a case-by-case analysis of a major burner's techniques and methods of controlling emissions during a burn. BACT for major open burning requires burning only during periods of good dispersion and generally precludes burning during December, January, or February. The final responsibility to determine BACT lies with the burner.

A significant portion of annual prescribed wildland open burning occurs during the fall season (September 1 through November 30). During the fall season, DEQ performs a meteorological forecast to determine dispersion conditions throughout the state and reports the same on a phone message. BACT includes obtaining and following a dispersion forecast prior to igniting a burn. Table 7 outlines smoke management activities by season.

For the entire text of Montana's open burning rules, see:

<http://deq.mt.gov/dir/legal/Chapters/CH08-06.PDF>

TABLE 7
Smoke Management Activities by Season

ACTIVITY/ REQUIREMENT	SPRING	SUMMER	FALL	WINTER
	Mar 1 – May 31	JUN 1 – AUG 31	SEP 1 – NOV 30	DEC 1 – FEB 28
Implement BACT	X	X	X	X
DEQ Dispersion Forecast Available			X	
Must Follow DEQ Restrictions			X	
Must Obtain DEQ Permission Before Burning				X

Must Comply With Local Program Restrictions	X	X	X	X
Major Burners Comply With MU Restrictions	X	X	X	

MONTANA / IDAHO AIRSHED GROUP

The Airshed Group is a voluntary association of major open burners committed to coordinating activities to mitigate adverse air quality effects of major open burning. The Airshed Group seeks to balance the competing objectives of prescribed burning for land management with maintaining air quality.

As set forth above, Airshed Group members, as major open burners, are required to follow BACT. In addition to the legal requirements, the Airshed Group subscribes to a set of self-imposed requirements set forth in an operating agreement and implements a tracking system to coordinate burner activity throughout the year.

The Airshed Group utilizes the services of a program manager (Monitoring Unit) and a meteorologist. Burners access a computerized database over the internet and enter parameters regarding their planned burning. During the spring burning season (March 1 through May 31), the meteorologist provides a dispersion forecast for members only. Prior to ignition, burners enter the appropriate data for a burn and check the dispersion forecast for their airshed. The monitoring unit tracks all database and meteorological activity to ensure optimal conditions and make final recommendations regarding burning.

The Airshed Group does not generally support summer or winter burning and does not provide meteorological services during the summer or winter months. During the fall burning season, DEQ engages the services of the Airshed Group meteorologist and provides a dispersion forecast for members and non-members.

For information regarding the Airshed Group, see:

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

LOCAL PROGRAM & MINOR OPEN BURNING

In addition to the requirements described above, open burners must comply with local program burning restrictions, particularly when local determinations of burning conditions are more restrictive than state or Monitoring Unit (MU) determinations.

Minor open burners are generally characterized as either residential and / or small business. The amount of burning is typically low and is not often routine. Minor open burners are regulated through state open burning rules and are required to contact DEQ through the 1-800 hotline for burning restrictions in the fall. Minor open burners must comply with BACT year-round and observe local program restrictions.

3.6 Action 6: Conduct Additional BACM Determination and Implementation

If necessary to further reduce smoke from prescribed burning during a wildfire event, the Program may make additional BACM determinations that may be implemented during a wildfire event. Various management techniques can be applied to reduce the emissions produced from wildland burning. Emission reduction strategies include techniques to exclude fuels from burning or burning fuels in ways that will increase combustion efficiency. To truly reduce total emissions over time, fuels excluded from one incident (prescribed fire or wildland fire managed for resource benefits) must not merely be consumed by some future incident (wildland fire).

Appendix F outlines a list of additional BACM control measure techniques for prescribed burning. Most techniques can be categorized as either fuel reduction or fuel treatment techniques and are routinely implemented by the Program. Table 8 outlines additional BACM determination and implementation responsibilities.

TABLE 8

Additional BACM Determination and Implementation Responsibilities

ACTION¹	DEQ	DPHHS	OTHER AFFECTED PARTIES²
Require additional BACM activities as part of the Smoke Management Program	AP ³ AQPP ⁴	NA	NA

1 - Action sequence does not connote priority.

2 - Other affected parties may include, but is not limited to federal and local health agencies; federal, state, and local disaster and emergency relief agencies; state departments of Labor & Industry and Office of Public Instruction; U.S. Forest Service; National Park Service; Fish and Wildlife Service; Bureau of Land Management; private residential land owners; and private commercial land owners.

3 - Air Permitting Program (APP), DEQ.

3.7 Action 7: Conduct Emergency Episode Avoidance Plan Determination

If a wildfire event resulted in elevated PM concentrations and was anticipated to remain elevated, DEQ is required to determine whether the administrative requirements found in the Montana Emergency Episode Avoidance Plan are applicable.

4.0 DEQ ACTIONS FOR SUBMITTING FLAGGED MONITORING DATA

DEQ shall take specific actions before submitting monitoring data adjustments for a wildfire event. Wildfire events are defined as any individual wildfire, or collection of wildfires, that can be demonstrated to have a clear casual relationship between measured emissions and impacts on air quality, public health, and/or visibility. DEQ shall document each wildfire event as set forth below.

4.1 Action 1: Documenting the Occurrence of Each Wildfire Event

DEQ shall document the occurrence of wildfire events by any of the following methods when available:

- (1) Compiling state and federal agency reports.
- (2) Gathering monitoring data.
- (3) Gathering relevant news reports.
- (4) Gathering meteorological data.
- (5) Gathering satellite photos.

The Exceptional Events Rule requires states that flag data to satisfy the requirements of 40 CFR 50.14 (c)(3)(iii) to provide evidence that: (a) the event satisfies the criteria that it was not reasonably controllable or preventable; (b) there is a clear casual relationship between the measured value and the event; (c) the event is associated with a measured value in excess of historical values; and (d) there would have been no exceedances or violation but for the event.

4.2 Action 2: Flagging AIRS Data

According to the Exceptional Events Rule, DEQ should flag particulate (PM-10 and/or PM-2.5) monitoring values affected by a wildfire event into the EPA AQS database and submit to EPA not later than July 1st of the calendar year following the year in which the flagged measurement occurred. 40 CFR 50.14 (c)(2)(iii).

4.3 Action 3: Documentation Submission to EPA

According to the Exceptional Events Rule, DEQ a state that has flagged data must submit a demonstration to justify data exclusion to EPA not later than the lesser of, three years following the end of the calendar quarter in which the flagged concentration was recorded or, 12 months prior to the date that a regulatory decision must be made by EPA. 40 CFR 50.14 (c)(3)(i).

4.4 Action 4: Public Participation

DEQ shall notice and provide for public comment all monitoring data submitted for exclusion. DEQ shall notify the public of changes to this Plan and of the documentation package for flagged data. Copies of this Plan and the documentation shall be made available for public review by the designated repositories and the DEQ website. DEQ shall also notify interested parties of the request for adjustment and the availability of the documentation for review. Proof of public participation for this Plan and the documentation package will be contained in a 'Record of Public Hearing'.

5.0 RE-EVALUATE PLAN EVERY FIVE YEARS

DEQ is required to re-evaluate the Plan every five years. This re-evaluation shall assess the natural events leading to any requests for adjustments of monitoring values, the status of the implementation of the Plan, and the adequacy of the actions set forth in the Plan. Table 9 outlines the Plan reevaluation responsibilities.

TABLE 9

Responsibilities for Re-Evaluating Plan Every Five Years

ACTION¹	DEQ	DPHHS	OTHER AFFECTED PARTIES²
Assess wildfire events	AQPP ³	As Needed	As Needed
Assess current status of the Plan	AQPP	As Needed	As Needed

Assess adequacy of the Plan	AQPP	As Needed	As Needed
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- 1 - Action sequence does not connote priority.
- 2 - Other affected parties may include, but is not limited to federal and local health agencies; federal, state, and local disaster and emergency relief agencies; state departments of Labor & Industry and Office of Public Instruction; U.S. Forest Service; National Park Service; Fish and Wildlife Service; Bureau of Land Management; private residential land owners; and private commercial land owners.
- 3 - Air Quality Policy & Planning (AQPP), DEQ.

6.0 REFERENCES

- (1) U.S. Department of Agriculture, Southern Forest Fire Laboratory, Southeastern Forest Experiment Station, Macon, Georgia. Contents and Effects of Forest Fire Smoke (reprint). Charles Tangren et. al. authors. N.d.
- (2) U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Prescribed Burning Background Document and Technical Information Document for Prescribed Burning Best Available Control Measures. (1992 - Research Triangle Park, NC: EPA-450/2-92-003).

7.0 APPENDICES

The following appendices contain information in support of the Plan. They also contain documentation for the Plan's public participation process and documentation for each wildfire event including its public participation process. The public participation process will follow the requirements outlined in 40 CFR Part 51 Appendix V.

APPENDIX A. EPA Exceptional Events Rule

1. The authority citation for part 80 continues to read as follows: Authority: 42 U.S.C. 7401 et seq.

2. Amend § 80.110 and paragraphs (j) and (k) to read as follows: § 80.110 Definitions.

(j) Exceptional event means an event that affects air quality in a way that is not reasonably controllable or preventable by the responsible party, and is determined by the Administrator to be an exceptional event. It does not include stationary air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or an inversion related to source nonattainment.

(k) Natural event means an event in which human activity plays little or no direct causal role.

(l) Evidence with respect to a national ambient air quality standard means one occurrence of a measured or modeled concentration that exceeds the specified concentration level of such standard for the averaging period specified by the standard.

3. Add § 80.114 to read as follows:

§ 80.114 Treatment of air quality monitoring data influenced by exceptional events.

(a) Requirements. (1) A State may request EPA to exclude data showing exceedances or violations of the national ambient air quality standard that are directly due to an exceptional event from use in determinations by the Administrator of EPA's attainment or nonattainment for a particular air quality standard. (2) Determination to justify data exclusion may include any reliable monitoring data, but must demonstrate a clear causal relationship between the measured exceedance or violation of such standard and the event in accordance with paragraph (c)(3) of this section.

(b) Determinations by EPA. (1) EPA shall exclude data from the determination of attainment and NAAQS violation where a State demonstrates to EPA's satisfaction that an exceptional event caused a specific air pollution concentration in excess of the applicable national ambient air quality standard at a particular air quality monitoring location and otherwise satisfies the requirements of this section. (2) EPA shall exclude data from use in determinations of attainment and NAAQS violation where a State demonstrates to EPA's satisfaction that emissions from a source directly caused a specific air pollution concentration in excess of one or more national ambient air quality standards at a particular air quality monitoring location and otherwise satisfies the requirements of this section. Such data will be treated in the same manner as

PART 50 — NATIONAL PRIMARY AND SECONDARY AMBIENT AIR QUALITY STANDARDS

1. The authority citation for part 50 continues to read as follows: Authority: 42 U.S.C. 7401 *et seq.*

2. Amend § 50.1 to add paragraphs (j) and (k) to read as follows: § 50.1 Definitions.

(j) *Exceptional event* means an event that affects air quality, is not reasonably controllable or preventable, is an event caused by human activity that is unlikely to recur at a particular location or a natural event, and is determined by the Administrator in accordance with 40CFR 50.14 to be an exceptional event. It does not include stagnation of air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or air pollution relating to source noncompliance.

(k) *Natural event* means an event in which human activity plays little or no direct causal role.

(l) *Exceedance with respect to a national ambient air quality standard* means one occurrence of a measured or modeled concentration that exceeds the specified concentration level of such standard for the averaging period specified by the standard.

3. Add § 50.14 to read as follows:

§ 50.14 Treatment of air quality monitoring data influenced by exceptional events.

(a) *Requirements.* (1) A State may request EPA to exclude data showing exceedances or violations of the national ambient air quality standard that are directly due to an exceptional event from use in determinations by demonstrating to EPA's satisfaction that such event caused a specific air pollution concentration at a particular air quality monitoring location. (2) Demonstration to justify data exclusion may include any reliable and accurate data, but must demonstrate a clear causal relationship between the measured exceedance or violation of such standard and the event in accordance with paragraph (c)(3)(iii) of this section.

(b) *Determinations by EPA.* (1) EPA shall exclude data from use in determinations of exceedances and NAAQS violations where a state demonstrates to EPA's satisfaction that an exceptional event caused a specific air pollution concentration in excess of one or more national ambient air quality standards at a particular air quality monitoring location and otherwise satisfies the requirements of this section. (2) EPA shall exclude data from use in determinations of exceedances and NAAQS violations where a State demonstrates to EPA's satisfaction that emissions from fireworks displays caused a specific air pollution concentration in excess of one or more national ambient air quality standards at a particular air quality monitoring location and otherwise satisfies the requirements of this section. Such data will be treated in the same manner as

exceptional events under this rule, provided a State demonstrates that such use of fireworks is significantly integral to traditional national, ethnic, or other cultural events including, but not limited to July Fourth celebrations which satisfy the requirements of this section.(3) EPA shall exclude data from use in determinations of exceedances and NAAQS violations, where a State demonstrates to EPA's satisfaction that emissions from prescribed fires caused a specific air pollution concentration in excess of one or more national ambient air quality standards at a particular air quality monitoring location and otherwise satisfies the requirements of this section provided that such emissions are from prescribed fires that EPA determines meets the definition in§ 50.1(j), and provided that the State has certified to EPA that it has adopted and is implementing a Smoke Management Program or the State has ensured that the burner employed basic smoke management practices. If an exceptional event occurs using the basic smoke management practices approach, the State must undertake a review of its approach to ensure public health is being protected and must include consideration of development of a SMP.

(4) [Reserved]

(c) *Schedules and Procedures.* (1)Public notification.(i) All States and, where applicable, their political subdivisions must notify the public promptly whenever an event occurs or is reasonably anticipated to occur which may result in the exceedance of an applicable air quality standard.(ii) [Reserved.](2) Flagging of data.(i) A State shall notify EPA of its intent to exclude one or more measured exceedances of an applicable ambient air quality standard as being due to an exceptional event by placing a flag in the appropriate field for the data record of concern in accordance with the schedules for submission of data to the AQS database in 40 CFR 58.16.(ii) Flags placed on data in accordance with this section shall be deemed informational only, and the data shall not be excluded from determinations with respect to exceedances or violations of the national ambient air quality standards unless and until, following the State's submittal of its demonstration pursuant to paragraph(c)(3) of this section and EPA review, EPA notifies the State of its concurrence by placing a concurrence flag in the appropriate field for the data record in the AQS database.(iii) Flags placed on data as being due to an exceptional event together with an initial description of the event shall be submitted to EPA not later than July 1st of the calendar year following the year in which the flagged measurement occurred, except as allowed under paragraph (c)(2)(iv) of this section.(iv) For PM_{2.5} data collected during calendar years 2004–2006, that the State identifies as resulting from an exceptional event, the State must notify EPA of the flag and submit an initial description of the event no later than October 1, 2007. EPA may grant an extension, if a State requests an extension, and permit the State to submit the notification of the flag and initial description by no later than December 1, 2007.(v) When EPA sets a NAAQS for a new pollutant, or revises the NAAQS for an existing pollutant, it may revise or set a new schedule for flagging data for the initial designation of areas for those NAAQS.(3) *Submission of demonstrations.*(i) A State that has flagged data as being due to an exceptional event and is requesting exclusion of the affected measurement data shall, after notice and opportunity for public comment, submit a demonstration to justify data exclusion to EPA not later than the lesser of, 3 years

following the end of the calendar quarter in which the flagged concentration was recorded or, 12 months prior to the date that a regulatory decision must be made by EPA. A State must submit the public comments it received along with its demonstration to EPA. (ii) A State that flags data collected during calendar years 2004–2006, pursuant to paragraph (c)(2)(iv) of this section, must adopt the procedures and requirements specified in paragraph (c)(3)(i) of this section and must include a demonstration to justify the exclusion of the data not later than the submittal of the Governor's recommendation letter on nonattainment areas. (iii) The demonstration to justify data exclusion shall provide evidence that: (A) The event satisfies the criteria set forth in 40 CFR 50.1(j); (B) There is a clear causal relationship between the measurement under consideration and the event that is claimed to have affected the air quality in the area; (C) The event is associated with a measured concentration in excess of normal historical fluctuations, including background; and (D) There would have been no exceedance or violation but for the event. (iv) With the submission of the demonstration, the State must document that the public comment process was followed.

(v) [Reserved.]

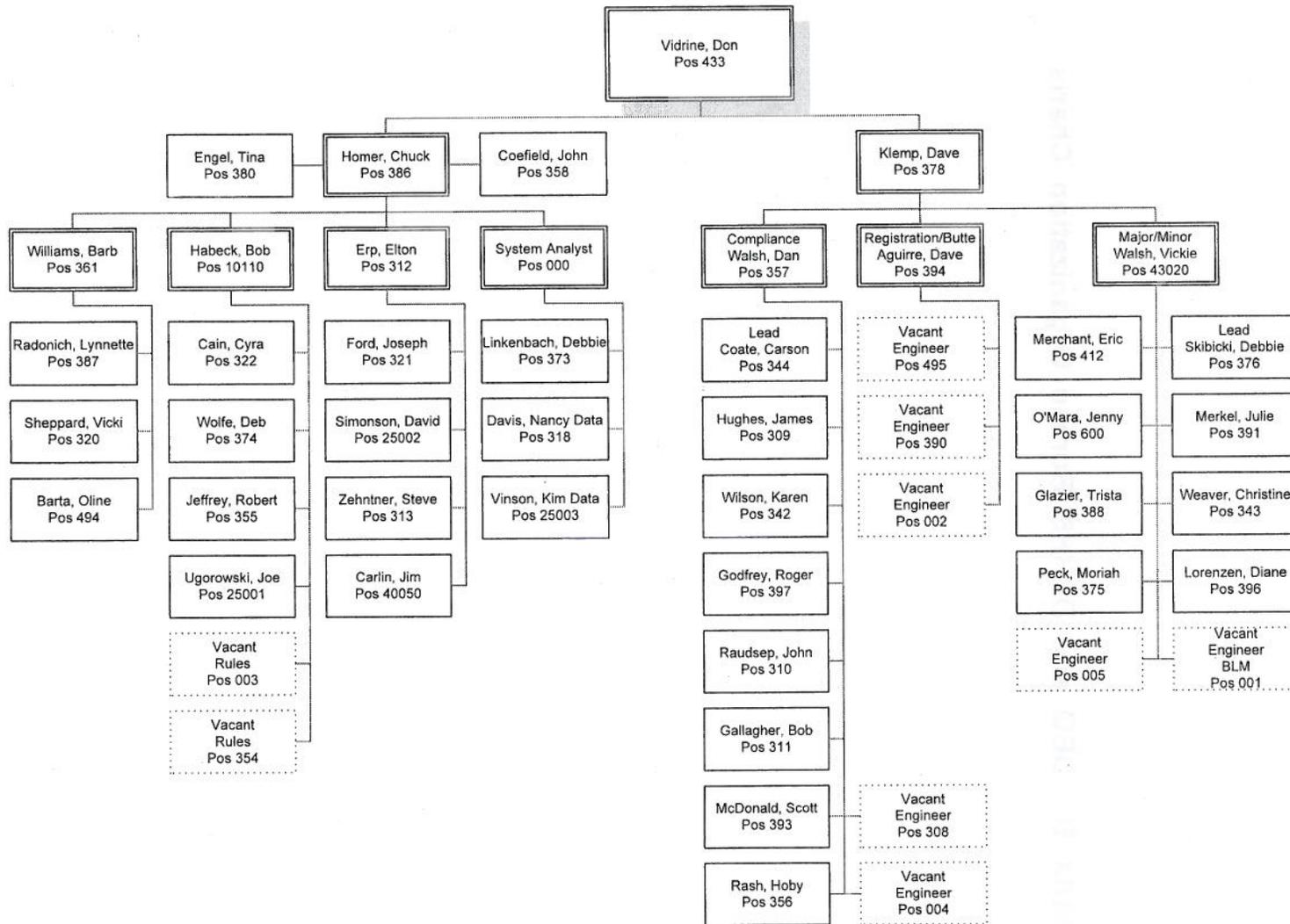
(A) [Reserved]

PART 51 — NATIONAL PRIMARY AND SECONDARY NATIONAL AMBIENT AIR QUALITY STANDARDS

4. The authority citation for part 51 continues to read as follows: Authority: 23 U.S.C. 101; 42 U.S.C. 7401–7671q. 5. Adding Subpart Y consisting of § 51.930 to read as follows:

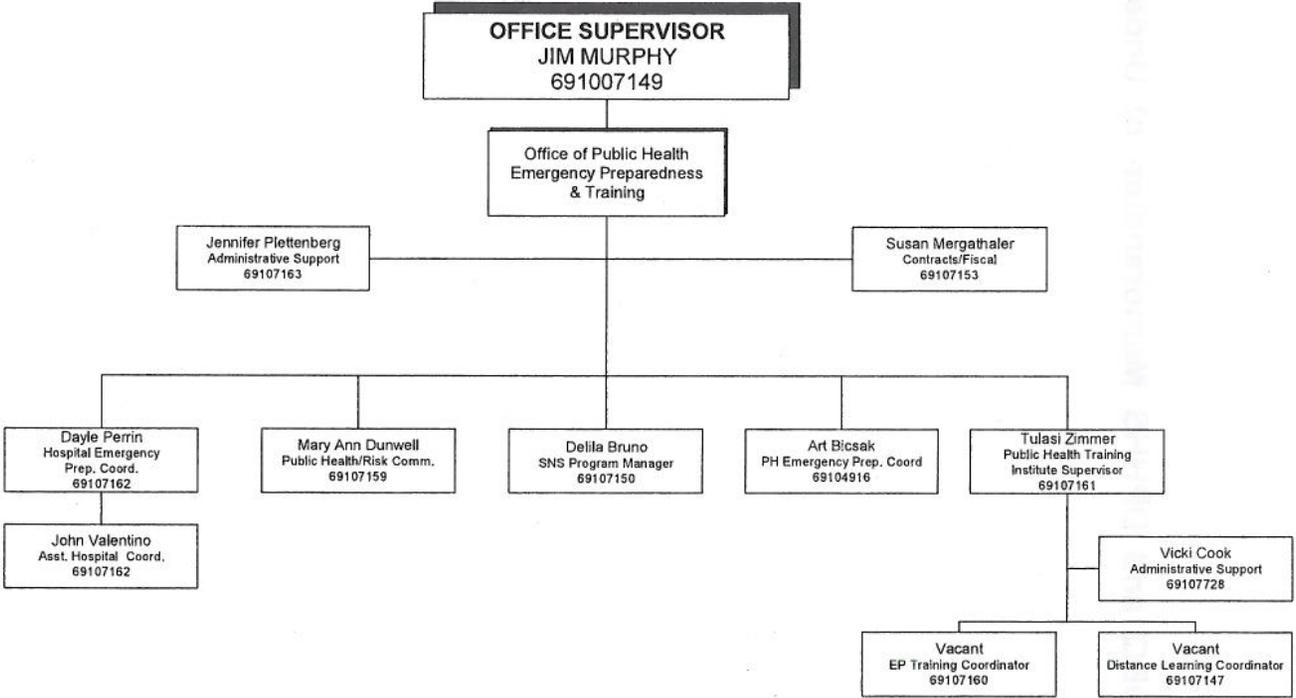
Subpart Y—Mitigation Requirements § 51.930 Mitigation of Exceptional Events. (a) A State requesting to exclude air quality data due to exceptional events must take appropriate and reasonable actions to protect public health from exceedances or violations of the national ambient air quality standards. At a minimum, the State must: (1) Provide for prompt public notification whenever air quality concentrations exceed or are expected to exceed an applicable ambient air quality standard; (2) Provide for public education concerning actions that individuals may take to reduce exposures to unhealthy levels of air quality during and following an exceptional event; and (3) Provide for the implementation of appropriate measures to protect public health from exceedances or violations of ambient air quality standards caused by exceptional events. (b) [Reserved] [FR Doc. E7–5156 Filed 3–21–07; 8:45 am]

APPENDIX B. DEQ and DPHHS Bureau Organization Charts



**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR RESOURCES MANAGEMENT BUREAU**

Department Of Public Health Human Services
Public Health & Safety Division
"To Improve & Protect the Health & Safety of Montanans"



updated 5/4/07

**MONTANA DEPARTMENT OF PUBLIC HEALTH AND HUMAN SERVICES
PUBLIC HEALTH & SERVICES BUREAU**

APPENDIX C. DEQ and DPHHS Memorandum of Understanding

3-9-04

МОНГОЛЫН ДЭМЖЭЛЭЙН ЗӨВЧӨЛӨӨД
УЛАСЫН ДЭМЖЭЛЭЙН ЗӨВЧӨЛӨӨД
УЛАСЫН ДЭМЖЭЛЭЙН ЗӨВЧӨЛӨӨД



**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY
AND
THE MONTANA DEPARTMENT OF
PUBLIC HEALTH AND HUMAN SERVICES**

- I. **Purpose:** This Memorandum of Understanding (MOU) defines the responsibilities and procedures under which the Montana Department of Environmental Quality (DEQ) and the Montana Department of Public Health and Human Services (DPHHS) will interact to protect and enhance public health and environmental quality (environmental health) for the benefit of all Montana citizens. DEQ and DPHHS recognize it is important to establish and maintain effective services to citizens of the State of Montana. This MOU, therefore, is established with the intent to promote the cooperation, coordination and performance of the functions of these two administrative agencies.

- II. **Authority:** Chapters 418 and 546 of the laws of the 1995 Legislature implemented recommendations of the Governor's Task Force to Renew Government by transferring all programs administered by the Department of Health and Environmental Sciences into a new DEQ and a new DPHHS. This MOU is established by mutual agreement of the DEQ and DPHHS.

- III. **Scope:** This MOU initiates and defines the procedures DEQ and DPHHS will follow in:
 - a. Establishing four (4) meetings a year for agency representatives identified by the directors to discuss environmental health issues;
 - b. Carrying out individual and collective responsibilities in emergency situations;
 - c. Conducting routine mandated responsibilities;
 - d. Coordinating inspections and enforcement actions; and
 - e. Providing education, training and public information.

- IV. **Responsibilities:**
 - A. **Quarterly Meetings:** The four (4) meetings a year will provide an opportunity for both agencies to discuss environmental health issues, regulatory matters and cooperative administrative policies.
 1. DEQ and DPHHS agree to establish a meeting schedule on a quarterly basis for the duration of this MOU.
 2. The meetings will be held in Helena on the 15th day of the 1st month in each quarter of the calendar year. DEQ and DPHHS will alternate hosting the meetings. The meetings will begin at 10:00 a.m. and last as long as it takes to sufficiently complete the agenda. Meeting dates, times and locations can be changed with the mutual consent of the agencies.

3. Each agency director will appoint a coordinator to act as the official department liaison for this MOU. The coordinator will be responsible for preparing the agenda when his or her agency hosts the meeting.
 4. In addition to the appointed coordinators, DEQ and DPHHS directors will select the appropriate agency representatives to represent their agency, along with any other representatives the directors might feel would be appropriate.
 5. The host agency will be responsible for recording, preparing and distributing the minutes of the meeting.
 6. The directors or their designees will attend all meetings and will ensure the participation of program managers and any other appropriate department personnel.
- B. Emergency Situations:** Natural and technological disasters require close cooperation between DEQ and DPHHS and with other state, local and federal agencies.
1. DEQ and DPHHS coordinators will be responsible for interagency coordination.
 2. The coordinators or appropriate designees will represent their agency at state agency situation briefings. They will be responsible for presenting their agency's involvement and, in instances where DEQ and DPHHS are working jointly, be prepared to present the status of those situations.
 3. If the emergency situation warrants a substantial involvement and commitment of resources by DEQ and DPHHS, the agency coordinators can agree to meet jointly as often and long as they believe necessary. They will be responsible for arranging the meetings and identifying and notifying the appropriate DEQ and DPHHS personnel.
- C. Routine Mandated Responsibilities:** DEQ and DPHHS routinely administer environmental health laws, which are the basis for their mandated responsibilities. Successful formal and informal working relationships have been formed by many of these programs.
1. Environmental health programs in DEQ and DPHHS which successfully fulfill their separate and collective responsibilities should continue to do so.
 2. DEQ and DPHHS program personnel are encouraged to solve common problems.
 3. In instances where a problem(s) cannot be solved by program personnel, the situation(s) can be discussed and resolved at the quarterly meetings.

The ultimate arbiters for interagency disagreements will be the directors of the two agencies.

4. DEQ and DPHHS programs that are concerned with environmental health interests include:

DEQ:

Permitting and Compliance:

- a. Water Quality Permitting - Surface Water and Ground Water
- b. Air Quality Permitting
- c. Drinking Water
- d. Subdivisions
- e. Motor Vehicle Recycling and Disposal
- f. Solid Waste Management
- g. Hazardous Waste Management
- h. Asbestos Control
- i. Underground Storage Tanks
- j. Methamphetamine Cleanup

Planning, Prevention and Assistance:

- a. Ambient Air Monitoring
- b. Municipal Wastewater
- c. Radiation Control
- d. Occupational Health

Remediation:

- a. Federal Superfund (CERCLA)
- b. State Superfund (CECRA)
- c. Leaking Underground Storage Tanks

DPHHS:

Epidemiologic Investigations

Communicable Diseases

Cancer Clusters

Health Effect Studies

Chemistry Laboratory

Microbiology Laboratory

Water Fluoridation

Prevention of Lead Poisoning in Children

Emergency Medical Services

Food and Consumer Safety

- a. Food, Drug and Cosmetics
- b. Food Establishments
- c. Daycare Centers, Schools and Institutions
- d. Vector Control
- e. Trailer Courts and Campgrounds
- f. Work Camps, Youth Camps, Spas, Swimming Pools and Bathing

Areas

- g. Consumer Product Safety
- h. Environmental Public Health Investigations

- i. Public accommodations, including Hotels, Motels, Bed & Breakfasts, Guest Ranches, etc.
- j. Tattoo and body piercing establishments.

D. Inspections and Enforcement: State law requires food service establishments, drinking establishments, daycare centers, public accommodations, food processors, and other public establishments to be licensed by DPHHS. DPHHS regulations require these establishments to have approved water supplies, wastewater treatment systems, and solid waste disposal. State law requires DEQ to enforce the requirements of the state's Public Water Supply Act, Water Quality Act, and Solid Waste Management Act. To ensure that timely and appropriate enforcement actions are taken against persons who own and/or operate licensed establishments that are in violation of the state's safe drinking water, wastewater treatment, and solid waste management regulations, DEQ and DPHHS agree to take the following action to support enforcement actions taken by either agency.

1. Inspections established under statutory authorities for DEQ and DPHHS shall continue.
2. DEQ and DPHHS programs are encouraged to periodically evaluate their inspection requirements and improve interagency cooperation where possible.
3. DEQ and DPHHS agree to share information about violations at facilities regulated by both agencies.
 - a. DEQ and DPHHS agree to share lists of regulated facilities.
 - b. DEQ and DPHHS agree to share inspection results and other information for use in enforcement proceedings taken by either agency. As necessary, each agency will provide the other with documentation of violations discovered at a facility that is regulated by the other agency.
 - c. Personnel from the two agencies will provide evidence, including testimony, for DEQ and DPHHS proceedings if appropriate.
4. DEQ and DPHHS agree to cooperate as appropriate in informal enforcement activities and in providing compliance assistance to facilities regulated by both agencies.
 - a. DEQ shall provide DPHHS copies of Warning Letters, Violation Letters, Notices of Violation and Orders sent to facilities licensed by DPHHS.
 - b. DPHHS shall provide DEQ with copies of Plans of Corrections and Notices of Violations sent to facilities regulated by DEQ.
 - c. DEQ and DPHHS shall cooperate as appropriate in the development of corrective actions required in Violation Letters or Plans of Correction.
5. *DEQ and DPHHS agree to cooperate as appropriate in formal enforcement actions initiated by either agency against a facility regulated by both agencies.*

- a. When either agency is anticipating an enforcement action involving an establishment or facility licensed by DPHHS, DEQ and DPHHS agree to investigate the violations in the context of the agencies' authority and responsibilities and take appropriate enforcement actions to support the enforcement proceedings taken by either agency.
- b. DEQ agrees to take appropriate enforcement actions against owners and/or operators of licensed establishments and facilities for violations of the state's public water supply, water quality, or solid waste management laws and regulations that have been identified and for which compliance has not been attained.
- c. DPHHS agrees to take appropriate enforcement actions, which may include the denial, suspension, or revocation of licensed establishments that are involved in enforcement proceedings initiated by DEQ for violations of the state's public water supply, water quality, or solid waste management laws and regulations.
- d. DEQ and DPHHS agree to take joint enforcement actions as appropriate. Joint enforcement may include coordinated proceedings conducted concurrently and/or an individual enforcement action signed by both departments.

E. Education, Training and Public Information

1. **Education: DEQ and DPHHS program personnel will continue environmental health educational efforts and will work cooperatively whenever possible.**
2. **Training: Both agencies should keep in mind the advantages of sharing training opportunities and create a means for notifying personnel of upcoming opportunities.**
3. **Public Information:**
 - a. DEQ and DPHHS information officers will attend the quarterly meetings.
 - b. The information officers will coordinate efforts to advise and assist DEQ and DPHHS program personnel in preparing information for the news media.

V. **MOU Review:** This MOU will remain in effect unless the parties mutually agree to modification or termination.

Dated this 15th day of November, 2005.

[Signed]

Richard H. Opper
Director
Department of Environmental Quality

[Signed]

Joan Miles
Director
Department of Public Health and Human Services

PUBLIC SERVICE ANNOUNCEMENT

PEOPLE IN < INSERT NAME OF AREA > SHOULD STAY TUNED TO AIR QUALITY REPORTS FOR SMOKE INFORMATION

DATELINE – Residents living in the area of the < INSERT NAME OF FIRE > fire should listen to local air quality forecasts to help them plan their daily activities.

Wildfire smoke can pose a particular risk for people with heart and lung disease, as well as for children and the elderly. At high enough levels, even healthy people can experience problems.

One of the biggest dangers of smoke come from particulate matter – solid particles and liquid droplets found in the air. The particles in smoke often are tiny – nearly 1/30th the diameter of the average human hair.

These particles can build up in the respiratory system, causing burning eyes, runny noses and illnesses such as bronchitis. These particles also can aggravate heart and lung disease, such as congestive heart failure, chronic obstructive pulmonary disease, emphysema and asthma.

Check you local air quality forecasts to help you plan your activities. Many communities report the Environmental Protection Agency's Air Quality Index, or AQI. As smoke gets worse, the index for particles changes. And so do the guidelines for protecting yourself.

If your area doesn't monitor particle levels, use common sense to protect your health. When it's smoky outside, keep your children indoors. Instead of going for a run, go to the gym, or work out at home. If you have asthma, make sure you take your medications. And when smoke reaches hazardous levels, everyone should stay inside.

If you begin experiencing symptoms, such as coughing, burning eyes or a runny nose, contact your doctor or your county health department – especially if you have heart or lung disease.

For more information about smoke from the <NAME OF FIRE HERE >, call <INSERT CONTACT OR WEB INFORMATION HERE >

For information on the AQI, go to <http://www.epa.gov/airnow/aqibroch/>

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PUBLIC SERVICE ANNOUNCEMENT

WILDFIRE SMOKE CAN AFFECT YOU EVEN INDOORS

DATELINE – When smoke levels from wildfires stay high for a long period, smoke can affect you even indoors.

The tiny particles in wildfire smoke can easily get inside your home. Over time, the particles can build up and can cause you problems – especially if you have a heart disease, such as congestive heart disease, or lung diseases such as chronic obstructive pulmonary disease, emphysema or asthma. The elderly and children also are more susceptible to the effects of smoke.

If you are advised to stay indoors, there are a number of steps you can take to keep the air inside your home as smoke-free as possible:

- Keep your windows and doors closed.
- Run your air conditioner, if you have one. Be sure to keep the fresh air intake closed and the filter clean.
- Use an indoor air filtration device with a HEPA filter. Make sure to change the filter regularly. Do not use air cleaners that work by generating ozone: They put more pollution inside your home.
- Avoid using anything that burns, including wood stoves and gas stoves, if possible, and even candles.
- Don't smoke. That just puts more pollution in your lungs – and those of the people around you.

If you have symptoms of smoke exposure indoors (coughing, stinging and watering eyes, runny nose, etc.) call your doctor or your county health department. This is particularly important for people with heart or respiratory diseases, the elderly and children.

For more information on particles and health, go to <http://www.epa.gov/airnow/aqibroch/>

For information on local air quality, call <INSERT NUMBER OF LOCAL AIR AGENCY, HEALTH DEPARTMENT OR OTHER AGENCY REPORTING AIR QUALITY>

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Wildfire Smoke and Your Health

What's in smoke from a wildfire?

Smoke is made up small particles, gases and water vapor. Water vapor makes up the majority of smoke. The remainder includes carbon monoxide, carbon dioxide, nitrogen oxide, irritant volatile organic compounds, air toxics and very small particles.

Is smoke bad for me?

Yes. It's a good idea to avoid breathing smoke if you can help it. If you are healthy, you usually are not at a major risk from smoke. But there are people who are at risk, including people with heart or lung diseases, such as congestive heart disease, chronic obstructive pulmonary disease, emphysema or asthma. Children and the elderly also are more susceptible to smoke.

What can I do to protect myself?

- Many areas report EPA's Air Quality Index for *particulate matter, or PM*. PM (tiny particles) is one of the biggest dangers from smoke. As smoke gets worse, that index changes -- and so do guidelines for protecting yourself. So listen to your local air quality reports.
- Use common sense. If it looks smoky outside, that's probably not a good time to go for a run. And it's probably a good time for your children to remain indoors.
- If you're advised to stay indoors, keep your windows and doors closed. Run your air conditioner, if you have one. Keep the fresh air intake closed and the filter clean.
- Help keep particle levels inside lower by avoiding using anything that burns, such as wood stoves and gas stoves -- even candles. And don't smoke. That puts even more pollution in your lungs -- and those of the people around you.
- If you have asthma, be vigilant about taking your medicines, as prescribed by your doctor. If you're supposed to measure your peak flows, make sure you do so. Call your doctor if your symptoms worsen.

How can I tell when smoke levels are dangerous? I don't live near a monitor.

Generally, the worse the visibility, the worse the smoke. In Montana, the Department of Environmental Quality uses visibility to help you gauge wildfire smoke levels. For a guide, go to www.deq.state.mt.us/fireupdates/ and click on the link labeled "Forest Fire Smoke Categories." Links to daily air quality updates are on the same page.

How do I know if I'm being affected?

You may have a scratchy throat, cough, irritated sinuses, headaches, runny nose and stinging eyes. Children and people with lung diseases such as asthma may find it difficult to breathe as deeply or vigorously as normally, and they may cough or feel short of breath. People with diseases such as asthma or chronic bronchitis may find their symptoms worsening.

Should I leave my home because of smoke?

The tiny particles in smoke do get inside your home. If smoke levels are high for a prolonged period of time, these particles can build up indoors. If you have symptoms indoors (coughing, burning eyes, runny nose, etc.), talk with your doctor or call your county health department. This is particularly important for people with heart or respiratory diseases, the elderly and children.

Are the effects of smoke permanent?

Healthy adults generally find that their symptoms (runny noses, coughing, etc.) disappear after the smoke is gone.

Do air filters help?

They do. Indoor air filtration devices with HEPA filters can reduce the levels of particles indoors. Make sure to change your HEPA filter regularly. Don't use an air cleaner that works by generating ozone. That puts more pollution in your home.

Do dust masks help?

Paper "comfort" or "nuisance" masks are designed to trap large dust particles -- not the tiny particles found in smoke. These masks generally will not protect your lungs from wildfire smoke.

How long is the smoke going to last?

That depends on a number of factors, including the number of fires in the area, fire behavior, weather and topography. Smoke also can travel long distances, so fires in other areas can affect smoke levels in your area.

I'm concerned about what the smoke is doing to my animals. What can I do?

The same particles that cause problems for people may cause some problems for animals. Don't force your animals to run or work in smoky conditions. Contact your veterinarian or county extension office for more information.

How does smoke harm my health?

One of the biggest dangers of smoke comes from *particulate matter* -- solid particles and liquid droplets found in air. In smoke, these particles often are very tiny, smaller than 2.5 micrometers in diameter. How small is that? Think of this: the diameter of the average human hair is about 30 times bigger.

These particles can build up in your respiratory system, causing a number of health problems, including burning eyes, runny noses and illnesses such as bronchitis. The particles also can aggravate heart and lung diseases, such as congestive heart failure, chronic obstructive pulmonary disease, emphysema and asthma.

Where is the smoke coming from?

It depends on where you are. To find out about smoke in your area, check with your local smoke management unit or health department. In Montana and Idaho, call 406-329-4905. On the Internet, go to: <http://www.inciweb.org/state/27/>

What about firefighters?

Firefighters do experience short-term effects of smoke, such as stinging, watery eyes, coughing and runny noses. Firefighters must be in good physical condition, which helps to offset adverse effects of smoke. In addition to being affected by particles, firefighters can be affected by carbon monoxide from smoke. A recent Forest Service study showed a very small percentage of firefighters working on wildfires were exposed to levels higher than occupational safety limits for carbon monoxide and irritants. If you are working on a fire and you're concerned about your health, see the medical unit or contact your safety officer. If you're not working on a fire, call your doctor.

Why can't the firefighters do something about the smoke?

Firefighters first priorities in fighting a fire are, by necessity, protecting lives, protecting homes and containing the wildfire. Sometimes the conditions that are good for keeping the air clear of smoke can be bad for containing fires. A windy day, for example, helps smoke disperse. But it can help a fire spread.

Firefighters do try to manage smoke when possible. As they develop their strategies for fighting a fire, firefighters consider fire behavior and weather forecasts, topography and proximity to communities – all factors that can affect smoke.

Why doesn't it seem to be as smoky when firefighters are working on prescribed fires.

Land managers are able to plan for prescribed fires. They get to choose the areas they want to burn, the size of those areas and the weather and wind conditions that must exist before they begin burning. This allows them to control the fire more easily and limit its size. Those choices don't exist with wildfires. In addition, wildfires that start in areas that haven't been managed with prescribed fire often have more fuel, because vegetation in the forest understory has built up, and dead vegetation has not been removed.

How do you measure the quality of the air?

Local air agencies (or sometimes federal land managers) use monitors to measure the amount of particulates in the air. That amount, measured in micrograms per cubic meter, is compared to a national index designed to protect public health.

Will the smoke be this bad every summer?

That depends on where you live and the weather each year. If you live in an area where fire has always been part of the ecosystem, you can expect fire and smoke. The amounts will depend on weather and the amount of fuel (trees, brush, etc.) available to be burned. You can protect yourself and your property by following good fire prevention measures. But we never will eliminate fire and smoke from these natural systems.



This document was prepared by the Air Program, U.S. Forest Service – Northern Region, with assistance from the Office of Air Quality Planning & Standards in the US Environmental Protection Agency. For more information, call 406-329-3493. August 2000.

TIPS TO REDUCE SMOKE EXPOSURE AND IMPACTS

For the Firefighter

Firefighters do experience short-term effects of smoke, such as stinging, watery eyes, coughing and runny noses. Firefighters must be in good physical condition which helps to offset adverse effects from smoke.

Previous studies have showed a small percentage of firefighters exceed occupational exposure limits for carbon monoxide and respiratory irritants. However, this is not a typical fire season. It is always a good practice to follow some basic tips to reduce the health stress that smoke exposure causes firefighters.

To Minimize Exposure to Smoke:

- Locate camps and incident command posts in areas that are not prone to inversions.
- Reduce dust by watering roads at the incident, on drier roads leading to the incident, and in the base camp.
- Rotate personnel out of heavy smoke areas.

Additional commonly used tactics to minimize exposure to smoke:

- Use flank attack as opposed to head attack, where appropriate, in heavy smoke situations.
- Minimize mop-up when possible.
- Use time and patience instead of water to put the fire out: use burn piles, allow areas to burn themselves out. Rely on burn-up instead of mop-up.
- In heavy smoke situations, remove crews from the line when possible.

Health Maintenance to Reduce Smoke Exposure Impacts:

- Monitor personnel for signs of fatigue and illness.
- Ensure firefighters are properly equipped for anticipated conditions (cold nights, rain, etc.).
- Provide for good rest and sleeping conditions.
- Encourage a high fluid intake during and after work for all personnel.
- Provide for adequate nutrition and supplements (e.g. antioxidants) if needed.

- Allow sick firefighters time to recover.
- Provide washing facilities near food lines and toilets.
- Limit close contact among firefighters by providing personal sleeping tents.
- Discourage sharing of canteens except in emergencies
- Encourage personnel to cover their mouth and nose when they cough or sneeze to avoid the spread of infection.
- Segregate infected personnel when possible
- Demobilize crews that have a large number of sick personnel.
- When symptoms are above the neck (stuffy nose, sneezing, scratchy throat), it is safe to continue to work if personnel continue to practice health maintenance tips mentioned above. If symptoms include fever, aching muscles, nausea, or diarrhea, hard work should be reduced or curtailed.
- When symptoms are respiratory in nature (lung congestion, expelling of phlegm, chronic cough) it may be appropriate to reduce or curtail hard work. If symptoms persist and become severe, the medical unit leader should consult a qualified physician to determine the appropriate treatment that may include a rest period in a clean air environment. This clean air environment could include a nearby motel or fire camp that is smoke free or a school auditorium with a closed, filtered circulation system.

References:

Reinhardt, Timothy E.; Ottmar, Roger, D; Hallett, Michael J. 1999. Guide to monitoring smoke exposure of wildland firefighters. Gen. Tech. Rep. PNW-GTR-448. Portland, OR: Department of Agriculture, Forest Service, Pacific Northwest Research Station, 15 p.

Reinhardt, Timothy E.; Ottmar, Roger, D. In press. Smoke exposure at western wildfires. Res. Pap. PNW-RP-525. Portland, OR: Department of Agriculture, Forest Service, Pacific Northwest Research Station. 71 p.

Reinhardt, Timothy E.; Ottmar, Roger, D.; Hanneman, Andrew J.S. In press. Smoke among firefighters at prescribed burns in the Pacific Northwest. Res. Pap. PNW-RP-526. Portland, OR: Department of Agriculture, Forest Service, Pacific Northwest Research Station. 45 p.

Sharkey, Brian, ed. 1997. Health hazards of smoke: recommendations of the April 1997 Consensus Conference. Tech. Rep. 9751-2836-MTDC. Missoula, MT: U.S. Department of Agriculture, Forest Service, Missoula Technology and Development Center. 84 p.

SMOKE IN THE AIR

Health Tips from the American Red Cross

Smoke consists of particles of various sizes. The large particles you see “floating” down are easy to escape by staying in a house or vehicle. However, the small particles that you cannot see as individual particles but as fog like, are the particles that cause the damage. Lung damage occurs not only in humans, but in animals as well. Particulate matter also causes more lung damage to infants and young children than adults.

Individuals with pre-existing respiratory/lung problems are at a greater risk for having breathing problems. People with asthma, emphysema, COPD, and allergies (like hay fever) should contact their health care provider as soon as possible for advice on how to handle an acute respiratory episode.

Coping:

- Stay indoors as much as possible. Wash or change filter(s) on air conditioners and/or furnaces frequently. You may be able to find special filters that will filter out smaller particles than a regular filter.
- Do not run or engage in heavy work or exercise when smoke is heavy.
- Wear a HEPA particulate respirator (mask) when in heavy smoke, especially out doors.
- If you do not have a way of filtering indoor air and there is smoke in your home, you could try an electric fan operated HEPA to remove particles.
- Stay well hydrated by drinking lots of water and fruit juices. Staying well hydrated helps dilute the phlegm in the respiratory tract making it easier to cough out smoke particles. Plan on coughing, it is nature’s way of clearing your lungs. Avoid caffeine products and alcohol as it has a dehydrating effect.
- If you have contact lenses – switch to eyeglasses when in a smoky environment. The low humidity in Montana reduces tearing to wash smoke particles out of eyes. Smoke irritated eyes can be moistened or flushed using saline drops or eye wash.
- Headaches will be common during a smoke emergency as they are caused by:
 - A. Dehydration.
 - B. Irritation of nose and sinus by smoke.
 - C. Forcefully blowing irritated nose resulting in mid-ear infection and earache.
 - D. Increased carbon monoxide in the air from large fires.

American Red Cross

Disaster Relief

If you need help, Call the Red Cross At:

Toll Free 1-800-541-2748

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY FOREST FIRE SMOKE CATEGORIES

Air Quality Index (AQI) for PM-2.5 24-Hour ¹

<u>Categories</u>	<u>Health Effects</u>	<u>Cautionary Statements</u>
Good	None	None
Moderate	Possibility of aggravation of heart or lung disease among persons with cardiopulmonary disease and the elderly.	None
Unhealthy for Sensitive Groups	Increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly.	People with respiratory or heart disease, the elderly and children should limit prolonged exertion.
Unhealthy	Increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; increased respiratory effects in the general population.	People with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion.
Very Unhealthy	Significant aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; significant risk of respiratory effects in the general population.	People with respiratory or heart disease, the elderly, and children should avoid any outdoor activity; everyone else should avoid prolonged exertion.
Hazardous	Serious aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly; serious risk of respiratory effects in the general population.	Everyone should avoid any outdoor exertion; people with respiratory or heart disease, the elderly, and children should remain indoors.

¹ Guideline For Reporting Of Daily Air Quality – Air Quality Index (AQI), EPA-454/R-99-010, July 1999, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.

MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY FOREST FIRE SMOKE CATEGORIES

**Breakpoints and Associated Visibility for PM-2.5 Pollutant
Standard Index (PSI) using TEOM PM10 values**

Categories	24-Hour TEOM ($\mu\text{g}/\text{m}^3$)¹	8-Hour TEOM ($\mu\text{g}/\text{m}^3$)²	1-Hour TEOM ($\mu\text{g}/\text{m}^3$)³	Visibility (miles)⁴
Good	0.0 - 13.4	0.0 - 19.1.0	0.0 - 33.5	≥ 13
Moderate	13.5 - 20.4	19.2 - 29.1	33.6 - 51.0	13 - 9
Unhealthy for Sensitive Groups	20.5 - 35.4	29.2 - 50.6	51.1 - 88.5.0	9 - 5
Unhealthy	35.5 - 80.4	50.7 - 114.9	88.6 - 201.0	5 - 2
Very Unhealthy	80.5 - 135.4	115.0 - 193.4	201.1 - 338.5	2 - 1
Hazardous	≥ 135.4	≥ 193.4	≥ 338.5	< 1

¹ Guideline For Reporting Of Daily Air Quality – Air Quality Index (AQI), EPA-454/R-99-010, July 1999, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711.

² Applied U.S. EPA SCREEN adjustment factor for 8-hour, 0.7, multiplied to the 24-hour PM-2.5 Pollutant Standards Index.

³ Fire, Smoke and Health Workshop, Seattle, WA, June 5 - 6, 2001. USEPA, CDC, USFS, UW.

⁴ Based on Helena Montana empirical study (July 2000 Montana Dept. of Environmental Quality).

Montana Department of
Environmental Quality

Visibility Ranges Used to Determine Forest
Fire Smoke Categories

Over 13 miles	Good
13 to 9 miles	Moderate
9 to 5 miles	Unhealthy For Sensitive Groups
5 to 2 miles	Unhealthy
2 to 1 miles	Very Unhealthy
Less than 1 mile	Hazardous

The procedure for making personal observation to determine the forest fire smoke index value for local areas without National Weather Station (NWS) or DEQ monitors is:

1. Face away from the sun.
2. Determine the limit of your visible range by looking for targets at known distances (miles).
3. Visible range is that point at which even high contrast objects totally disappear.
4. Use the values above to determine the local forest fire smoke category.

APPENDIX E. Montana / Idaho State Airshed Group Information

The Montana / Idaho State Airshed Group Information provides a summary of the airshed group's structure, membership, and activities. The group was established in 1991 to address air quality issues in the region. The group's primary focus is on monitoring and reporting air quality data, as well as coordinating with state and federal agencies to address air quality concerns. The group also provides technical assistance to local air quality management districts (AQMDs) and other stakeholders in the region.

The Montana / Idaho State Airshed Group is a non-profit organization that was established in 1991. The group's primary focus is on monitoring and reporting air quality data, as well as coordinating with state and federal agencies to address air quality concerns. The group also provides technical assistance to local air quality management districts (AQMDs) and other stakeholders in the region. The group's membership includes representatives from state and federal agencies, as well as local AQMDs and other stakeholders.

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Montana / Idaho State Airshed Group Information

The Montana / Idaho State Airshed Group Smoke Management Program (Program) was formed in 1978 order to minimize or prevent the accumulation of smoke from the major users of prescribed fire to such a degree that the state and federal air quality standards are preserved. The Program works to ensure that a proper balance exists between protecting the need for prescribed fire and the need to protect public health.

The Program is self-regulating and implemented through an agreement executed among members called the Smoke Management Plan. Program membership reduces burners' risk of violating state and federal air quality standards and may also reduce the number of public complaints concerning smoke. DEQ recognizes the Program as being the best available control technique for regulating smoke from prescribed fire. In Montana, DEQ has issued a blanket burning permit to all Program members allowing them to burn pursuant to guidelines set forth in the Program.

The state of Montana has been divided into ten airsheds. An additional fifteen airsheds represent north and south Idaho. Each airshed has its own coordinator who analyzes daily atmospheric conditions for burn restrictions during the opening burning season. This airshed management approach allows Program members more flexibility to burn at various locations and/or elevations than if they were to operate independently. This weather information service is only available to Program members.

Major open burners who are members of the Program apply for individual air quality permits each year from DEQ. Program members are required to follow the policies outlined in the Program Operation's Guide in addition to the provisions of the Montana Clean Air Act and the Administrative Rules of Montana (ARM). A major open burner is defined as any person, agency, institution, business, or industry conducting open burning that emits, per calendar year, more than 500 tons of carbon monoxide or 50 tons of any other pollutant except hydrocarbons regulated under ARM 17.8.601. Minor open burners, such as private citizens, are not members of the Program. However, minor open burners are required to call DEQ's toll free number to determine whether open burning is restricted.

The Program takes into consideration the effects of interstate transport of smoke and other particulate matter due to meteorology. The Program coordinator also recognizes areas of air quality sensitivity, or 'nonattainment' areas. Nonattainment areas are surrounded by 'impact zones' that are closely monitored to ensure that members do not violate state or federal air quality regulations. Winter burning from November to March is not allowed in impact zones.

The Program meets at least once per year to discuss and review the operation of the previous year's burning. This meeting also provides all members with the opportunity to make recommendations for the upcoming burn season and to fully participate in the function and operation of the Program.

BACM Control Measures

Perhaps the most obvious method to reduce wildland fire emissions is to reduce the amount of fuel burned. Reducing the amount of fuel burned should be accomplished by methods that result in reduced emissions: (a) at the time of the burn relative to normal practices, or (b) over longer time periods. Preferably, the emission reduction will not be simply deferred to a future date.

Alternatives to fire are least applicable when fire is needed for ecosystem or habitat management, or forest health enhancement. Alternative methods can be used to accomplish effects similar to what burning would accomplish when fire is used to eliminate an undesirable species or dispose of biomass waste. Examples of such techniques include specific fuel or chemical treatments and concentration burning (also called "swamper" or "jackpot" burning).

1.0 Minimizing Emissions by Fuel Reduction

Fuel treatments is a broad category that can include fuel loading reduction methods like mechanical removal of logging slash from clearcuts, use of animals to graze an area and reduce live vegetation and small twigs, and onsite chipping or crushing of woody material and/or brush. Mechanical removal of fuels for other purposes such as electrical power generation, firewood or consumer products made from wood that would otherwise be burned are examples of biomass utilization. Each method has drawbacks. Mechanical treatments, for example, may interfere with land management objectives if they cause undue soil disturbance or compaction, stimulate alien plant invasion, impair water quality, or remove material needed for nutrient cycling or small animal habitat. A difficulty with mechanical treatments is that most require good road access which is frequently not available in remote wildlands or costly helicopter removal.

Whole Tree Harvesting and/or Yarding of Unmerchantable Materials (YUM): Mechanical removal of fuels may result in sufficient treatment so that burning is not needed. This technique is only applicable in activity fuels (debris generated from management activities; especially timber harvest). Since this technique is effective in reducing large woody fuels (those greater than 3 inches in diameter) it is applicable only in forest fuel types (not brush or grass).

Firewood Sales: Firewood sales may result in sufficient removal of woody debris making burning unnecessary. This technique is particularly effective for piled material where the public has easy access. This technique is only applicable in forest types with large diameter, woody biomass.

Mechanical Processing: Flailing or chipping of fuels using machinery to reduce or obviate the need to burn.

Biomass Utilization: Woody material can be used for many miscellaneous purposes including pulp for paper and specialty forest products (wood furniture or art). This category is difficult to define due to the potential diversity of uses. When wood is scarce

and pulp prices are high, biomass that previously had no commercial value could suddenly be marketable. Again this is only applicable in forest types that include large-diameter woody biomass.

Hog Fuel for Electrical Generation: Woody biomass can also be removed and used to provide electricity in regions with cogeneration facilities.

Ungulates: Grazing and browsing animals (especially sheep, cattle, and goats) can sometimes be used to reduce live grassy or brush fuels so burning is not longer required or to reduce fuels. However, ungulates are selective, favoring some plants over others. The cumulative effect of this selectivity can significantly change plant species composition and long-term ecological processes of an area.

Burn More Frequently: Frequent, low intensity fires can prevent unwanted vegetation from becoming established on the forest floor. If longer fire rotations are used, vegetation has time to grow resulting in the production of extra biomass and extra fuel loading at the time of burning. This technique generally has positive effects on land management goals since it is likely to result in fire regimes that more closely mimic natural fire frequencies.

Schedule Burning Before New Fuels Appear: Burning can sometimes be scheduled for times of the year before new fuels appear. This may interfere with land management goals if burning is forced into seasons and moisture conditions where increased mortality of desirable species can result or inadequate burn occurs.

Underburn Before Litter Fall: Brush vegetation or deciduous trees drop their leaves in the fall and this litter contributes extra volume to the ground fuels. If burning takes place prior to leaf fall, less available fuel exists and therefore less fuel is consumed, resulting in fewer emissions.

Burn Before Green-up: Burning in cover types with brush, herbaceous, or grassy fuel components can produce fewer emissions if burning takes place before green-up. Before green-up, less fuel is available for consumption and is often dry and efficiently consumed. Therefore, fewer emissions are produced unless fuel before green-up has an internal fuel moisture content so high that little fuel is consumed.

Isolating Fuels: Large logs, snags, deep pockets of duff, or other fuel concentrations that have the potential to smolder for long periods of time can be isolated by constructing a fireline around the fuels of concern. The fuels are scattered or sprayed with foam or other fire retardant material. Isolating these fuels from general burning is often faster, safer, and less costly than mop-up, allowing targeted fuels to remain following the prescribed burn.

Concentration ("Spot") Burning: Sometimes a sub-area (specific 'spots') of fuels can be burned rather than using fire over 100 percent of an area. The total acres burned and emissions under these circumstances can be difficult to quantify.

Chemical Treatments. Chemicals may produce effects similar to fire when the objective is to reduce or remove live vegetation and/or species from a site. Chemical treatments carry their own set of ecological and public relations problems.

2.0 Minimizing Emissions by Reducing Fuel Consumption

Emission reduction can be achieved when significant amounts of fuel are at or above the moisture of extinction and therefore are unavailable for combustion, isolated from burning, or extinguished through mop-up. However, these techniques may leave significant amounts of fuel in the treated area that may be burned in the future. Long-term emission reductions are achieved only if the fuels left behind can be expected to decompose or be otherwise sequestered at the time of burning.

The ability to target and remove only the fuels necessary to meet management objectives is one of the most effective methods of reducing emissions from burning. When the combination of appropriate fuel type and burning conditions can be met, fuel consumption can be greatly reduced. For example, if the objective of burning is to reduce wildfire hazard, removal of fine and intermediate diameter fuels may be sufficient; and the ability to limit large fuel and organic layer consumption will significantly reduce emissions. Examples of this technique include burning when non-target fuel moistures are high, isolating non-target fuels, rapid (mass) ignition, and rapid mop-up.

High Moisture Content in Non-Target Fuels: Burning when internal moisture content of fuels is high effectively limits their consumption. Intuition might suggest that fuels with high moisture content will burn less efficiently and consequently produce more emissions. In reality, much less fuel is consumed when the fuel moisture content is high and emissions are greatly reduced as compared with burning under dry fuel moisture conditions.

High Moisture Content in Large, Woody Fuels: Burning when large-diameter woody fuels (3+ inches in diameter or greater) are wet can result in reduced fuel consumption and less smoldering. When large fuels are wet they will not sustain combustion on their own. When small twigs and branch-wood cease burning, large logs are extinguished by their own internal moisture. Large logs, therefore, are not completely consumed and do not smolder as much. Since the consumption of the large, woody fuels influences the consumption of the forest floor, reducing large woody fuel consumption also reduces consumption of the duff. This technique can be a very effective way of reducing total emissions from a prescribed burn area and can have secondary benefits by leaving more large-woody debris in place for nutrient cycling. This technique can be effective in natural and activity fuels in all forest types.

Moist Litter and/or Duff: The litter and organic layer that forms from decayed and partially decayed material generally burns very inefficiently and has the potential to create a tremendous amount of emissions. Consumption of this litter and/or duff layer can be greatly reduced if the material is quite moist. The surface fuels can be burned

and the organic layer left virtually intact. The appropriate conditions for utilization of this technique generally occur in the spring (in areas where snow has covered the ground over the winter) or within a few days of a soaking rain. This technique can be very effective at reducing emissions in certain cover types that tend to have deep organic layers. The technique may be more difficult to utilize in cover types where removal of the organic layer is desired.

Burn Before Large Fuels Cure: Living trees contain very high internal fuel moisture that takes a number of months to dry after harvest. If an area can be burned within 3-4 drying months of timber harvest, many of the large, woody logs will still contain a significant amount of live fuel moisture. This technique is generally restricted to activity-generated fuels in all forest habitats.

Mass Ignition / Shortened Fire Duration: Mass ignition can occur through a combination of dry fine-fuels and mechanical devices such as the helitorch to rapidly ignite large areas. Mass ignition can reduce the total amount of fuel consumed and shorten the duration of the smoldering phase of a fire by causing rapid consumption of dry, surface fuels and creating a very strong plume or convection column which draws much of the heat away from the fuel bed, preventing drying and preheating of the large, woody fuels and forest floor. This strong plume also results in improved smoke dispersal. The fire dies out shortly after the fine fuels are fully consumed and little smoldering or consumption of the larger fuels and duff occurs. The mass fire technique is most effective in open clearcut areas containing large, woody fuels and a relatively deep forest floor that have been timber-harvested.

Rapid Mop-up: Rapidly extinguishing a fire can reduce fuel consumption and smoldering emissions, although this technique is not particularly effective and can be very costly. Rapid mop-up primarily effects smoldering consumption of large, woody fuels and duff. Rapid mop-up reduces residual emissions that tend to get caught in drainage flows and enter smoke sensitive areas.

3.0 Minimizing Emissions by Fuel Treatments

Increasing combustion efficiency, or shifting the majority of consumption away from the smoldering phase and into the more efficient flaming phase, can reduce total emissions. Several lighting and fuel manipulation techniques that are available to managers for increasing combustion efficiency.

Burning Fuels in Piles or Windrows: Fuels concentrated into piles or windrows generate greater heat and burn more efficiently. A greater amount of the consumption occurs in the flaming phase and the emission factor is lower. This technique is primarily effective in forest fuel types but may have some applicability in brush types also. Concentrating fuels into piles or windrows generally requires the use of heavy equipment that can have a negative impact on soils and water quality. Piles and windrows also cause temperature extremes in the soils directly underneath and can result in areas of soil sterilization.

Backing Fires: Flaming combustion is cleaner than smoldering combustion. A backing fire takes advantage of this relationship by causing more fuel consumption to take place in the flaming phase than would occur if a heading fire were used. In applicable fuel types, the flaming front backs more slowly through the fuel bed and by the time it passes, most available fuel has been consumed so the fire quickly dies out with very little smoldering. This technique is only applicable in fuel types where the primary ground fuel is grass, litter, and/or very fine woody fuels. Without continuous fine fuels (grass, leaves, needles), backing fire spread is impossible. Generally, the emission reductions obtained from a backing fire are minimal and may not be cost-effective.

“Air Curtain Destructor” Pit Incinerators: Burning fuels in a pit with the aide of a powerful fan-like device to force excess oxygen into the combustion process results in a very hot fire that produces little smoke. These devices are commonly used to burn land clearing, highway rights-of-way or demolition debris in smoke-sensitive areas and may be required by air quality agency regulations in some areas.

END OF DOCUMENT
F:\CB7306\Word\NEAP\NEAP 2007 01.doc



"Wolfe, Debra"
<dwolfe@mt.gov>
01/14/2008 02:40 PM

To Deirdre Rothery/R8/USEPA/US@EPA
cc
bcc

Subject RE: 2007 Flagged PM data demonstration

History: This message has been replied to.

Deidre: I'm having trouble with our website, else I'd have you simply go there. Here they are - Thanks, Deb

Debra J. Wolfe
Senior Air Quality Planner
Montana Department of Environmental Quality
P.O. Box 200901 - 1520 E 6th Avenue
Helena, MT 59620-0901
Ph. 406-444-7916 Fax 406-444-1499
dwolfe@mt.gov

P Please consider the environment before printing this email.

-----Original Message-----

From: Rothery.Deirdre@epamail.epa.gov [mailto:Rothery.Deirdre@epamail.epa.gov]
Sent: Monday, January 14, 2008 12:37 PM
To: Wolfe, Debra
Cc: Erp, Elton
Subject: 2007 Flagged PM data demonstration

Hi Deb,

I am in the process of reviewing the documentation package for the 2007 wildfire season. In the text of the section "Evidence that 2007 Wildfires Influenced Monitored Air Quality Data", MT DEQ states:

"The spreadsheets for each monitoring day and location compare the measured value with both the historical monthly maxima and mean for that day as averaged for 2004, 2005 and 2006 data."

The package I received does not appear to include any comparison to monthly maxima data. Could you please clarify whether or not that comparison has been done? Additionally, could you provide that comparison data for my review as part of the documentation package?

Thanks,

Deirdre Rothery
US Environmental Protection Agency Region VIII
1595 Wynkoop Street
Mail Code 8P-AR
Denver, Colorado 80202
(303)-312-6431

   
Fire07Flags_Lewis_ClarkCnty049.xls Fire07flags_LincolnCnty053.xls Fire07Flags_MissoulaCnty063.xls Fire07Flags_RavalliCnty081.xls
  
Fire07Flags_SandersCnty089.xls Fire07Flags_SilverBowCnty093.xls Fire07Flags_YellowstoneCnty111.xls
  
Fire07Flags_CascadeCnty013.xls Fire07Flags_FlatheadCnty029.xls Fire07Flags_GallatinCnty031.xls

2007 AQS Fire Flagged Data
Missoula County MT (Msla Health Dept Only)

Year		2007																	
State Code		30																	
County Code		063																	
County Name		Missoula																	
Site ID		0031																	
Local Site Name		MSLA Health Dept																	
Parameter Code		81102				85101				88101									
POC		4				3				1				2					
Month	Day	Value ug/m3	Historical Monthly Mean			Foot Notes	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Foot Notes
			Mean	Max	Foot Notes			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes	
Jul	14									12.9	7.2	12.1	1						
Jul	17	33.0	23.0	23.0	3	30.0	21.0		3,7	13.6									
Jul	20									11.7									
Jul	23	44.0				39.0				20.3				19.8	7.5	11.8	1		
Jul	26									11.7									
Jul	29	41.0				36.0				26.4									
Aug	01									32.5	8.5	17.4	1						
Aug	04	28.0	25.0	30.0	3	25.0	22.5		3,7	8.3									
Aug	07									15.5									
Aug	10	24.0				22.0				7.5									
Aug	13									32.8									
Aug	16	129.0				115.0				70.8 ✓				70.1 ✓	8.3	12.0	1		
Aug	19									49.5 ✓									
Aug	22	18.0				17.0				9.1									
Aug	25									17.4									
Aug	28	23.0				21.0				8.6				8.4					
Aug	31									45.4 ✓									
Sep	03	38.0	23.8	35.0	3	35.0	22.3		3,7	26.7	8.3	18.0	1						
Sep	06									9.4									
Sep	12									35.4 ✓									
Sep	15	46.0				42.0				27.7									

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

**2007 AQS Fire Flagged Data
Lincoln County MT (Non-Continuous Data Only)**

Year		2007															
State Code		30															
County Code		053															
County Name		Lincoln															
Site ID		0018															
Local Site Name		Libby Courthouse Annex															
Parameter Code		81102				85101				88101				88101			
POC		2				2				1				2			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	14									11.0	6.7	13.4	1				
Jul	18	26.0	16.8	25.0	1	24.0	15.8		1,7	15.4							
Jul	26									7.9							
Aug	01									26.4	6.8	11.0	1				
Aug	16	65.0	18.5	31.0	1	62.0	17.5		1,7	31.6				31.4	6.5	9.1	1
Sep	03	18.0	13.1	22.0	1	17.0	12.7		1,7	10.8	6.7	11.3	1				
Sep	15	36.0				35.0				17.3							

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data Lincoln County MT (Continuous Data Only)

Year		2007											
State Code		30											
County Code		053											
County Name		Lincoln											
Site ID		0018											
Local Site Name		Libby Courthouse Annex											
Parameter Code		81102				85101				88502			
POC		1				1				3			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	13	38.7	22.0	51.0	1	34.3	19.7		1,7	9.8	8.9	16.3	3
Jul	14	35.2				31.3				10.7			
Jul	15	32.4				28.6				12.9			
Jul	16	43.1				38.6				17.1			
Jul	17	51.9				46.8				22.3			
Jul	18	29.7				26.7				16.3			
Jul	26	30.3				27.0				10.2			
Jul	27	32.0				28.5				10.7			
Jul	28	29.0				26.3				10.5			
Aug	01	53.1	23.0	50.0	1	47.9	21.0		1,7	29.5	8.9	13.4	3
Aug	02	65.6				59.3				37.5			
Aug	05	35.0				31.4				19.5			
Aug	11	26.1				23.8				12.5			
Aug	12	27.8				25.4				14.3			
Aug	16	70.7				64.4				31.0			
Aug	17	77.6				71.3				41.5			
Aug	18	31.2				28.5				12.7			
Sep	03	19.3	20.0	36.0	1	17.7	18.7		1,7	9.9	7.8	12.3	3
Sep	15	40.4				37.8				17.5			

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

**2007 AQS Fire Flagged Data
Missoula County MT (Continuous Data Only)**

Year		2007							
State Code		30							
County Code		063							
County Name		Missoula							
Site ID		0024							
Local Site Name		MSLA Boyd Park							
Parameter Code		81102				85101			
POC		6				4			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	13	33.9	25.0	47.0	3	29.7	23.0	3,7	
Jul	14	41.9				36.9			
Jul	15	36.7				32.3			
Jul	16	45.4				40.2			
Jul	17	36.7				32.7			
Jul	18	27.4				24.3			
Jul	19	28.9				25.8			
Jul	20	30.3				26.9			
Jul	21	36.7				32.6			
Jul	22	47.2				41.7			
Jul	23	42.9				38.0			
Jul	24	35.0				31.0			
Jul	25	19.7				17.5			
Jul	26	32.1				28.5			
Jul	27	38.1				33.9			
Jul	28	33.8				29.8			
Jul	29	42.3				37.2			
Jul	30	31.5				27.8			
Jul	31	24.3				21.7			
Aug	01	63.5	25.0	37.0	3	56.4	23.0	3,7	
Aug	02	79.4				70.4			
Aug	03	40.2				35.9			
Aug	04	25.2				22.9			
Aug	05	61.7				55.4			
Aug	06	78.5				70.9			
Aug	07	37.7				34.1			
Aug	08	30.5				27.5			
Aug	09	63.8				57.2			

2007 AQS Fire Flagged Data
Missoula County MT (Continuous Data Only)

Year		2007							
State Code		30							
County Code		063							
County Name		Missoula							
Site ID		0024							
Local Site Name		MSLA Boyd Park							
Parameter Code		81102				85101			
POC		6				4			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes
Aug	10	25.8				23.4			
Aug	11	41.8				37.9			
Aug	12	77.6				69.9			
Aug	13	68.1				60.6			
Aug	14	60.3				54.4			
Aug	15	57.7				51.6			
Aug	16	124.3				111.3			
Aug	17	138.8				124.7			
Aug	18	70.1				62.9			
Aug	19	87.1				79.0			
Aug	21	19.0				17.5			
Aug	22	20.4				18.8			
Aug	23	30.1				27.7			
Aug	24	28.5				26.1			
Aug	25	27.3				24.7			
Aug	26	18.9				17.2			
Aug	27	22.0				20.2			
Aug	28	24.9				22.9			
Aug	29	40.5				36.8			
Aug	30	87.9				78.7			
Aug	31	76.3				69.0			
Sep	01	21.2	23.0	40.0	3	19.3	21.0		3,7
Sep	02	29.8				26.8			
Sep	03	44.3				39.6			
Sep	04	49.3				44.8			
Sep	05	29.5				26.7			
Sep	06	24.1				22.0			
Sep	07	29.2				26.6			

**2007 AQS Fire Flagged Data
Missoula County MT (Continuous Data Only)**

Year		2007							
State Code		30							
County Code		063							
County Name		Missoula							
Site ID		0024							
Local Site Name		MSLA Boyd Park							
Parameter Code		81102				85101			
POC		6				4			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes
Sep	11	55.5				51.0			
Sep	12	73.4				67.3			
Sep	13	26.8				24.7			
Sep	14	34.5				31.6			
Sep	15	53.9				49.3			
Sep	16	53.8				49.6			

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

**2007 AQS Fire Flagged Data
Missoula County MT (Msla Seeley Lake Only)**

Year	2007												
State Code	30												
County Code	063												
County Name	Missoula												
Site ID	0021												
Local Site Name	MSLA Seeley Lake												
Parameter Code	81102				85101				88101				
POC	1				1				1				
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	14	48.0	35.0	75.0	2	42.0	30.9		2,7	14.3	6.9	13.8	2
Jul	17									10.1			
Jul	20	33.0				28.0				11.5			
Jul	26	36.0				31.0				12.6			
Jul	29	29.0				25.0				15.4			
Aug	01	47.0	20.0	39.0	2	41.0	17.8		2,7	22.4	6.9	10.4	2

Site moved.

No samples collected in Aug or Sep

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data Sanders County MT

Year		2007											
State Code		30											
County Code		089											
County Name		Sanders											
Site ID		0007											
Local Site Name		Thompson Falls High School											
Parameter Code		81102				85101				88101			
POC		1				1				1			
Month	Day	Value	Historical Monthly Mean			Value	Historical Monthly Mean			Value	Historical Monthly Mean		
			Mean	Max	Foot		Mean	Max	Foot		Mean	Max	Foot
Jul	14									9.7	5.5	10.6	1
Jul	17	35.0	16.8	30.0	1	32.0	15.9		1,7	21.7			
Jul	23	18.0				16.0				10.1			
Aug	01									13.2	6.1	11.5	1
Aug	16	104.0	18.7	38.0	1	97.0	17.6		1,7	75.1			
Sep	03	16.0	11.9	24.0		15.0	11.5		1,7	11.2	5.1	12.9	1
Sep	12									13.6			
Sep	15	29.0				28.0				19.7			

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data Ravalli County MT

Year		2007							
State Code		30							
County Code		081							
County Name		Ravalli							
Site ID		0007							
Local Site Name		Hamilton - PS 46							
Parameter Code		88101				88502			
POC		1				3			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	13					16.0	7.7	13.4	2
Jul	14					11.5			
Jul	15					14.8			
Jul	16					16.8			
Jul	17	10.8	6.1	10.9	1	12.5			
Jul	18					10.6			
Jul	19					17.7			
Jul	20					28.5			
Jul	21					31.7			
Jul	22					43.6			
Jul	23	21.7				23.3			
Jul	24					20.7			
Jul	25					16.4			
Jul	26					20.8			
Jul	27					16.3			
Jul	28					16.6			
Jul	29	27.1				30.0			
Jul	30					36.6			
Jul	31					39.2			
Aug	01	31.3	7.2	10.1	1	35.0	9.4	14.1	2
Aug	02					45.9			
Aug	03					51.5			
Aug	04	49.7 ✓				72.8			
Aug	06					81.2			
Aug	07	42.2 ✓				45.0			
Aug	08					39.5			
Aug	09					43.8			
Aug	10	22.4				27.4			

2007 AQS Fire Flagged Data Ravalli County MT

Year		2007							
State Code		30							
County Code		081							
County Name		Ravalli							
Site ID		0007							
Local Site Name		Hamilton - PS 46							
Parameter Code		88101				88502			
POC		1				3			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes
Aug	11					29.7			
Aug	12					83.6			
Aug	13					130.3			
Aug	14					138.5			
Aug	15					104.8			
Aug	16	131.9				143.4			
Aug	17					115.3			
Aug	18					132.5			
Aug	19					161.9			
Aug	20					19.7			
Aug	21					12.3			
Aug	22	8.6				11.3			
Aug	23					14.3			
Aug	24					14.4			
Aug	25	18.7				24.0			
Aug	26					20.4			
Aug	27					8.6			
Aug	28	11.6				14.1			
Aug	29					41.6			
Aug	30					90.5			
Aug	31					87.1			
Sep	01					28.2	8.4	19.4	2
Sep	02					43.2			
Sep	03					60.3			
Sep	04					70.5			
Sep	05					19.6			
Sep	12					26.1			
Sep	13	18.4	4.4	5.9	1	22.7			

2007 AQS Fire Flagged Data Ravalli County MT

Year		2007							
State Code		30							
County Code		081							
County Name		Ravalli							
Site ID		0007							
Local Site Name		Hamilton - PS 46							
Parameter Code		88101				88502			
POC		1				3			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes
Sep	14					30.4			
Sep	15	51.4				56.9			
Sep	16					54.1			
Sep	17					17.8			
Sep	18					13.9			

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data Silver Bow County MT

Year		2007											
State Code		30											
County Code		093											
County Name		Silver Bow											
Site ID		0005											
Local Site Name		Butte Greeley School											
Parameter Code		81102 <i>PM10</i>				85101 <i>PM10</i>				88101 <i>PM2.5</i>			
POC		4				1				1			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	19	45.1	23.7	52.0	1	34.0	19.3		1,7				
Jul	20	43.9				33.5				17.2	7.1	18.8	1
Jul	21	54.7				41.5							
Jul	22	67.6				51.3							
Jul	23	61.8				47.0				25.2			
Jul	24	40.2				30.8							
Jul	25	31.0				23.7							
Jul	26	37.3				28.4							
Jul	27	32.9				25.1							
Jul	28	40.3				30.5							
Jul	29	44.5				33.8							
Jul	30	72.0				54.7				23.5			
Jul	31	55.1				41.8							
Aug	01	72.6	21.7	50.0	1	55.7	17.3		1,7	35.4 ✓	7.0	11.7	1
Aug	02	65.8				50.5							
Aug	03	70.5				53.5							
Aug	04	64.4				49.7				26.0			
Aug	05	68.7				53.1							
Aug	06	60.0				46.5							
Aug	07	75.3				58.5				38.4 ✓			
Aug	08	76.0				59.0							
Aug	09	75.0				58.3							
Aug	10	61.6				47.5				25.6			
Aug	11	41.2				31.9							
Aug	12	94.1				71.8							
Aug	13	195.3				149.9				86.6 ✓			
Aug	14	160.8				124.8							
Aug	15	158.4				122.3							
Aug	16	130.8				101.2				43.3 ✓			
Aug	17	36.9				28.5							
Aug	18	38.8				30.3							

2007 AQS Fire Flagged Data Silver Bow County MT

Year		2007											
State Code		30											
County Code		093											
County Name		Silver Bow											
Site ID		0005											
Local Site Name		Butte Greeley School											
Parameter Code		81102				85101				88101			
POC		4				1				1			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Aug	19	110.9				86.0				50.3			
Aug	20	36.4				28.7							
Aug	21	31.4				24.6							
Aug	25	49.2				37.6				20.7			
Aug	26	69.0				53.3							
Aug	27	46.5				36.0							
Aug	28	46.0				35.8				15.4			
Aug	29	81.2				62.8							
Aug	30	124.8				95.5							
Aug	31	140.4				109.0				47.5			
Sep	01	51.5	17.7	52.0		39.8	15.0		1.7				
Sep	02	77.0				58.7							
Sep	03	72.9				56.0				23.2	6.3	12.4	1
Sep	04	62.4				48.6							
Sep	05	32.6				25.5							
Sep	11	61.0				47.3							
Sep	12	90.7				70.6				35.4			
Sep	13	27.0				21.5							
Sep	14	55.8				43.9							
Sep	15	58.5				45.7							
Sep	16	68.7				55.0							

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

**2007 AQS Fire Flagged Data
Missoula County MT (Msla Seeley Lake Only)**

Year		2007								
State Code		30								
County Code		063								
County Name		Missoula								
Site ID		0021								
Local Site Name		MSLA Seeley Lake								
Parameter Code		81102			85101			88101		
POC		1			1			1		
Month	Day	Value ug/m3	Historical Monthly Mean		Value ug/m3	Historical Monthly Mean		Value ug/m3	Historical Monthly Mean	
			(ug/m3)	Foot Notes		(ug/m3)	Foot Notes		(ug/m3)	Foot Notes
Jul	14	48.0	35.0	2	42.0	30.9	2	14.3	6.9	2
Jul	17							10.1		
Jul	20	33.0			28.0			11.5		
Jul	26	36.0			31.0			12.6		
Jul	29	29.0			25.0			15.4		
Aug	01	47.0	20.0	2	41.0	17.8	2	22.4	6.9	2

Site moved.

No samples collected in Aug or Sep 2007

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported

**2007 AQS Fire Flagged Data
Lincoln County MT (Continuous Data Only)**

Year		2007								
State Code		30								
County Code		053								
County Name		Lincoln								
Site ID		0018								
Local Site Name		Libby Courthouse Annex								
Parameter Code		81102			85101			88502		
POC		1			1			3		
Month	Day	Value ug/m3	Historical Monthly Mean		Value ug/m3	Historical Monthly Mean		Value ug/m3	Historical Monthly Mean	
			(ug/m3)	Foot Notes		(ug/m3)	Foot Notes		(ug/m3)	Foot Notes
Jul	13	38.7	22.0	1	34.3	19.7	1	9.8	8.9	3
Jul	14	35.2			31.3			10.7		
Jul	15	32.4			28.6			12.9		
Jul	16	43.1			38.6			17.1		
Jul	17	51.9			46.8			22.3		
Jul	18	29.7			26.7			16.3		
Jul	26	30.3			27.0			10.2		
Jul	27	32.0			28.5			10.7		
Jul	28	29.0			26.3			10.5		
Aug	01	53.1	23.0	1	47.9	21.0	1	29.5	8.9	3
Aug	02	65.6			59.3			37.5		
Aug	05	35.0			31.4			19.5		
Aug	11	26.1			23.8			12.5		
Aug	12	27.8			25.4			14.3		
Aug	16	70.7			64.4			31.0		
Aug	17	77.6			71.3			41.5		
Aug	18	31.2			28.5			12.7		
Sep	03	19.3	20.0	1	17.7	18.7	1	9.9	7.8	3
Sep	15	40.4			37.8			17.5		

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported

2007 AQS Fire Flagged Data Yellowstone County MT

Year		2007											
State Code		30											
County Code		111											
County Name		Yellowstone											
Site ID		1065											
Local Site Name		Blgs Lockwood Park											
Parameter Code		81102				85101				88101			
POC		1				1				1			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	23	54.0	24.0	52.0	1	48.0	21.6		1,7	18.1	13.8	115.0	1
Jul	29	27.0				24.0				12.3			
Aug	04	51.0	19.5	27.0	1	45.0	17.3		1,7	25.4	7.7	21.3	1
Aug	07									9.7			
Aug	10	41.0				37.0				12.7			
Aug	13									27.6			
Aug	16	55.0				50.0				19.9			
Aug	19									15.1			
Aug	31									11.0			
Sep	03	45.0	15.9	32.0	1	40.0	14.8		1,7	13.3	5.5	9.1	1

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data Cascade County MT

Year		2007			
State Code		30			
County Code		013			
County Name		Cascade			
Site ID		1026			
Local Site Name		Great Falls High School			
Parameter Code		88101			
POC		1			
Month	Day	Value ug/m3	Historical Monthly Values		
			Mean	Max	Foot Notes
Jul	20	11.6	6.8	11.4	1
Jul	23	24.2			
Jul	29	37.0			
Aug	01	15.5	6.8	21.0	1
Aug	04	51.2			
Aug	07	31.5			
Aug	10	15.1			
Aug	13	35.3			
Aug	16	20.0			
Aug	19	35.3			
Aug	31	48.0			
Sep	03	22.4	4.8	10.0	1

Foot Notes

1. 2004, 2005 and 2006 data
2. 2005 and 2006 data
3. 2006 data
4. 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data
Flathead County MT
(Continuous Data)

Year		2007															
State Code		30															
County Code		029															
County Name		Flathead															
Site ID		0009								0047							
Local Site Name		White Fish Dead End								Kalispell Flathead Electric							
Parameter Code		81102				85101				81102				85101			
POC		1				1				1				1			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	16	50.9	22.9	60.0	1	45.2	21.1		1,7	48.6	25.9	50.0	1	43.7	23.8		1,7
Jul	17	43.5				39.1				51.5				46.3			
Jul	22	31.0				27.7				29.0				25.9			
Jul	23	33.2				29.6				36.7				32.7			
Jul	31	53.4				48.5				37.8				34.2			
Aug	01	76.7	23.8	57.0	1	69.3	21.8		1,7	105.7	25.9	61.0	1	95.4	23.5		1,7
Aug	02	90.0				81.5				93.4				84.5			
Aug	03	76.5				69.5				57.7				52.1			
Aug	04	68.7				62.2				67.1				60.3			
Aug	05	80.5				73.2				78.8				71.4			
Aug	06	106.7				97.8				74.3				67.4			
Aug	07	67.1				61.7				55.0				50.0			
Aug	08	52.4				48.7				66.0				61.2			
Aug	09	65.2				60.0				70.1				63.5			
Aug	10	50.8				46.6				35.0				32.3			
Aug	11	31.3				28.8				39.7				36.7			
Aug	12	70.1				64.3				55.7				51.0			
Aug	13	104.5				95.4				89.9				81.4			
Aug	14	90.9				83.6				62.3				56.5			
Aug	15	61.7				56.3				102.4				92.6			
Aug	16	106.7				97.5				147.4				134.5			
Aug	17	132.7				121.0				115.2				105.0			
Aug	18	52.4				48.2				51.9				47.2			
Aug	19	39.7				36.7				38.5				35.5			
Aug	23	28.1				26.0				34.8				32.5			
Aug	24	32.6				30.3				27.3				25.0			

2007 AQS Fire Flagged Data
Flathead County MT
(Continuous Data)

Year		2007															
State Code		30															
County Code		029															
County Name		Flathead															
Site ID		0009								0047							
Local Site Name		White Fish Dead End								Kalispell Flathead Electric							
Parameter Code		81102				85101				81102				85101			
POC		1				1				1				1			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Aug	25	43.1				39.6				26.3				23.9			
Aug	29	46.3				43.0				54.7				50.7			
Aug	30	56.8				52.0				64.7				59.1			
Aug	31	49.2				45.1				47.8				43.7			
Sep	01	19.8	21.6	49.0	1	18.0	20.4		1,7	15.3	20.4	48.0	1	13.8	19.0		1,7
Sep	03	28.7				26.3				25.6				23.3			
Sep	10	33.0				31.0				39.7				37.4			
Sep	11	44.4				41.2				44.3				41.0			
Sep	13	33.8				31.7				52.8				49.5			
Sep	14	49.8				46.8				55.3				51.4			
Sep	15	52.1				48.8				48.7				45.2			
Sep	16	47.7				44.5				57.0				52.9			

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data
Flathead County MT
(Non-Continuous Data - Columbia Falls)

Year	2007																
State Code	30																
County Code	029																
County Name	Flathead																
Site ID	0007																
Local Site Name	Columbia Falls Ball Park																
Parameter Code	81102									85101							
POC	1				2					1				2			
		Historical Monthly Mean				Historical Monthly Mean				Historical Monthly Mean				Historical Monthly Mean			
Month	Day	Value ug/m3	Mean	Max	Foot Notes	Value ug/m3	Mean	Max	Foot Notes	Value ug/m3	Mean	Max	Foot Notes	Value ug/m3	Mean	Max	Foot Notes
Jul	17	47.0	21.5	39.0	1	41.0	24.8	39.0	2	42.0	19.8		1,7	37.0	22.6		2,7
Jul	23					31.0								28.0			
Aug	04	56.0	22.8	42.0	1	54.0	27.3	42.0	2	51.0	21.0		1,7	49.0	25.3		2,7
Aug	07																
Aug	10	37.0				33.0				34.0				30.0			
Aug	13																
Aug	16	105.0				96.0				95.0				87.0			
Aug	19																
Aug	25																
Aug	31																
Sep	03	43.0	17.4	42.0	1	46.0	16.8	30.0	2	40.0	16.3		1,7	43.0	15.9		2,7
Sep	15	50.0				50.0				46.0				47.0			

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data
Flathead County MT
(Non-Continuous Data - Whitefish / Kalispell)

Year		2007							
State Code		30							
County Code		029							
County Name		Flathead							
Site ID		0009				0047			
Local Site Name		White Fish Dead End				Kalispell Flathead Electric			
Parameter Code		88101				88101			
POC		1				1			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	17	19.2	7.2	15.3	1	20.7	7.2	15.3	1
Jul	23	9.6				13.8			
Aug	01	0.3	7.4	15.1	1	0.2	7.0	17.1	1
Aug	04	40.5 ✓				35.7 ✓			
Aug	07					14.4			
Aug	10	18.5				10.8			
Aug	13	65.9 ✓				50.2 ✓			
Aug	16	49.4 ✓				67.1 ✓			
Aug	19	17.4				15.7			
Aug	25	9.7				7.6			
Aug	31	13.6				10.0			
Sep	03	13.4	7.2	16.4	1	15.0	5.8	10.9	1
Sep	15								

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

**2007 AQS Fire Flagged Data
Gallatin County MT (Bozeman & Belgrade Sites Only)**

Year		2007							
State Code		30							
County Code		031							
County Name		Gallatin							
Site ID		0006				0008			
Local Site Name		Bozeman WWTP				Belgrade Conagra			
Parameter Code		88101				88101			
POC		1				1			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	20	11.5	7.1	11.3	3	13.5	8.5	21.5	4,6
Jul	23	19.2				24.0			
Jul	29	11.7				12.9			
Aug	01	23.2	7.7	10.6	2	28.1	6.9	12.6	4,6
Aug	04	10.2				13.2			
Aug	07	12.4				18.3			
Aug	10	12.0				18.2			
Aug	13	85.3				71.5			
Aug	16	26.4				29.4			
Aug	19	35.8				37.6			
Aug	28	9.1				10.9			
Sep	03	13.9	5.9	12.0	2	16.6	6.6	13.3	4,6
Sep	12	26.4				27.2			

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data Gallatin County MT (West Yellowstone Sites Only)

Year		2007															
State Code		30															
County Code		031															
County Name		Gallatin															
Site ID		0013								0016							
Local Site Name		West Yellowstone Park Ent								West Yellowstone City Center							
Parameter Code		88101				88502				88101				88502			
POC		1				3				1				3			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jun	28					83.0	4.5	11.2	1					100.0			5
Jun	29	29.2	4.2	8.4	1	35.6				37.9			5	42.4			
Jul	08					10.6	5.8	14.5	1					12.3			5
Jul	09					9.5								7.6			
Jul	21					13.0								11.0			
Jul	22					14.4								14.5			
Jul	23					15.6				16.6				15.2			
Jul	24					12.3								11.3			
Aug	01					11.1	6.6	21.3	1					9.7			5
Aug	02					8.0								7.6			
Aug	03					12.9								12.5			
Aug	04	10.0	5.8	8.0	1	9.7				9.9			5	10.3			
Aug	14					32.8								37.0			
Aug	15					38.9								37.6			
Aug	16	16.8				19.0				17.4				16.9			
Aug	19					10.2								9.0			
Aug	27					10.0								8.9			
Aug	28	13.2				13.7				13.1				12.0			
Sep	06					9.3	5.5	18.2	1					8.9			5
Sep	13					17.5								16.1			
Sep	14					9.6								9.1			

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data Lewis and Clark County MT

Year		2007											
State Code		30											
County Code		049											
County Name		Lewis and Clark											
Site ID		0018						0026					
Local Site Name		Helena Lincoln School						Rossiter Pump House					
Parameter Code		88101				88502				88101			
POC		1				3				1			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Aug	15					56.0							
Aug	16	28.2				31.4				26.9			
Aug	17					27.0							
Aug	18					16.8							
Aug	19	57.8				64.3							
Aug	25	20.3				20.8							
Aug	26					14.4							
Aug	27					10.9							
Aug	29					17.1							
Aug	30					38.8							
Aug	31	56.9				64.4							
Sep	01					21.8			5				
Sep	02					18.0							
Sep	03	20.3	5.4	9.1	1	20.9				23.1			5
Sep	04					22.0							
Sep	05					21.1							
Sep	12	16.0				16.7							
Sep	15	18.3				19.1				20.4			
Sep	16					33.5							
Sep	17					11.1							

Foot Notes

1. Avg 2004, 2005 and 2006 data
2. Avg 2005 and 2006 data
3. Avg 2006 data
4. Avg 2004 and 2006
5. No Historical Data
6. No Data - NULL code reported
7. 85101 Historical Max Value not easily obtainable

2007 AQS Fire Flagged Data Lewis and Clark County MT

Year		2007											
State Code		30											
County Code		049											
County Name		Lewis and Clark											
Site ID		0018						0026					
Local Site Name		Helena Lincoln School						Rossiter Pump House					
Parameter Code		88101				88502				88101			
POC		1				3				1			
Month	Day	Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean			Value ug/m3	Historical Monthly Mean		
			Mean	Max	Foot Notes		Mean	Max	Foot Notes		Mean	Max	Foot Notes
Jul	13					11.8			5				
Jul	14	10.4	6.6	11.9	1	12.3							
Jul	15					11.9							
Jul	16					12.8							
Jul	19					18.2							
Jul	20	18.1				20.2							
Jul	21					22.8							
Jul	22					32.2							
Jul	23	23.9				25.6				24.5			5
Jul	24					22.7							
Jul	25					19.3							
Jul	26	24.2				31.9							
Jul	27					24.4							
Jul	28					16.3							
Jul	29	19.0				18.6				17.5			
Jul	30					28.4							
Jul	31					23.4							
Aug	01					46.0			5				
Aug	02					27.3							
Aug	03					25.1							
Aug	04	16.8	7.0	14.9	1	19.8				17.3			5
Aug	05					34.3							
Aug	06					51.8							
Aug	07	45.6				51.9							
Aug	08					42.9							
Aug	09					31.7							
Aug	10	25.8				31.0				25.2			
Aug	12					42.5							
Aug	13	74.0				81.6							
Aug	14					44.9							