

Appendix A. Monitor Values

Appendix A-1 Salmon Monitor Values for all Days AQS16-059-0004

Date	Salmon POC 3 (Primary) PM _{2.5}	Salmon POC 1 (Co-located) PM _{2.5}	Values included in this Request	Value not included but believed to be also affected by Wildfires
7/30/2012	15.1			Yes
7/31/2012	15.4			Yes
8/5/2012	16.3			Yes
8/6/2012	19.7			Yes
8/7/2012	20.5			Yes
8/8/2012	25.1			Yes
8/9/2012	27			Yes
8/10/2012	33.7		Yes	
8/11/2012	37.2		Yes	
8/12/2012	49.2		Yes	
8/13/2012	96.5	85	Yes	
8/14/2012	147		Yes	
8/15/2012	67.3		Yes	
8/16/2012	106.5		Yes	
8/17/2012	96.6		Yes	
8/18/2012	30.4		Yes	
8/19/2012	34.5	31.2	Yes	
8/20/2012	37.7		Yes	
8/21/2012	22.2			Yes
8/22/2012	21.8			Yes
8/23/2012	35.9		Yes	
8/24/2012	108.2		Yes	
8/25/2012	91.3	77.8	Yes	
8/26/2012	45.5		Yes	
8/27/2012	7.9			
8/28/2012	58.2		Yes	
8/29/2012	78.1		Yes	
8/30/2012	132		Yes	
8/31/2012	49.8		Yes	

Appendix A-1. Salmon Monitor Values for all Days, AQS16-059-0004
(cont.)

Date	Salmon POC 3 (Primary) PM _{2.5} (µg/m ³)	Salmon POC 1 (Co-located) PM _{2.5} (µg/m ³)	Values included in this Request	Value not included but believed to be also affected by Wildfires
9/1/2012	69.4		Yes	
9/2/2012	145.2		Yes	
9/3/2012	186.9		Yes	
9/4/2012	182.7		Yes	
9/5/2012	97.8		Yes	
9/6/2012	48.4		Yes	
9/7/2012	53.1		Yes	
9/8/2012	27.5			Yes
9/9/2012	11.5			
9/10/2012	136.4		Yes	
9/11/2012	214.3		Yes	
9/12/2012	194.4		Yes	
9/13/2012	153.7		Yes	
9/14/2012	70.2		Yes	
9/15/2012	162.1		Yes	
9/16/2012	162.5		Yes	
9/17/2012	112.3		Yes	
9/18/2012	130.3		Yes	
9/19/2012	135.5		Yes	
9/20/2012	159.8		Yes	
9/21/2012	153.5		Yes	
9/22/2012	86.6		Yes	
9/23/2012	44.3		Yes	
9/24/2012	31.8			Yes
9/25/2012	62.7		Yes	
9/26/2012	37.4		Yes	
9/27/2012	39.3		Yes	
9/28/2012	20			Yes
9/29/2012	7			
9/30/2012	14.5	12.1		
10/1/2012	18.2			Yes

Appendix A-2. Pinehurst Monitor Values for all Days, AQS 16-079-0017

Date	Pinehurst POC 4 (Primary) PM _{2.5} (µg/m ³)	Pinehurst POC 1 (Co-located) PM _{2.5} (µg/m ³)	Pinehurst POC 2 (Co-located) PM _{2.5} (µg/m ³)	Values included in this Request	Value not included but believed to be also affected by Wildfires
8/14/2012	18.6				Yes
8/15/2012	4.6				
8/16/2012	3.7				
8/17/2012	4				
8/18/2012	5.3				
8/19/2012	6	8	7.9		
8/20/2012	7.8				
8/21/2012	6.4				
8/22/2012	4				
8/23/2012	2.7				
8/24/2012	1.7				
8/25/2012	1.9	2.6	2.9		
8/26/2012	16.5				Yes
8/27/2012	17.6				
8/28/2012	13.8				Yes
8/29/2012	3.1				
8/30/2012	1.8				
8/31/2012	6.4	7.5	7.3		
9/1/2012	4.6				
9/2/2012	2.4				
9/3/2012	2.8				
9/4/2012	1.7				
9/5/2012	3.8				
9/6/2012	1.5	2	2.2		
9/7/2012	2.6				
9/8/2012	5.2				
9/9/2012	7.9				
9/10/2012	8.9				

Appendix A-2. Pinehurst Monitor Values for all Days AQS 16-079-0017 (cont.)					
Date	Pinehurst POC 4 (Primary) PM _{2.5} (µg/m ³)	Pinehurst POC 1 (Co-located) PM _{2.5} (µg/m ³)	Pinehurst POC 2 (Co-located) PM _{2.5} (µg/m ³)	Values included in this Request	Value not included but believed to be also affected by Wildfires
9/11/2012	10.9				
9/12/2012	4.3	5.5	5.5		
9/13/2012	4.3				
9/14/2012	31.3			Yes	
9/15/2012	43.6			Yes	
9/16/2012	17.7				
9/17/2012	7.4				
9/18/2012	4.6	7	6.3		
9/19/2012	19.9				Yes
9/20/2012	30.8				Yes
9/21/2012	16.2				Yes
9/22/2012	20.8			Yes	
9/23/2012	22.8				Yes
9/24/2012	22.4				Yes
9/25/2012	18.4			Yes	
9/26/2012	20.3				Yes
9/27/2012	18.8				Yes
9/28/2012	20				Yes
9/29/2012	15.8				Yes
9/30/2012	8.7	8.6	8.7		
10/1/2012	22.4				Yes
10/2/2012	14.1				Yes
10/3/2012	4.9				
10/4/2012	7.7				
10/5/2012	10.9				
10/6/2012	12.1	9.5	10.3		
10/7/2012	14.4				Yes
10/8/2012	26.6				Yes
10/9/2012	22.2				Yes
10/10/2012	20.2				Yes
10/11/2012	24.2				Yes
10/12/2012	18.4	17.4	17.3		Yes

Appendix B: Salmon EER Daily Summaries

For each day, July 30–October 13, 2012, Appendix B includes a summary of all EER elements along with a satellite/back trajectory map, PM_{2.5} and wind time series charts. The summary is a table which provides succinct information addressing all 7 EER criteria, or referencing other locations in this document where additional information may be found.

Appendix B: Salmon EER Information by Day

Information for This Appendix

This appendix contains day-by-day detailed information in support of the Exceptional Events request for each day requested, including the monitor values, AQS number and POC for each value on which DEQ is requesting concurrence. Explanations follow for the information contained in this appendix.

Summary of EER Evidence Tables

These tables contain concise, yet complete information supporting each Exceptional Event Rule (EER) element for each day in which EER concurrence is requested, along with reference to the main report section containing more complete explanations of the transport scenarios involved, alternative hypotheses and other EER elements.

Hysplit Back-trajectories / MODIS Satellite Images

Daily satellite images are overlaid with HYSPLIT back trajectories and HMS fire detects. Terra (morning) or Aqua (afternoon) RGB True Color images show a snapshot of the smoke at the time of the satellite pass. HYSPLIT back trajectories were run for the 24-hour period ending at 2359 on each day. New trajectories start hourly and have starting positions at the source of 0 m AGL, 500 m AGL, and 1000 m AGL. HMS fire detects are all those identified by the MODIS satellites during the 24-hour period.

Time Series Charts for each “Date” Requested

Twenty-four hour time series charts are provided to depict the temporal pattern of hourly PM_{2.5} concentration and meteorological parameters associated with each day. In addition, typical PM_{2.5} concentrations during the same month in previous years when wildfires were not impacting Salmon are characterized for comparison.

Top chart: “Date” PM_{2.5} with Average and 95th Percentile for Month (2009-2011)

2012 PM_{2.5} – The orange circles and line indicate the hourly PM_{2.5} concentration for each hour for each day affected by wildfires in 2012.

August/September/October Average. The blue line with filled blue triangle markers represents the average for the month for the three years prior to 2012. So each value represents 90 or 93 values averaged together. The October average only represents the days prior to October 15, to better represent the wildfire period.

August/September/October 95th percentile. The open blue triangles and dotted line represent the 95th percentile value for the identified month from the 2009 – 2011 data set. The 95th percentile is used to represent the upper limit of the normal historical fluctuations for each hour, based on EPA guidance for the 24-hour normal range between “average” and 95th percentile. Hourly values above this line indicate an “exceptional” hourly value that is beyond normal for that hour and month.

Middle Chart: “Date” Wind Speed and Wind Direction.

Wind Speed - The purple diamonds and solid line represent the wind speed in meters per second (m/s) recorded at the DEQ met station on Highway 93 approximately 500 m south of US 28 in Salmon. The wind sensor is at 10 meters above ground level.

Wind Direction, deg – The blue open squares represent the wind direction for the hour, at the DEQ met station.

Bottom Chart: “Date” Solar Radiation, Temperature and Vert. Temp. Gradient

V. Temp Gradient, K/km – The open rust colored diamonds represent the vertical temperature gradient between the DEQ met station in Salmon at 3960 ft above sea level and the Kriley Creek RAWs met station located in the foothills north of Salmon at 5200 ft above sea level, downloaded from MESOWEST (Horel, 2002). Its location is shown in Figure 17. The temperature gradient based on these two met stations is used to approximate a vertical temperature gradient- an indicator of atmospheric stability. A gradient greater than the environmental lapse rate, -6.5 K/km (degrees Kelvin per kilometer) is considered stable while a gradient lower than -6.5 K/km is considered unstable. This parameter can be used to identify days in which the surface temperature inversion does not break.

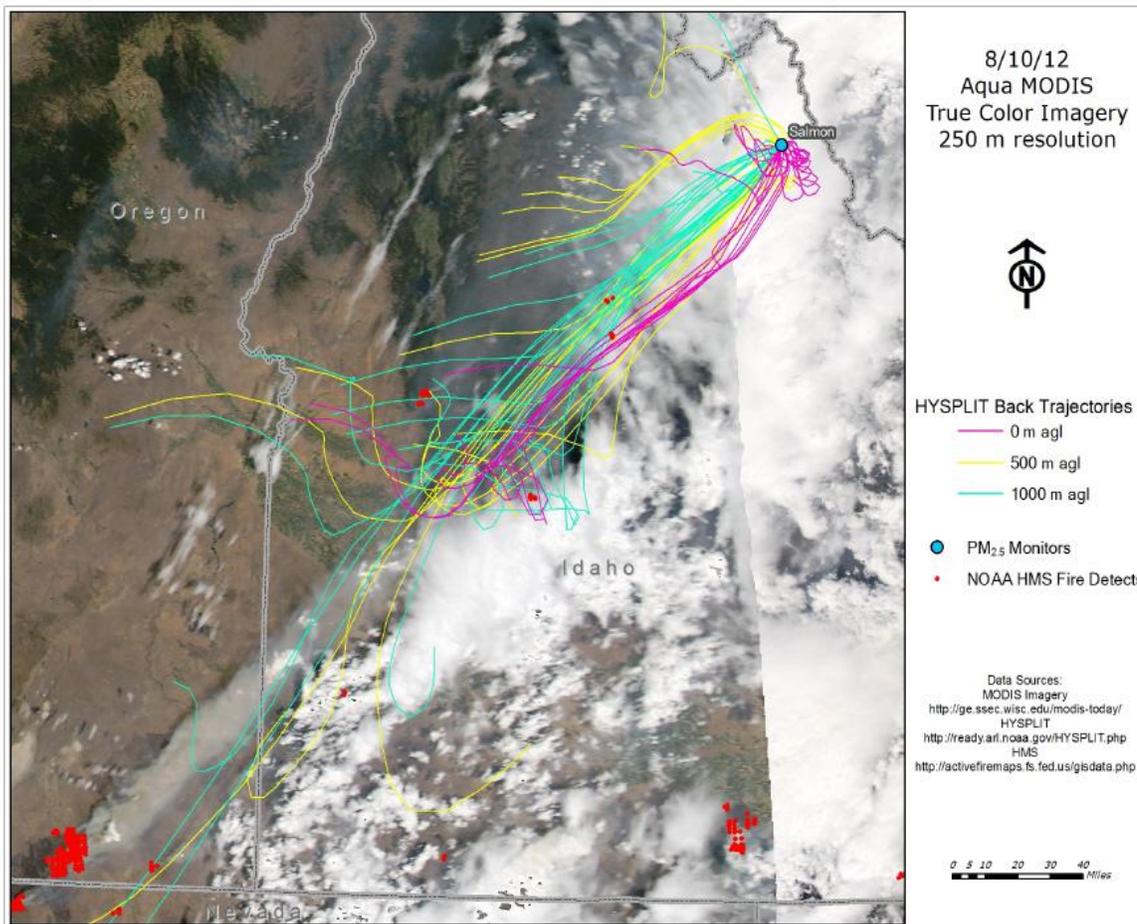
-dT/dZ = -6.5K/km – The black dotted line at -6.5 indicates the fixed environmental lapse rate, the vertical temperature gradient above which the atmosphere remains stable.

Temp. F – The green triangles and green line represent the temperature at 2 meters above ground as measured at the DEQ met station. It is included to indicate when the evening temperature dips below 40 degrees F, the point at which DEQ believes residential wood combustion is beginning to be used.

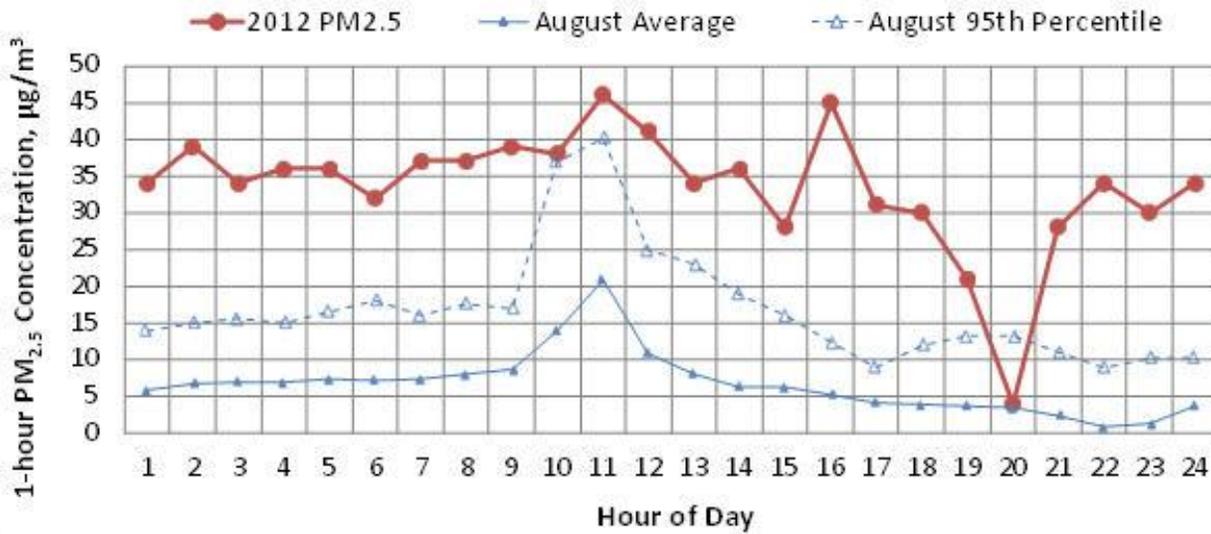
Solar Radiation, W/m² – the larger blue filled circles represent the solar radiation, in Watts per square meter (W/m²) measured at the DEQ met station. The solar intensity and cycle indicates when solar driven up-valley flows may be expected and when gravity driven down-slope and down-valley flows may be prevalent before sunrise and after sunset.

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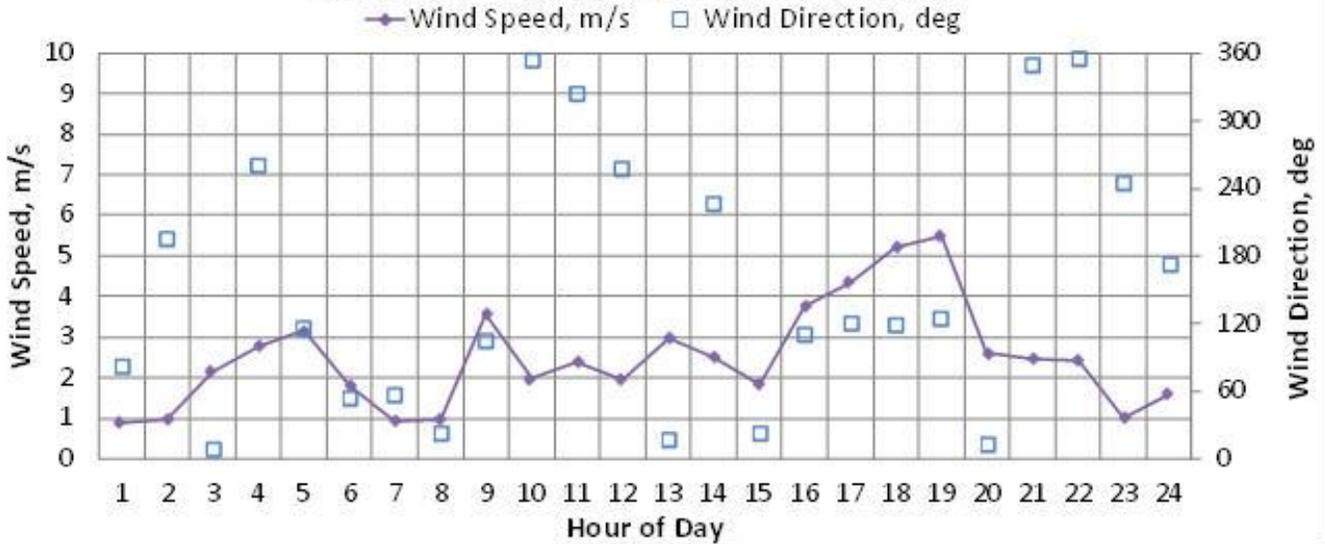
Summary of EER Evidence for Salmon Monitor Value, 33.7 $\mu\text{g}/\text{m}^3$ on 8-10-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; 97 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 4, 5 (See Sec. 4)
	Weather Conditions:	4-Corners High weakens and retreats while long wave ridge remains over the US west of the Mississippi providing light winds.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows visible smoke throughout the region. Back trajectories intersect smoke and/or fire detects from Halstead, Mustang, Trinity, and Springs fires in Idaho and the Holloway fire in Oregon. Hourly trace remains above 30 $\mu\text{g}/\text{m}^3$ between 0100 and 1400, indicating smoke trapped in the valley overnight. A spike at 1600 suggests a possible direct plume impact.
	Alternative Hypotheses:	No prescribed or crop residue burning occurred in Lemhi Co. (See Sec. 4)
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 17.8 to 27.9 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	DEQ issued air quality forecast notifying public of possible wildfire smoke impacts.



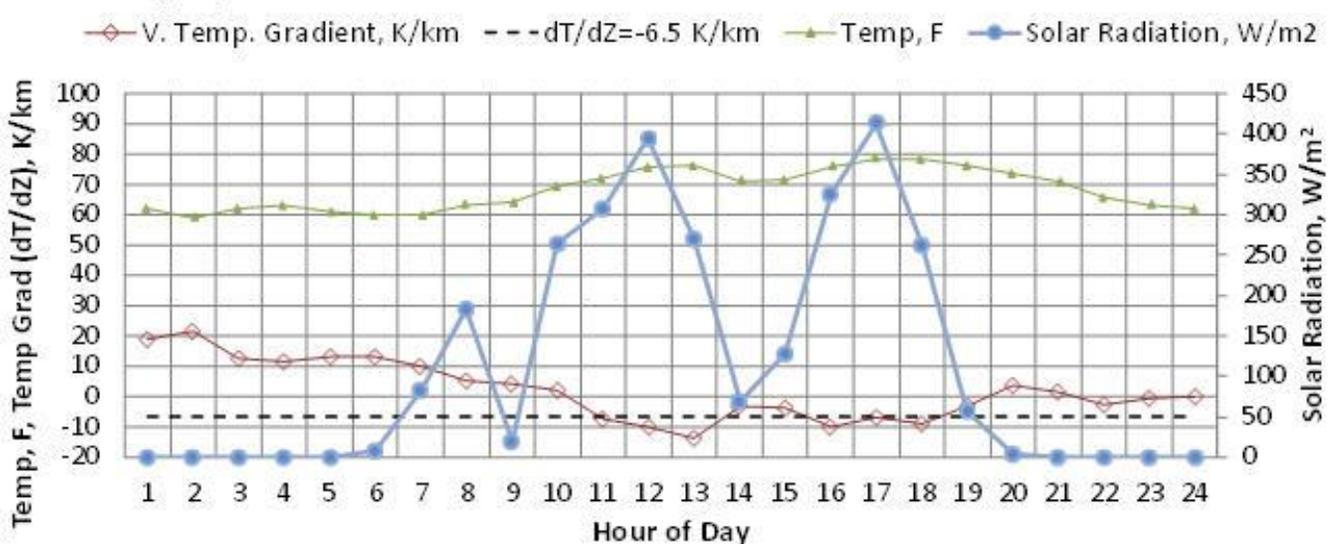
8/10/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



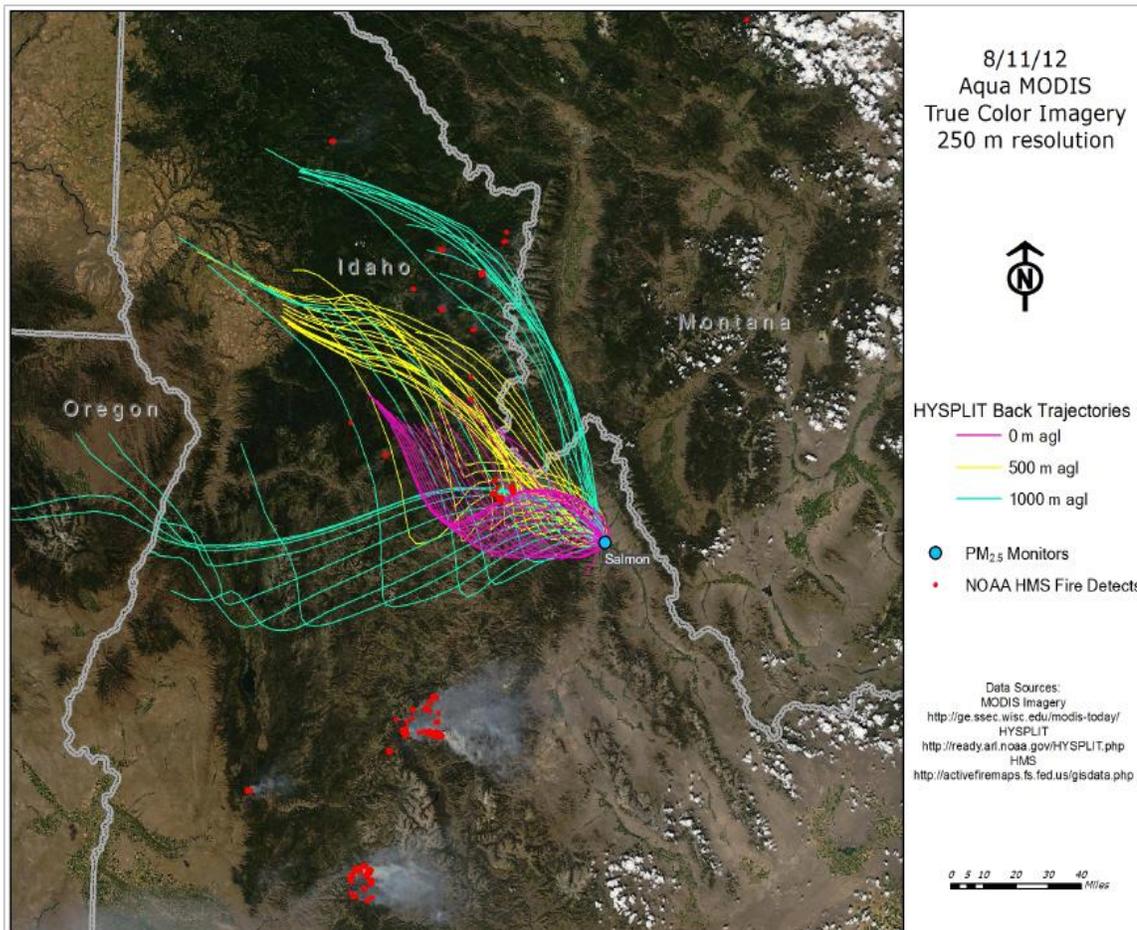
8/10/2012 Wind Speed and Wind Direction



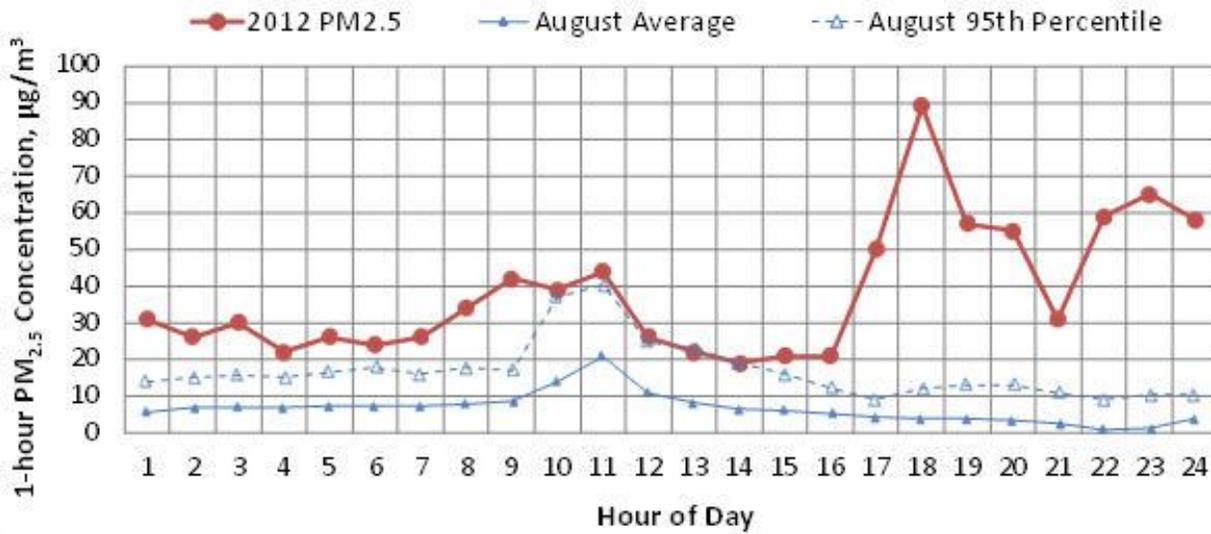
8/10/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



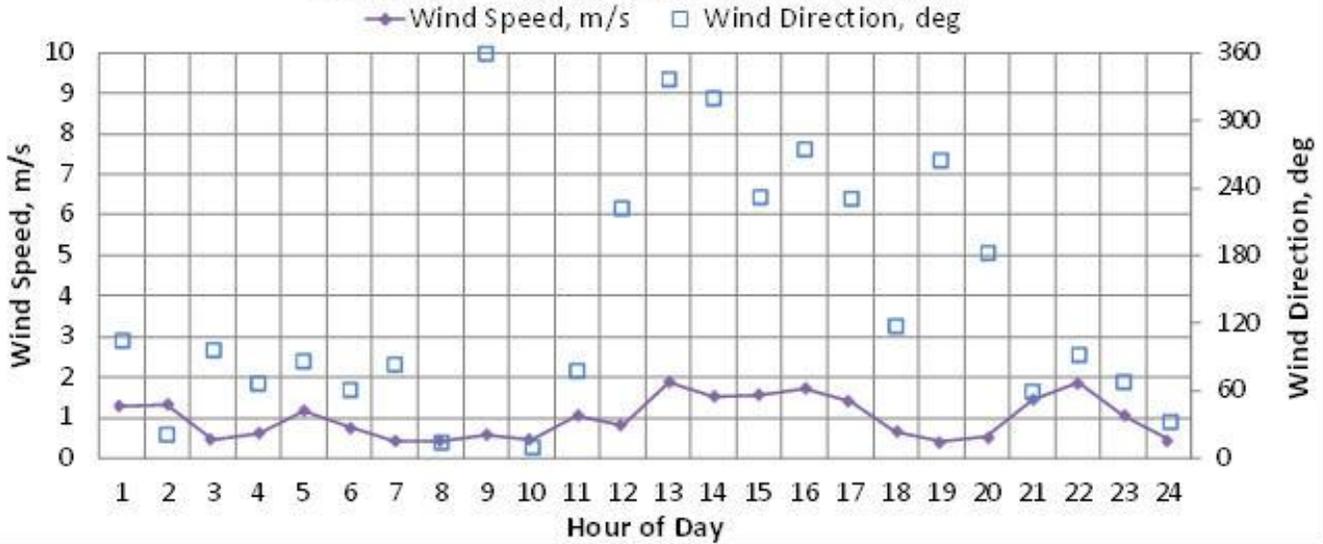
Summary of EER Evidence for Salmon Monitor Value, 37.2 $\mu\text{g}/\text{m}^3$ on 8-11-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; 98 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Embedded shortwave decays long wave ridge over Idaho and provides NW-W flow aloft.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows visible smoke blowing east from Mustang, Halstead, Trinity, and Springs fires. Back trajectories intersect smoke and/or fire detects from Mustang and Powell SBW Complexes. Hourly trace shows sustained values above 20 $\mu\text{g}/\text{m}^3$ throughout the day and a sudden rise to 50 – 90 $\mu\text{g}/\text{m}^3$ from 1700 - 1800. Values remain elevated at night.
	Alternative Hypotheses:	No prescribed or crop residue burning occurred in Lemhi Co. Temperature too warm for RWC. (See Sec. 4)
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 21.3 to 31.4 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual NAAQS “but for” this contribution.
Mitigation:	See Sec 8 and Appendix D	DEQ issued air quality forecast notifying public of possible wildfire smoke impacts.



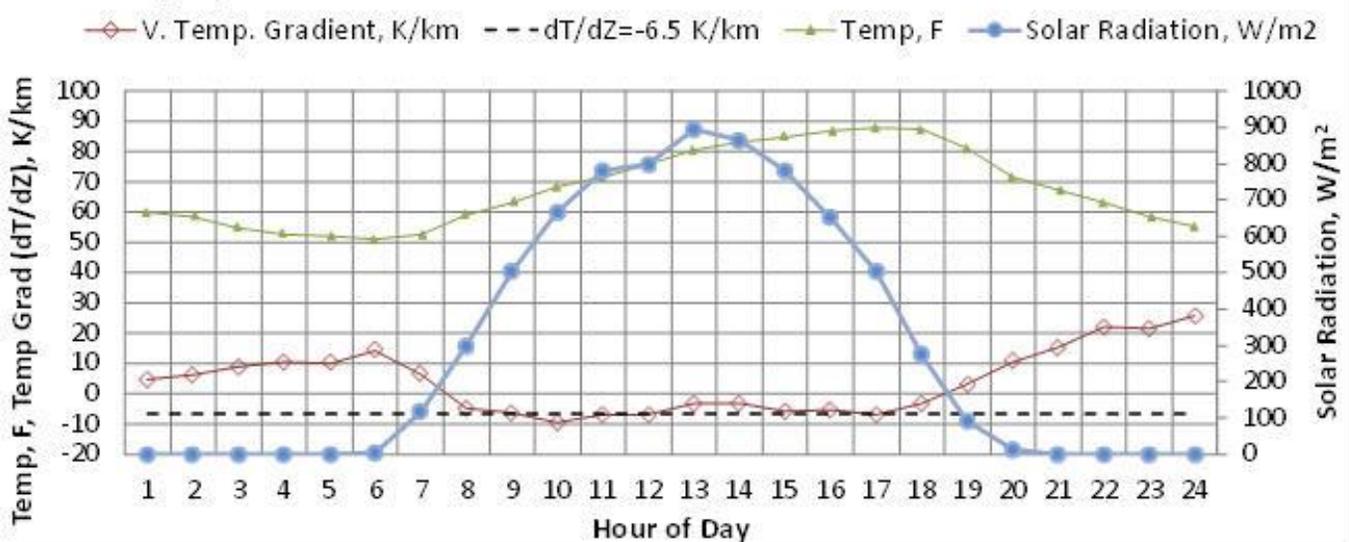
8/11/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



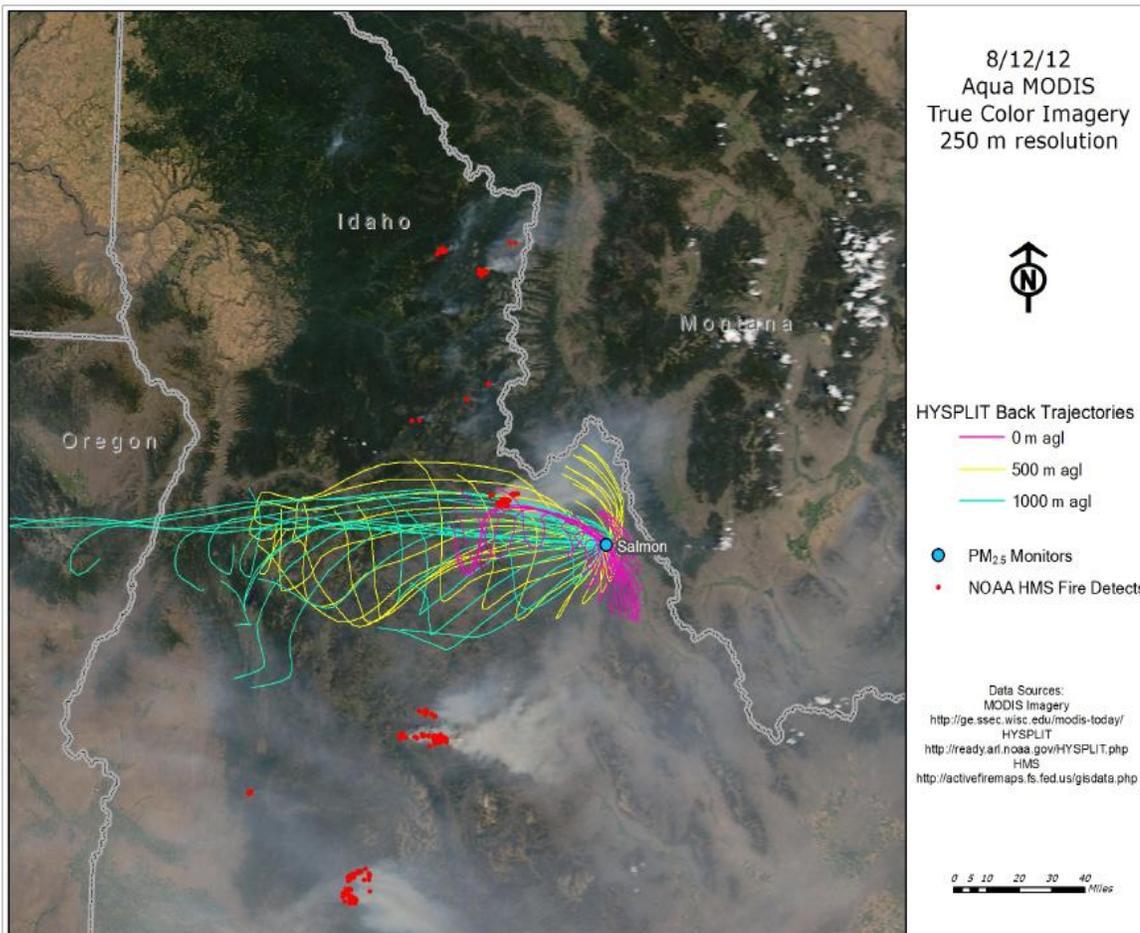
8/11/2012 Wind Speed and Wind Direction



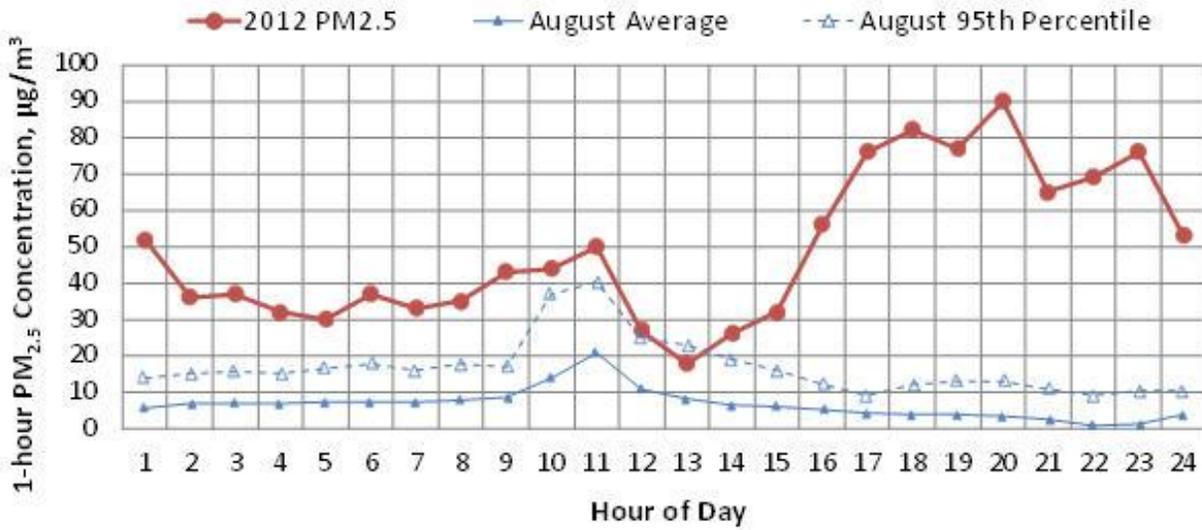
8/11/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



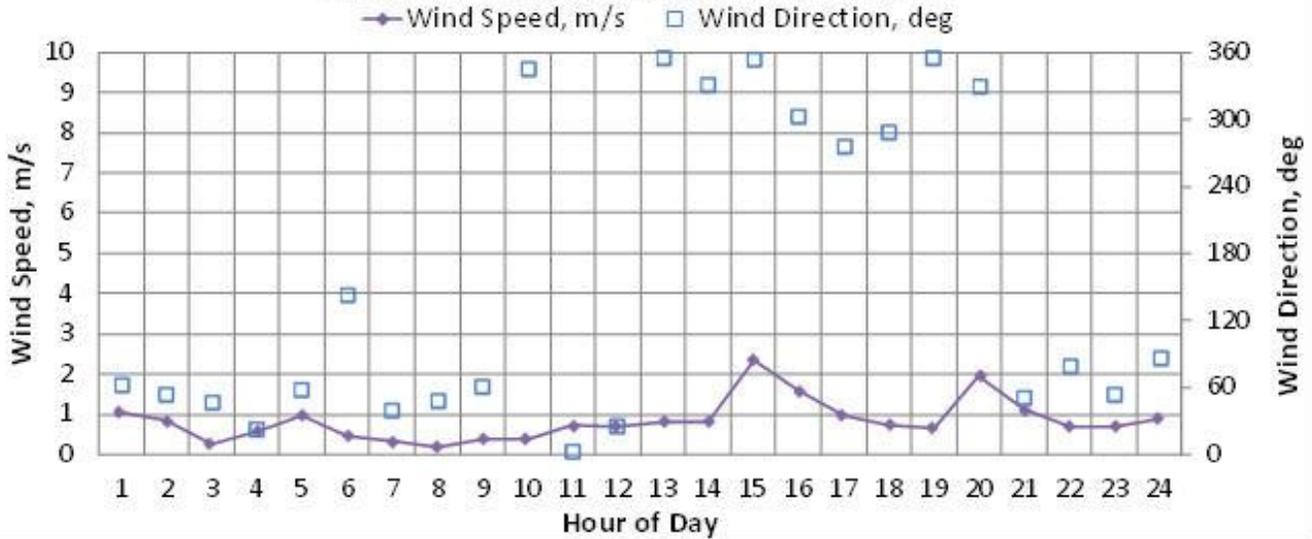
Summary of EER Evidence for Salmon Monitor Value, 49.2 $\mu\text{g}/\text{m}^3$ on 8-12-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario1, 2, 3 (See Sec. 4)
	Weather Conditions:	Shortwave progresses east, amplification of ridge upstream as low off CA coast strengthens. Ridge axis located near Central Idaho, generating zonal flow.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows visible smoke throughout the region. Thick smoke plumes come from fires and thinner smoke occupies the Salmon and surrounding valleys. Back trajectories intersect smoke and/or fire detects from Mustang and Halstead fires. Surface trajectories indicate advection from the valleys to the south of Salmon, while the 500 m trajectories intersect smoke in the highlands to the north of Salmon. Hourly trace shows sustained elevated concentrations from early to late morning and a significant rise with winds from the NW and N 1500 – 1700 and stable conditions by 1600 trap the smoke so that values remain high overnight.
	Alternative Hypotheses:	No prescribed or crop residue burning occurred in Lemhi Co. Temperature too warm for RWC. (See Sec. 4)
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 33.3 to 43.4 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	DEQ issued air quality forecast notifying public of possible wildfire smoke impacts.



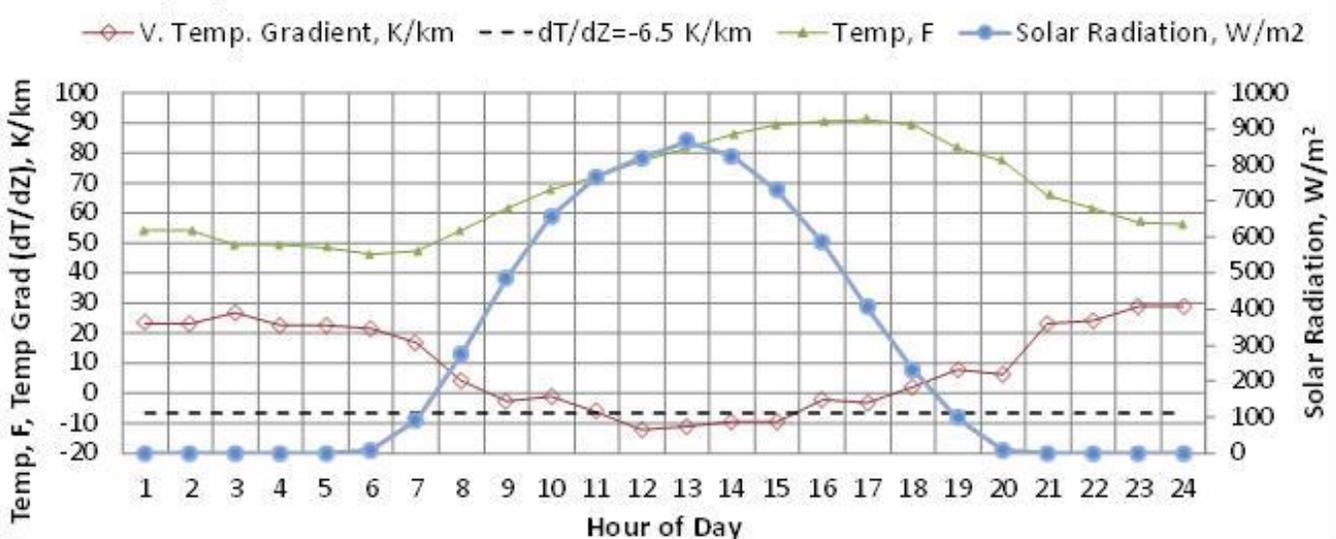
8/12/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



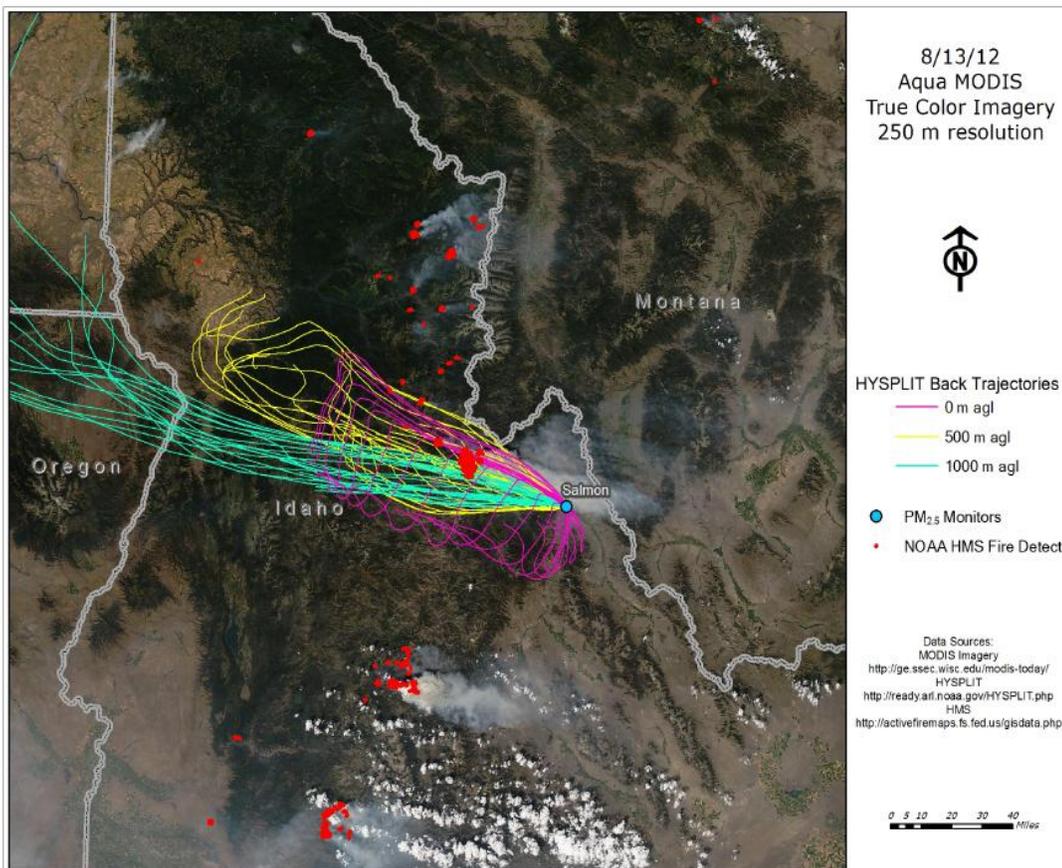
8/12/2012 Wind Speed and Wind Direction



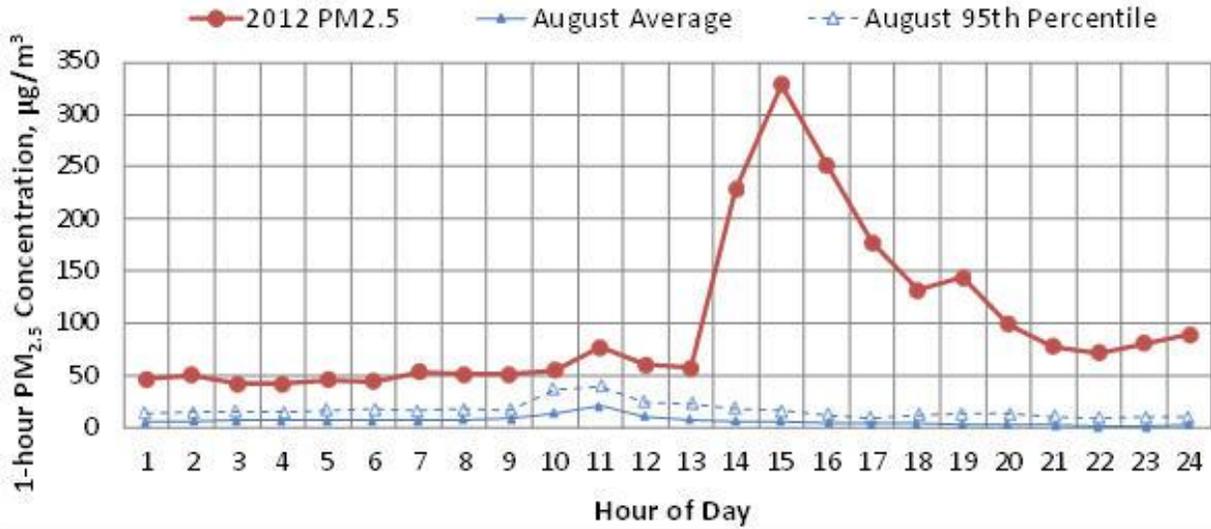
8/12/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



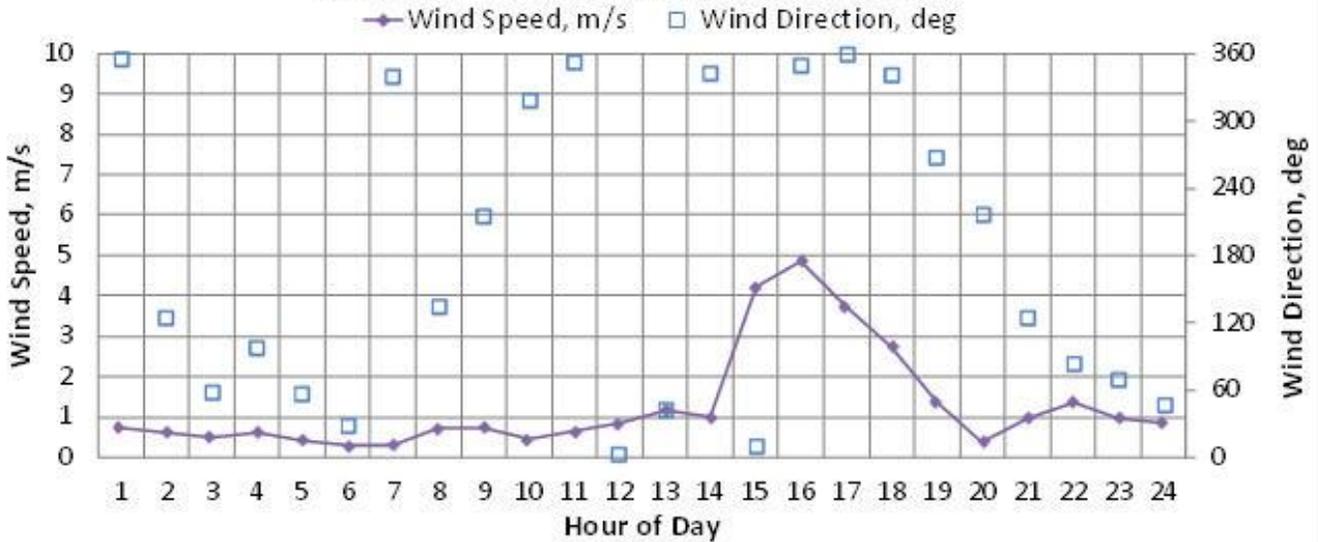
Summary of EER Evidence for Salmon Monitor Value, 96.5 $\mu\text{g}/\text{m}^3$ on 8-13-2012, AQS #16-059-0004 POC 3		
Also included in this request, 24-hour FRM Value (filter based): 85 $\mu\text{g}/\text{m}^3$, AQS #16-059-0004 POC 1		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1 and 2 (See Sec. 4)
	Weather Conditions:	CA low progresses north and brings west-northwest flow over Idaho.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows the Mustang Complex plume directly intersecting the Salmon area and valley north of Salmon. Thick smoke occupies the mountains to the north of Salmon. Back trajectories intersect smoke and/or fire detects from the Mustang Complex. Hourly trace shows sustained elevated concentrations around 50 $\mu\text{g}/\text{m}^3$ from early morning to midday and a massive ~325 $\mu\text{g}/\text{m}^3$ spike starting at 1 pm (satellite photo taken at 1:30 pm local time). Values remain high at night. Wind speed rises in concert with spike in concentrations and valley floor wind directions are northerly and northwesterly carrying trapped smoke into Salmon all afternoon.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 80.6 to 90.7 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



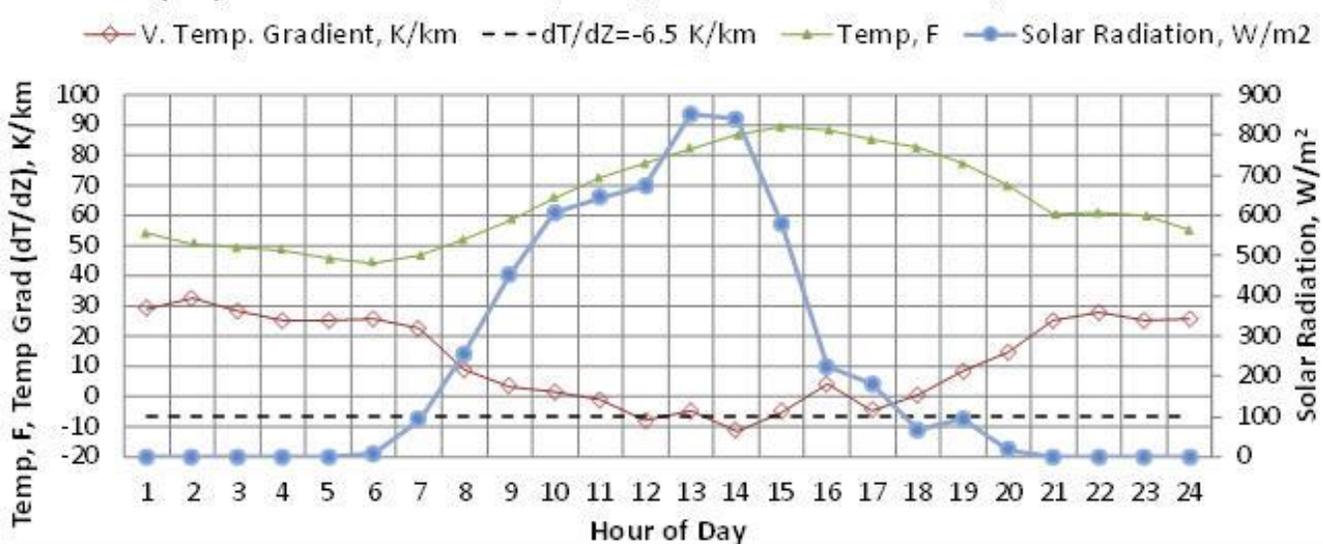
8/13/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



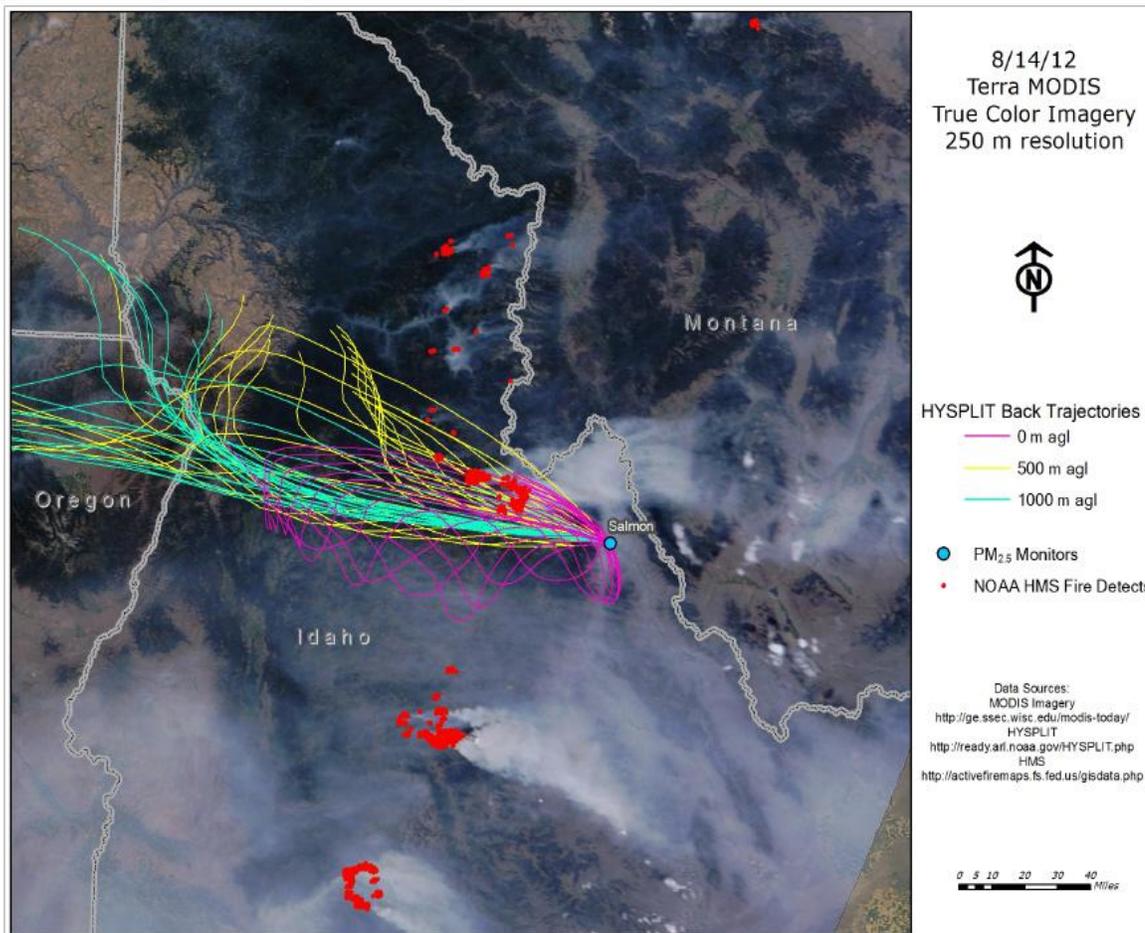
8/13/2012 Wind Speed and Wind Direction



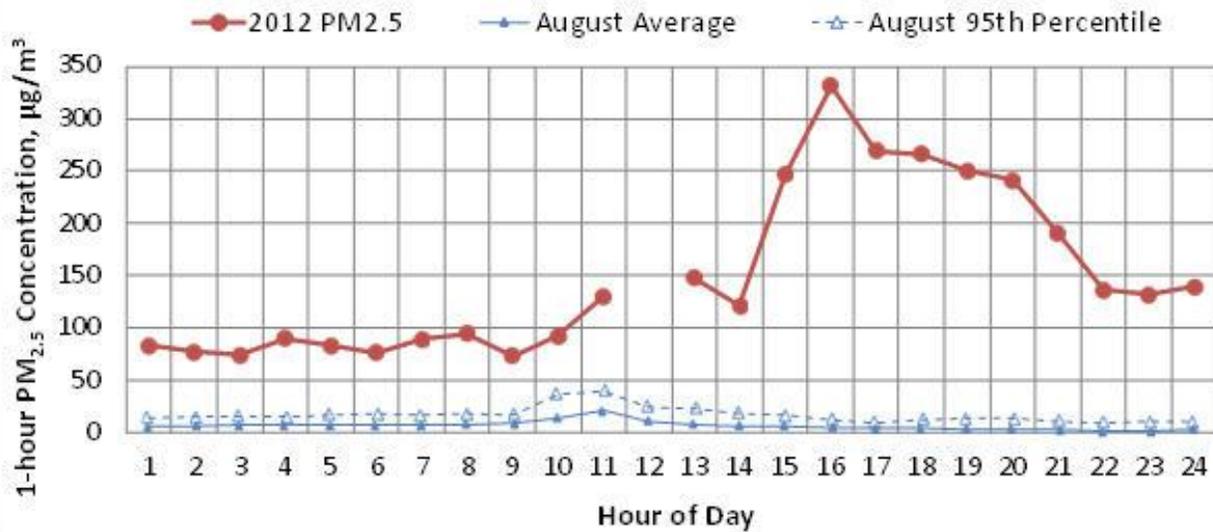
8/13/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



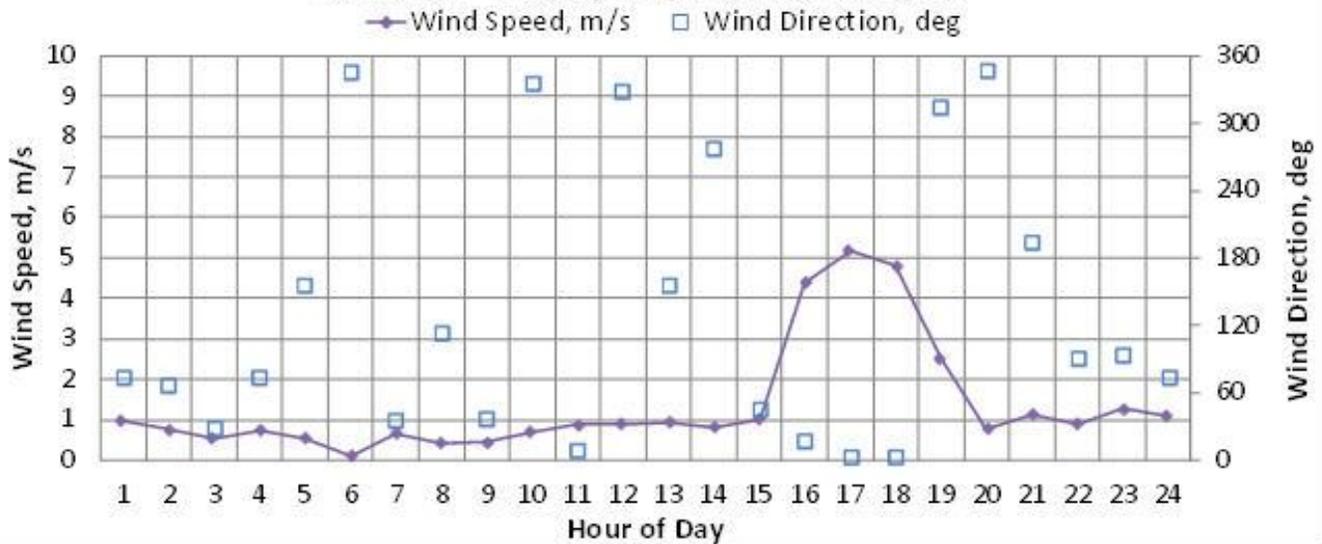
Summary of EER Evidence for Salmon Monitor Value, 147 $\mu\text{g}/\text{m}^3$ on 8-14-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3 (See Sec. 4)
	Weather Conditions:	Slight weakening of ridge provides zonal flow across Idaho.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows thick smoke north and south of Salmon and throughout southern Idaho. Smoke is visible in Salmon. Back trajectories intersect smoke and/or fire detects from the Mustang Complex. Hourly trace is similar to previous day, showing sustained elevated concentrations from early morning to midday and a massive spike in the afternoon. Values remain high at night. Wind speed rises in concert with spike to ~340 $\mu\text{g}/\text{m}^3$. Wind directions are northerly, indicating smoke in the valley flow from the heavily impacted valley to the north.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 131.1 to 141.2 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



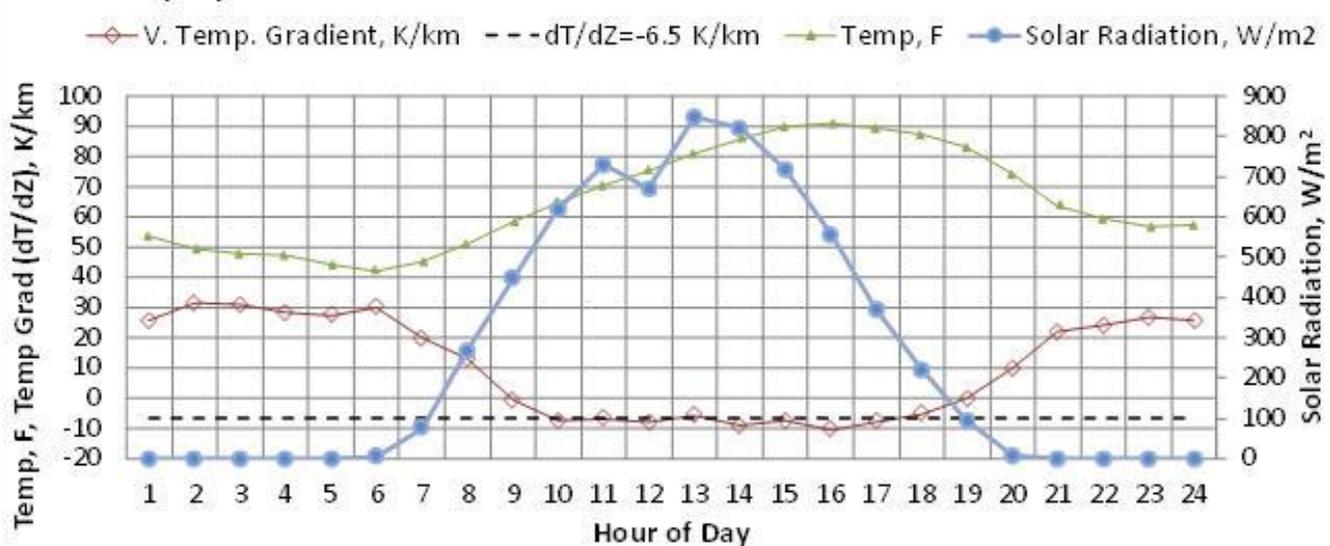
8/14/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



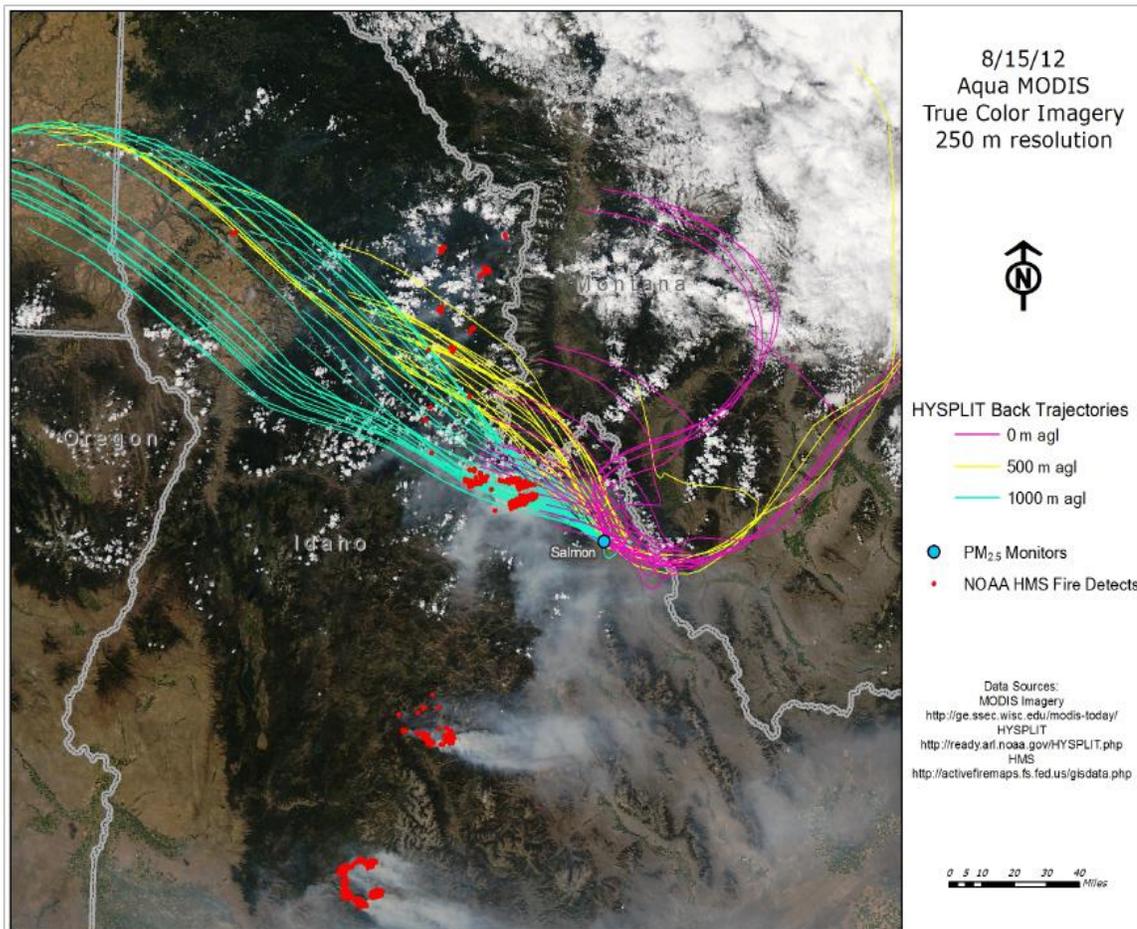
8/14/2012 Wind Speed and Wind Direction



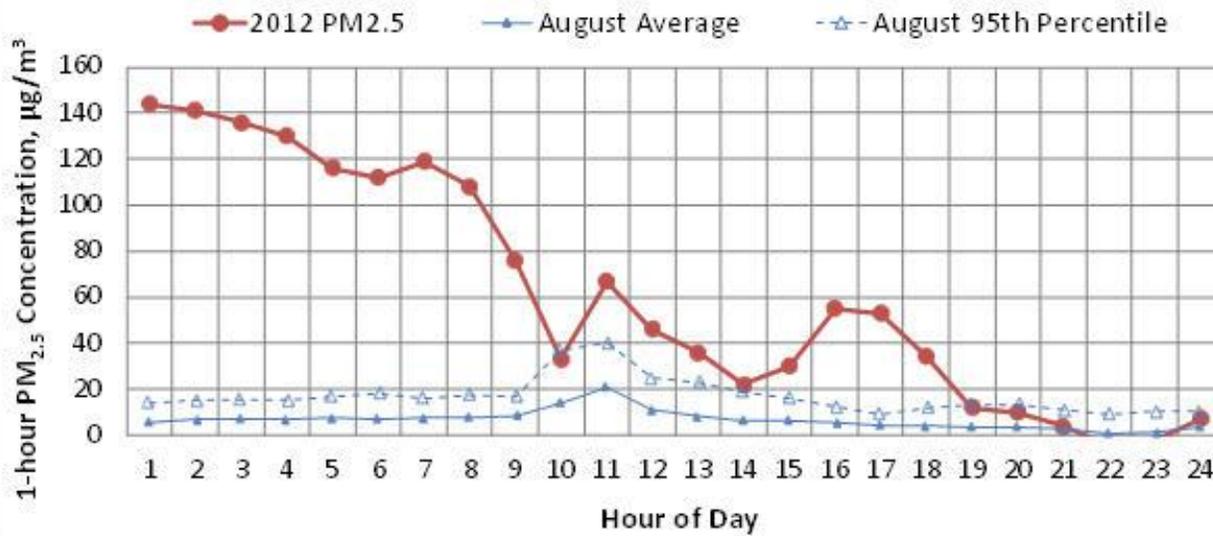
8/14/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



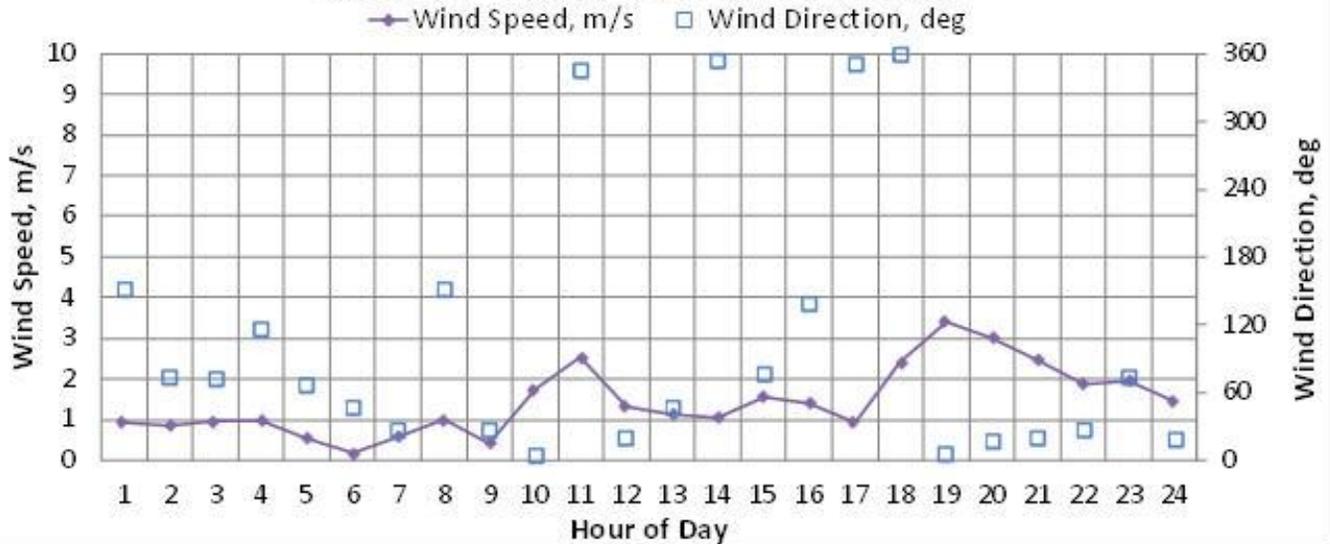
Summary of EER Evidence for Salmon Monitor Value, 67.3 $\mu\text{g}/\text{m}^3$ on 8-15-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3 (See Sec. 4)
	Weather Conditions:	Weak Rex block develops offshore with minimal confluence over Idaho while ridge provides greater influence and northwest flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows thick smoke in Salmon and surrounding valleys. Back trajectories intersect smoke and/or fire detects from the Mustang and Powell SBW Complexes. Hourly trace shows very high $\text{PM}_{2.5}$ in the early morning, trapped by stable air, from the previous day, declining throughout the day, interrupted by two spikes at 1100 and 1600 - 1700.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 51.4 to 61.5 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and App D	Notification of Stage 1 AQA advises residents of protective actions.



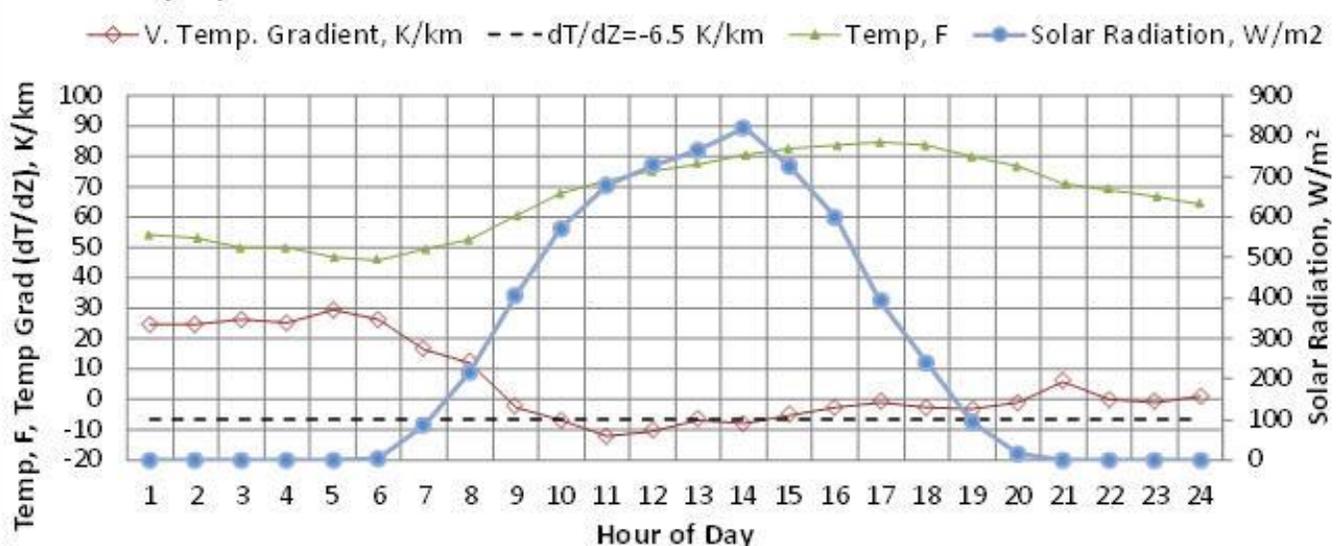
8/15/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



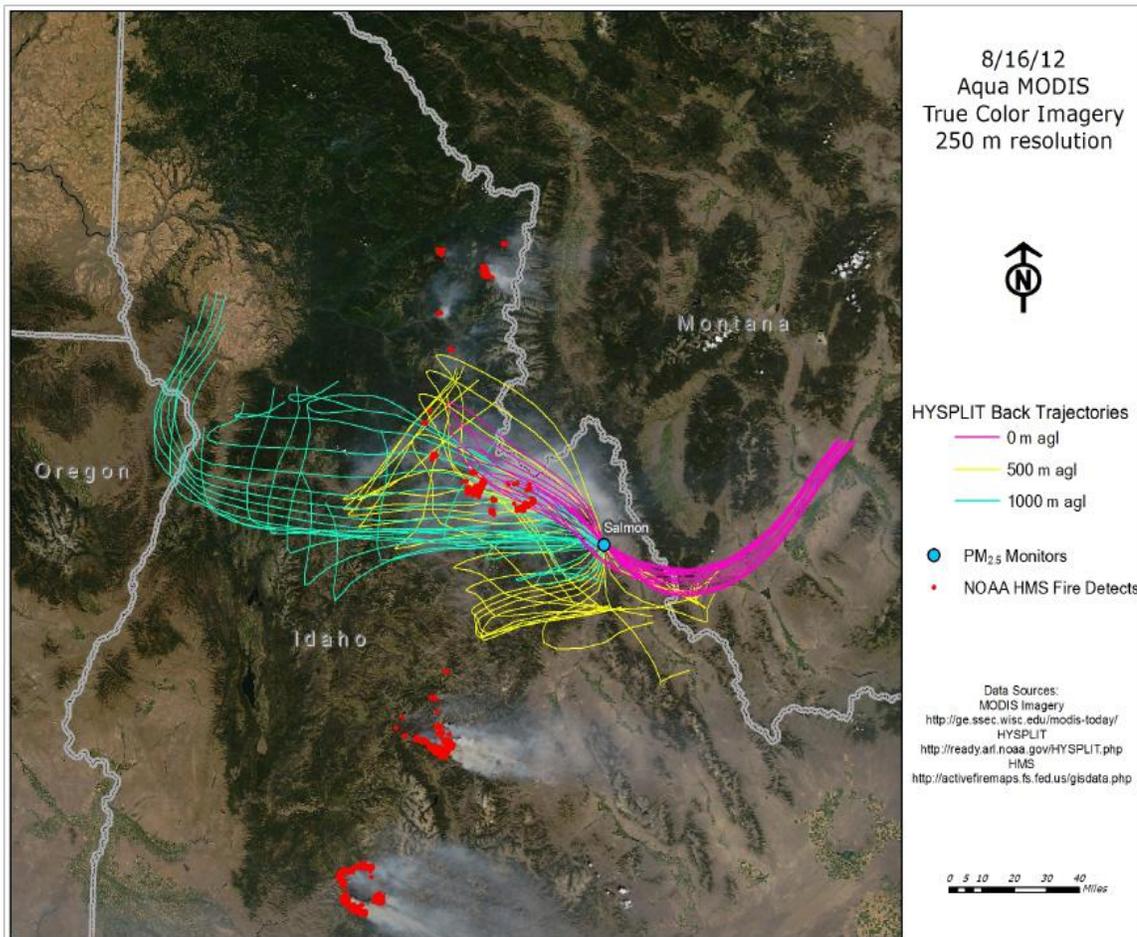
8/15/2012 Wind Speed and Wind Direction



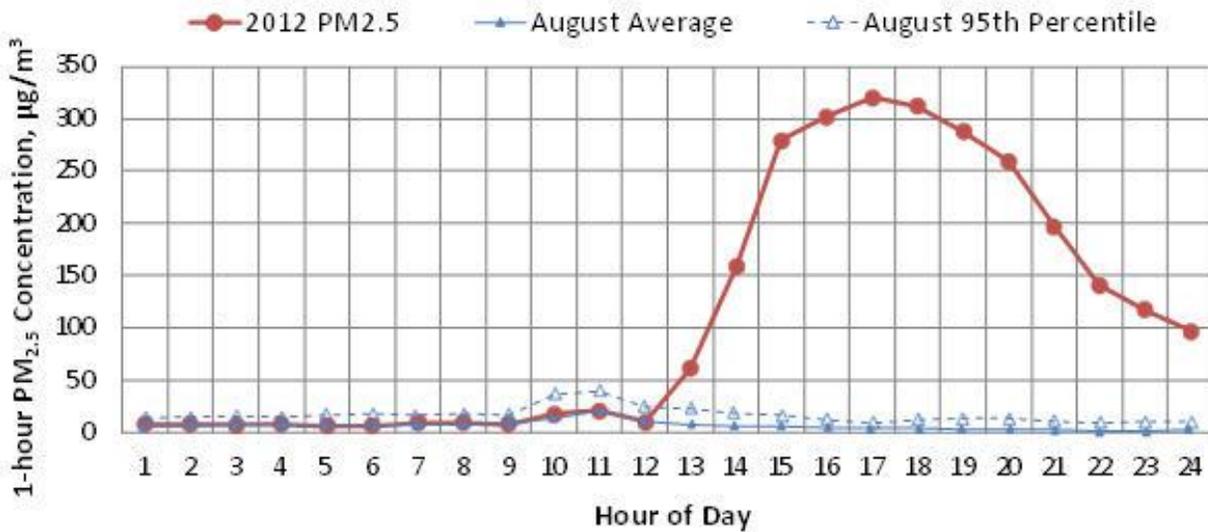
8/15/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



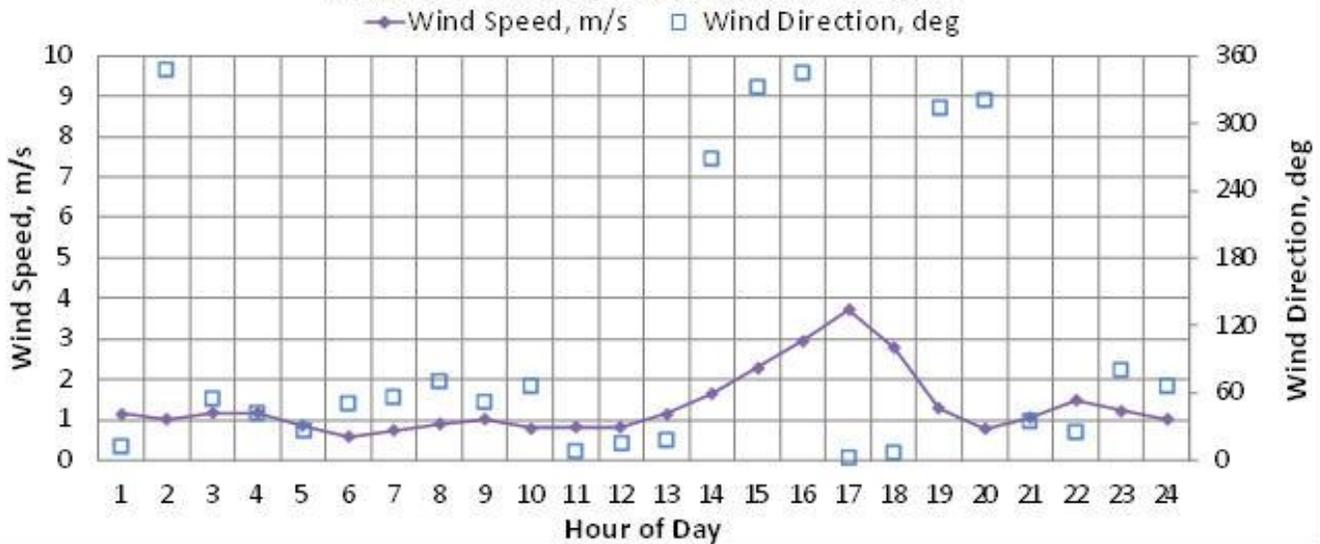
Summary of EER Evidence for Salmon Monitor Value, 106.5 $\mu\text{g}/\text{m}^3$ on 8-16-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Low offshore low forces ridge to amplify and generate weak northwest winds over Idaho.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows heavy smoke plumes from Mustang and Halstead blowing southeast. Back trajectories intersect smoke and/or fire detects from the Mustang and Powell SBW Complexes. Hourly trace shows Salmon inundated with smoke after noon, when the wind switches to a northwesterly flow. Concentrations each 300 $\mu\text{g}/\text{m}^3$ and remain above 100 $\mu\text{g}/\text{m}^3$ for the rest of the day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 90.6 to 100.7 $\mu\text{g}/\text{m}^3$. We conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



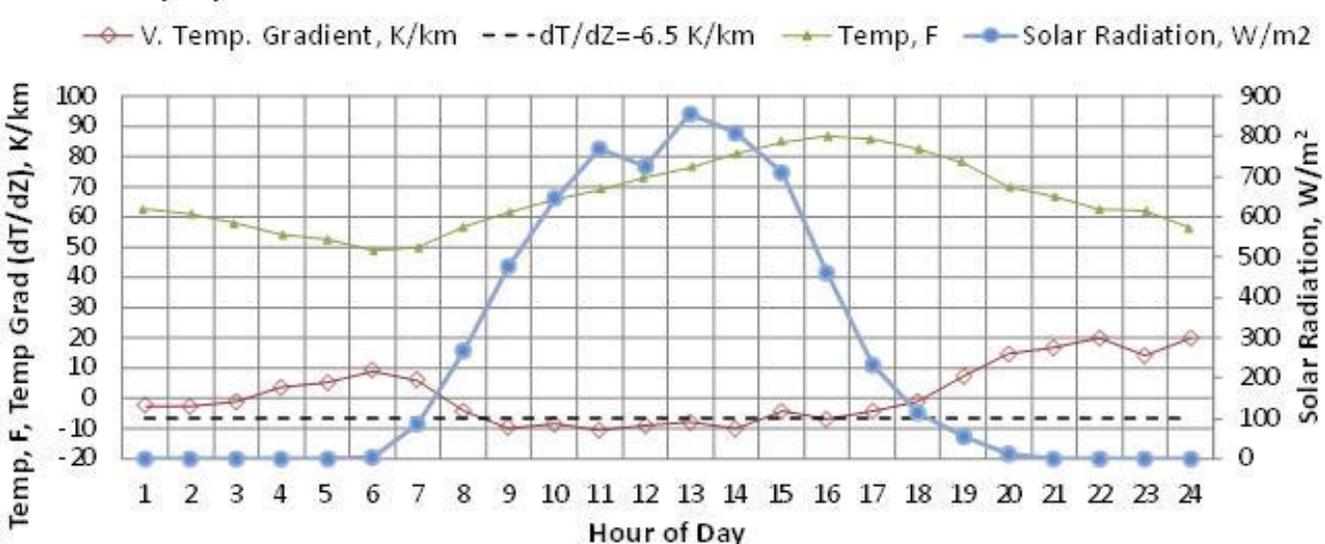
8/16/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



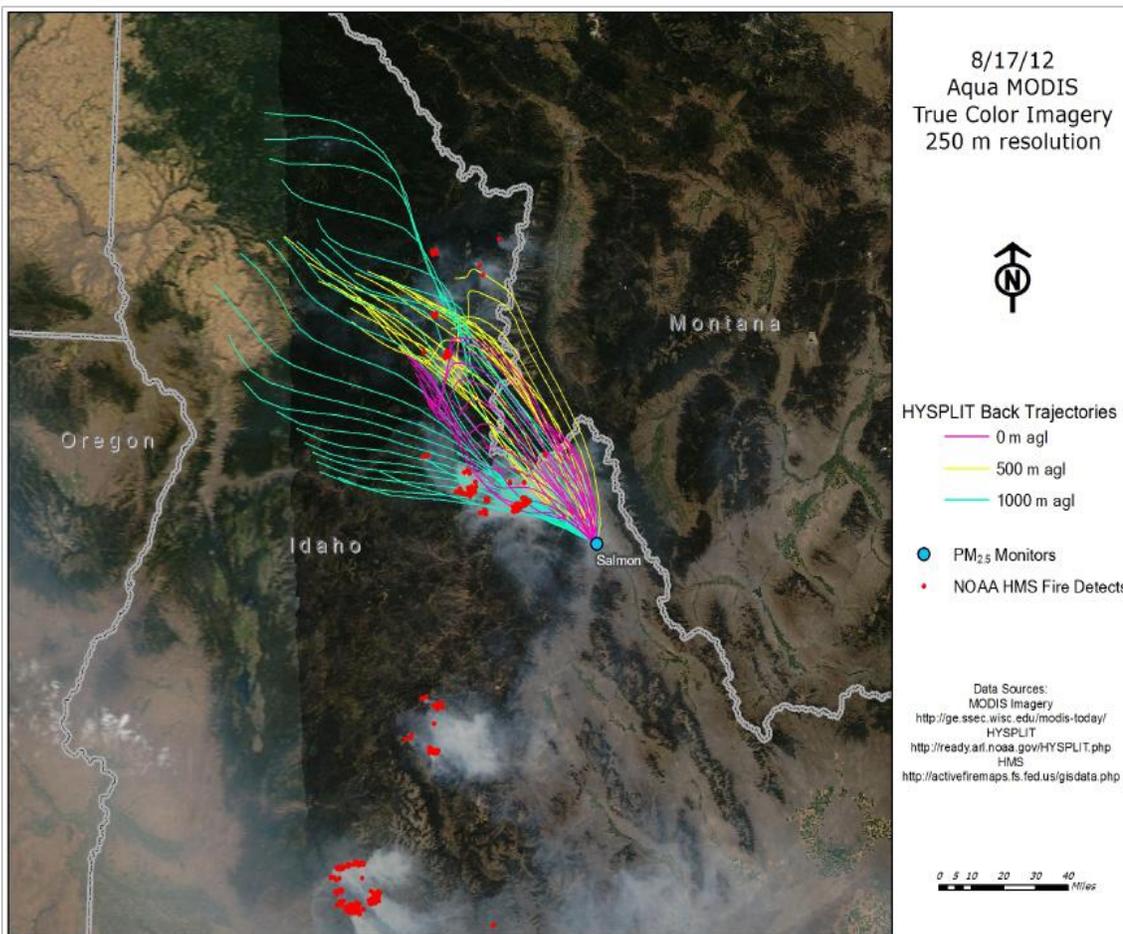
8/16/2012 Wind Speed and Wind Direction



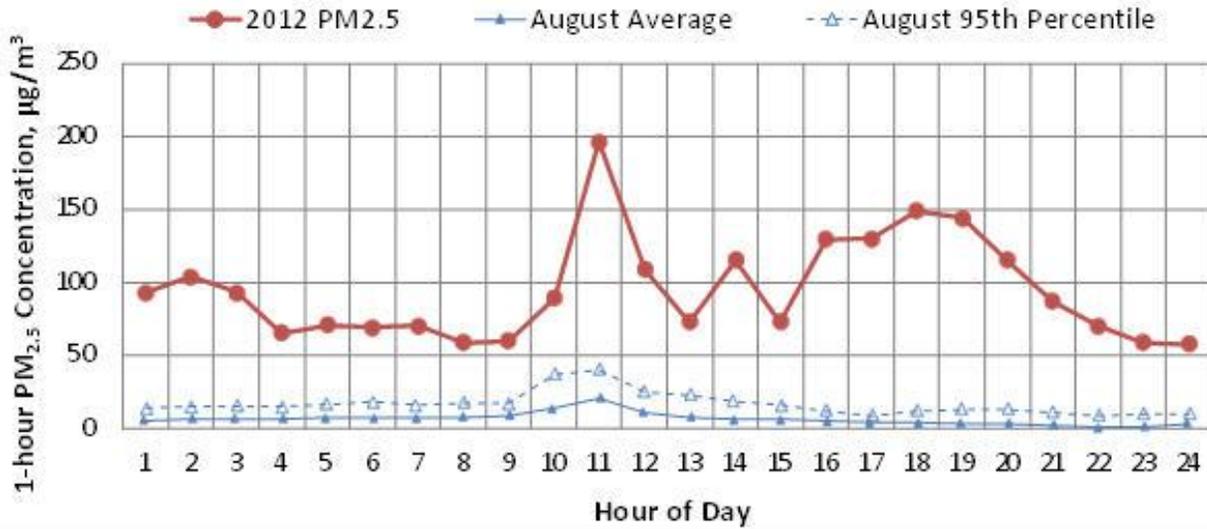
8/16/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



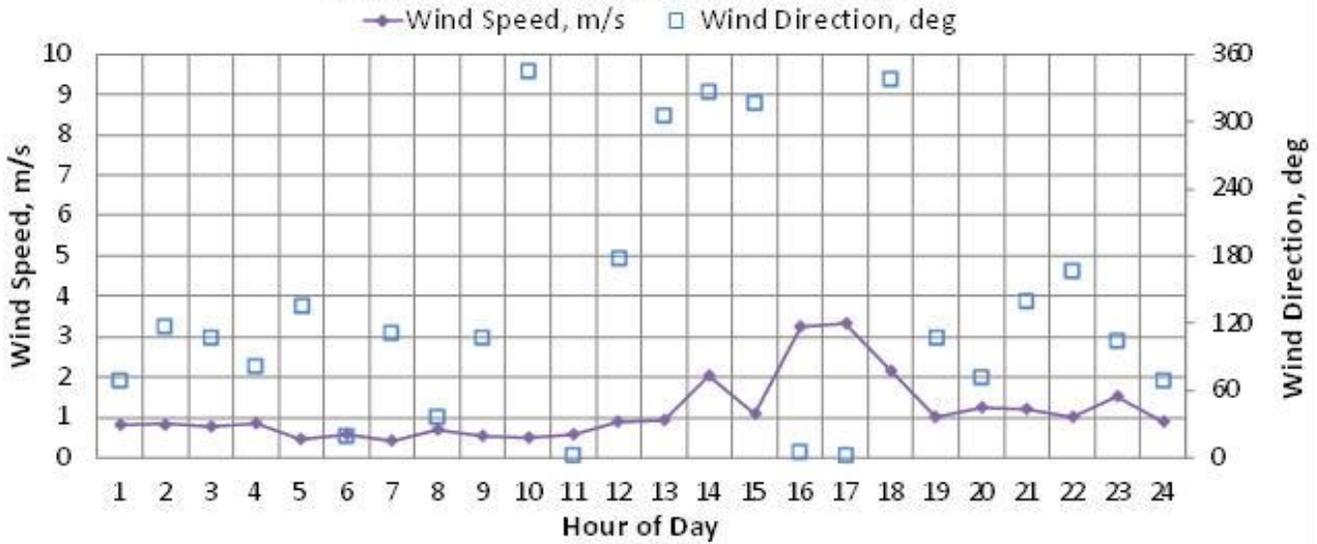
Summary of EER Evidence for Salmon Monitor Value, 96.6 $\mu\text{g}/\text{m}^3$ on 8-17-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	High develops over S. NV with ridge axes located along the Canadian Rockies and Cascade Crest, which generates NW flow over Idaho.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows visible smoke emanating from all local fires and present in the valley north and south of Salmon. Back trajectories intersect smoke and/or fire detects from the Mustang and Powell SBW Complexes. Hourly trace shows sustained high values at night (am and pm) and a spike ~200 $\mu\text{g}/\text{m}^3$ at 1100 and a broader peak ~150 $\mu\text{g}/\text{m}^3$ 1800 - 1900 both beginning with winds from the north. Concentrations remain above 50 $\mu\text{g}/\text{m}^3$ for the 24-hour period.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 80.7 to 90.8 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



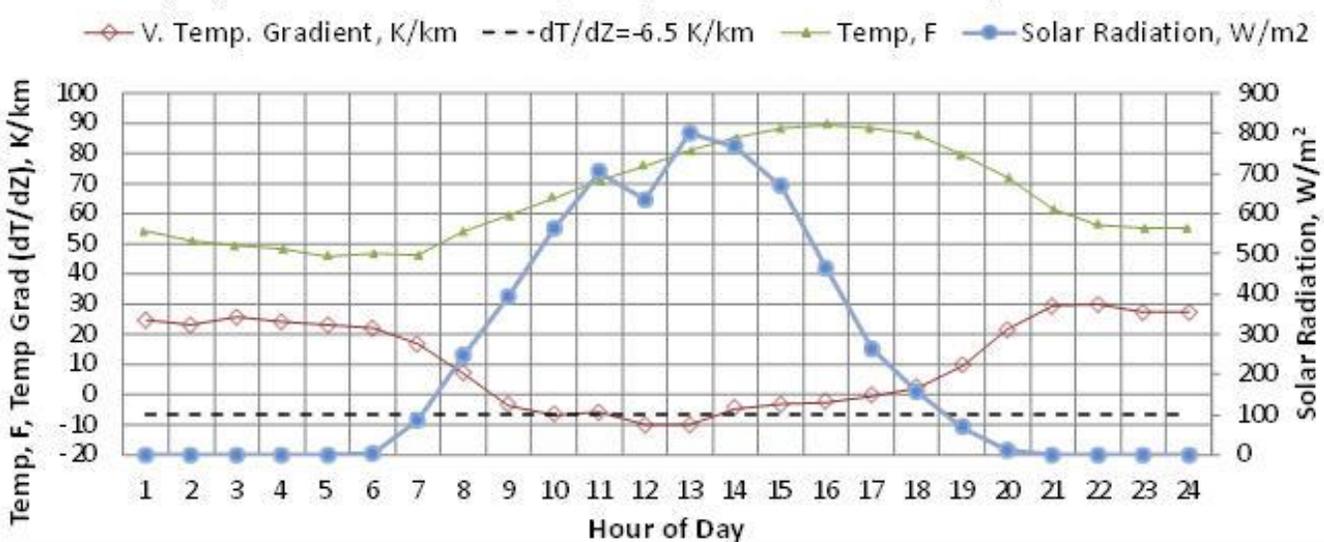
8/17/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



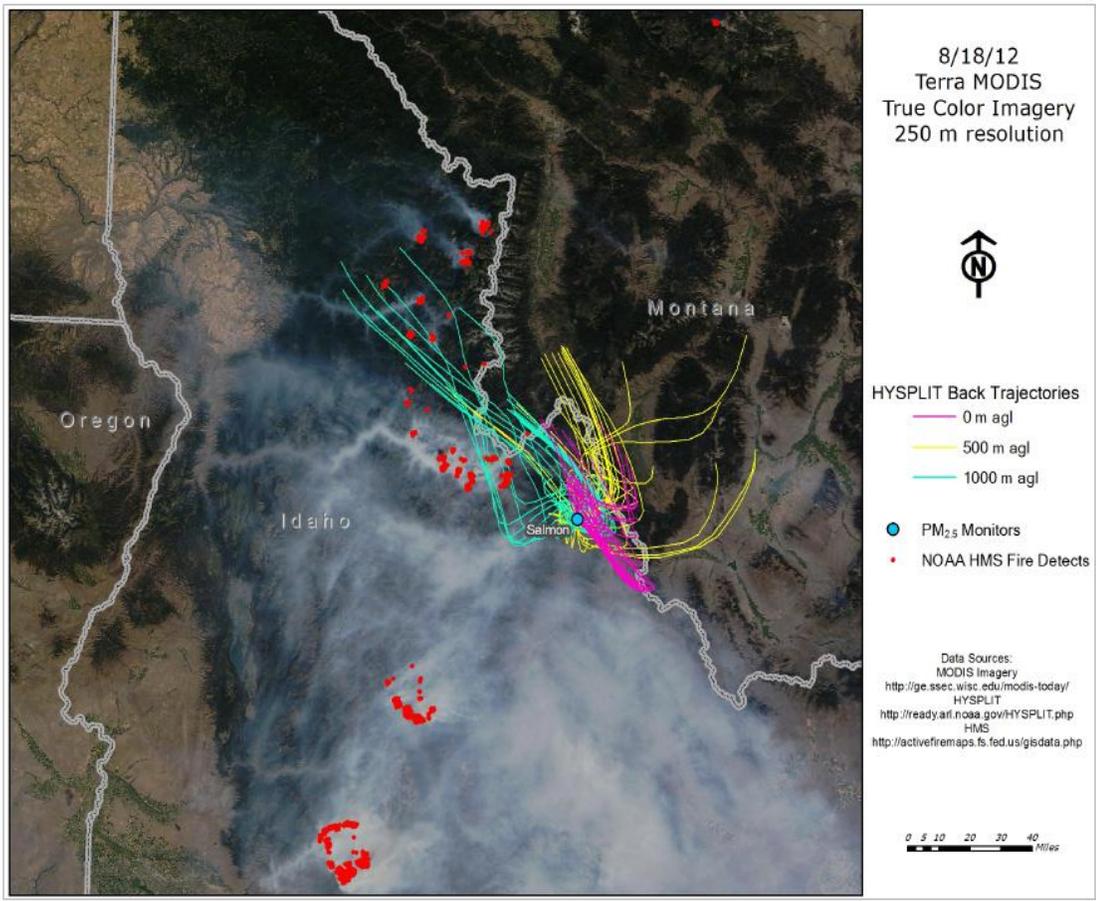
8/17/2012 Wind Speed and Wind Direction



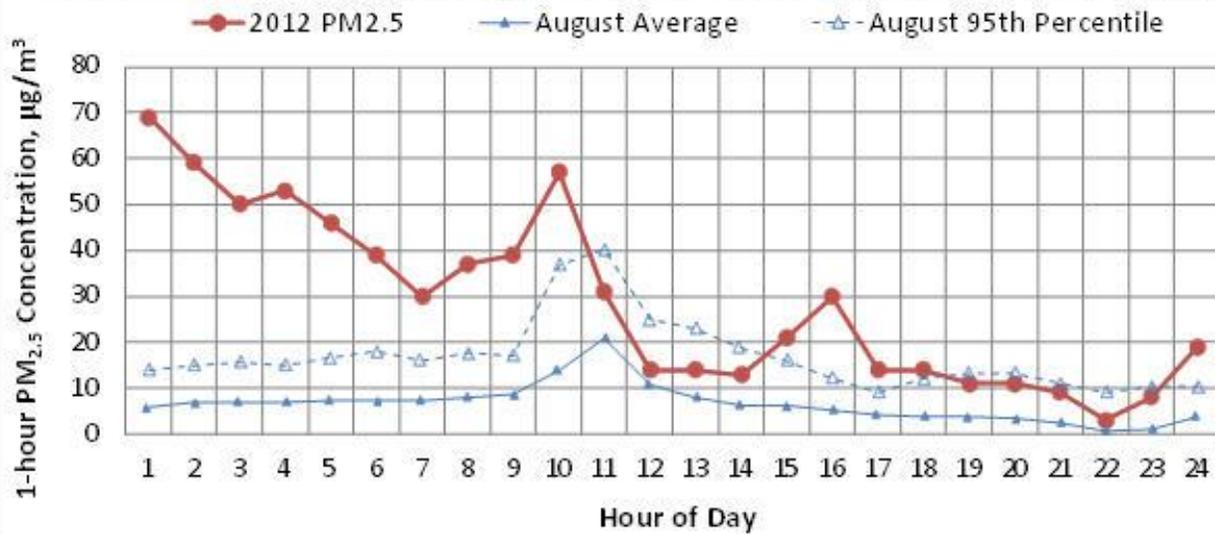
8/17/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



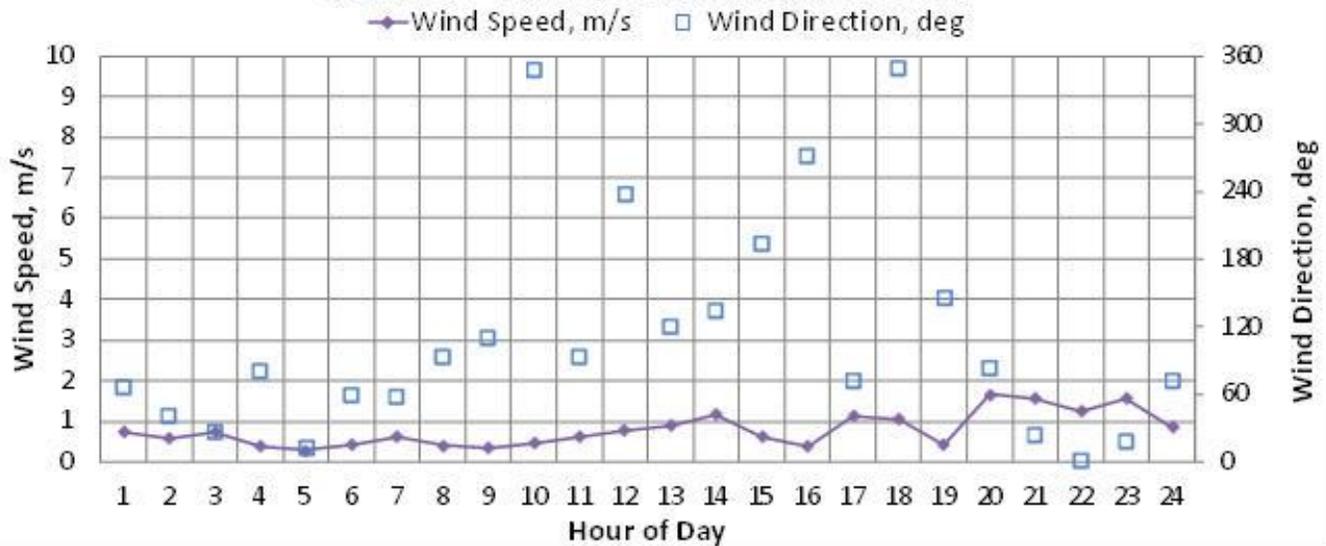
Summary of EER Evidence for Salmon Monitor Value, 30.4 $\mu\text{g}/\text{m}^3$ on 8-18-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; 95 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3 (See Sec. 4)
	Weather Conditions:	High strengthens and extends north to the Idaho Panhandle. Low wind speeds throughout atmosphere over most of Idaho with 500mb wind speeds under 10 kts.
		Morning satellite image shows thick smoke obscuring surface details throughout central and southern Idaho. Smoke has drained into the Middle Fork of the Salmon River and the Clearwater River valleys. Back trajectories intersect smoke and/or fire detects from the Mustang and Powell SBW Complexes. Back trajectories travel short distances in 24-hour period, indicating a stagnant atmosphere. Hourly trace shows declining values from a high of 70 $\mu\text{g}/\text{m}^3$ at 0100, interspersed with spikes at 1000 and 1500 when winds are from the north and west to southwest, respectively.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 14.5 to 24.6 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



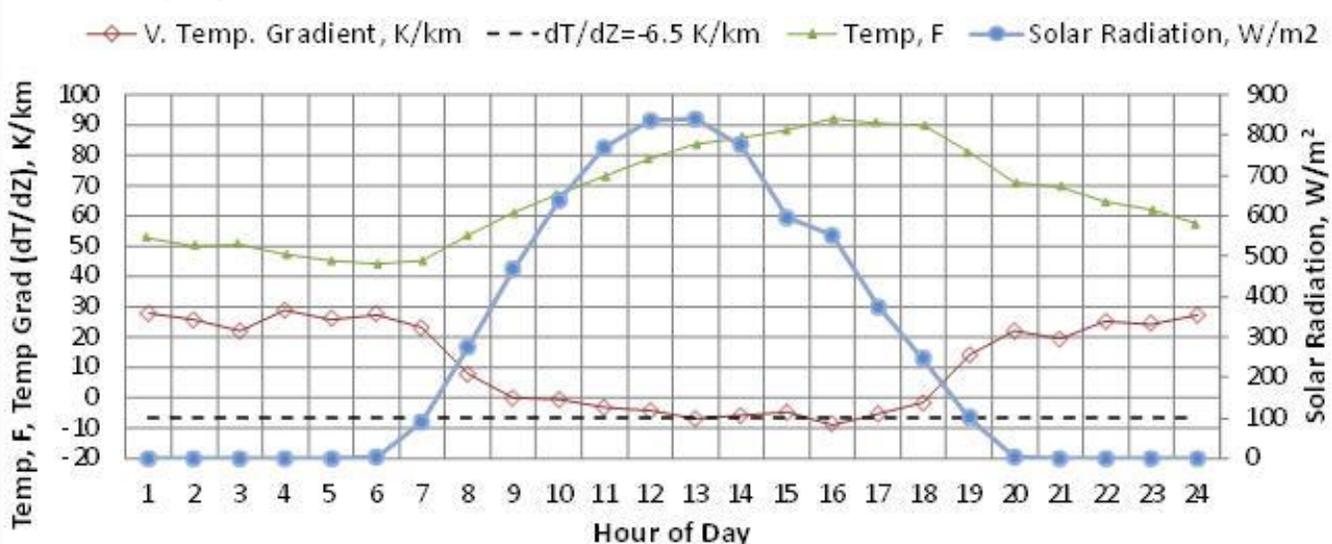
8/18/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



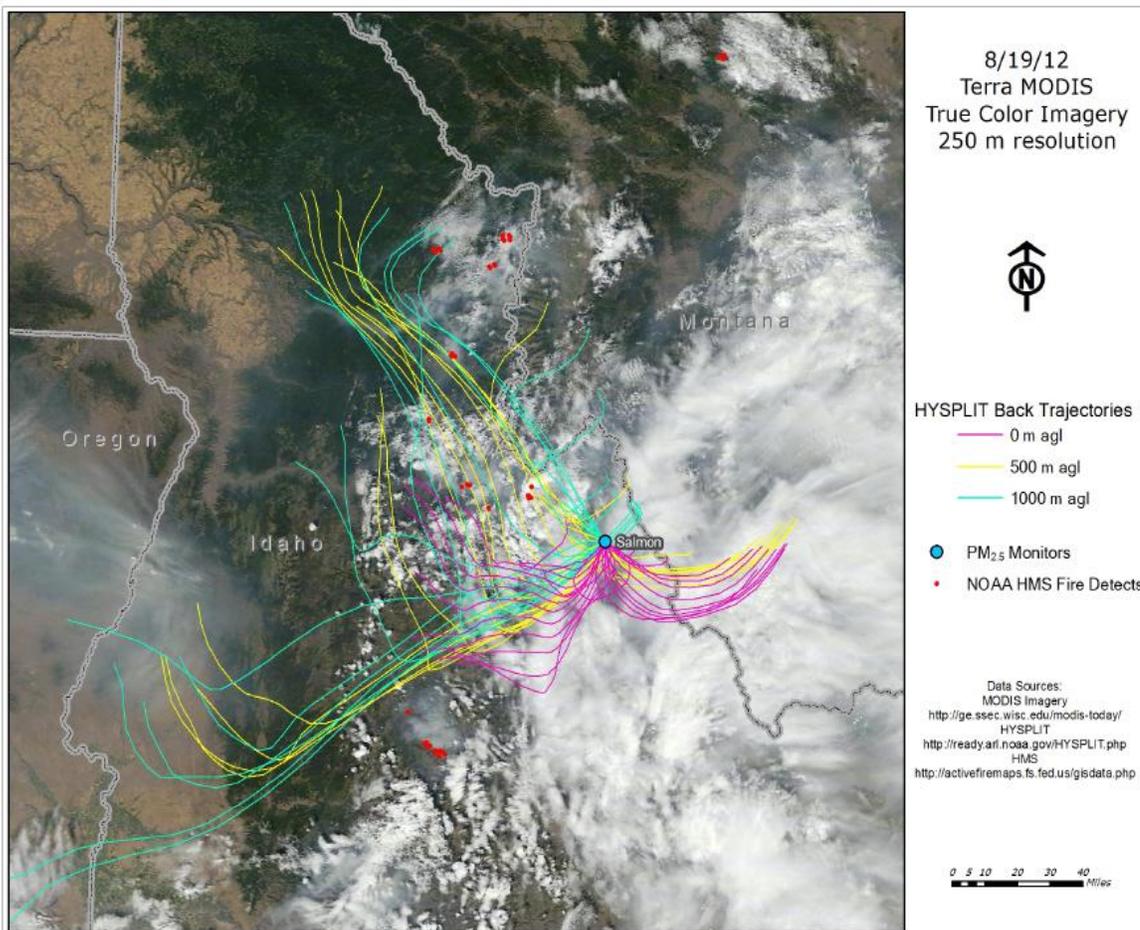
8/18/2012 Wind Speed and Wind Direction



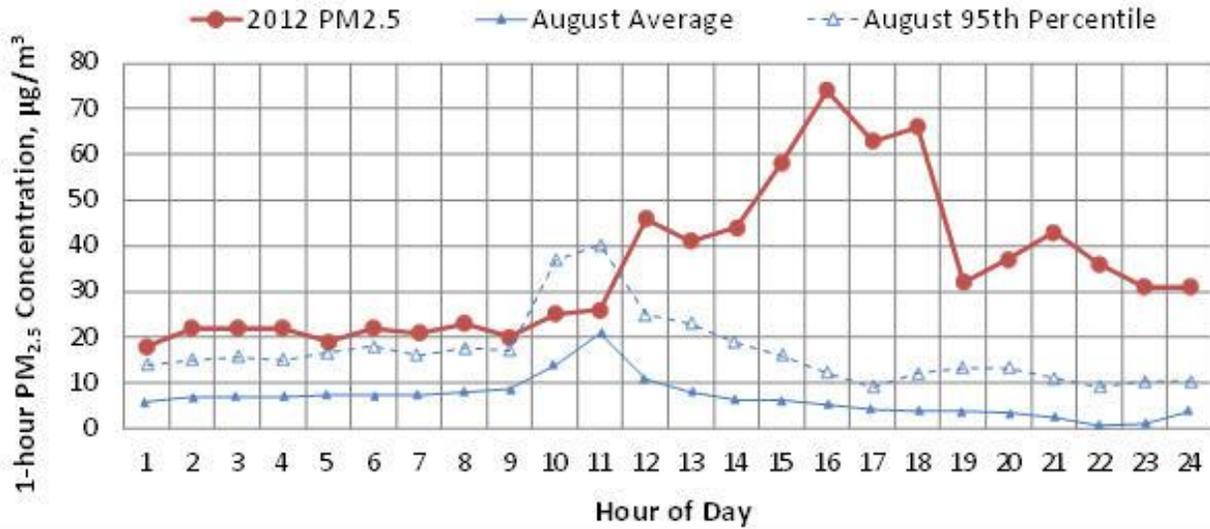
8/18/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



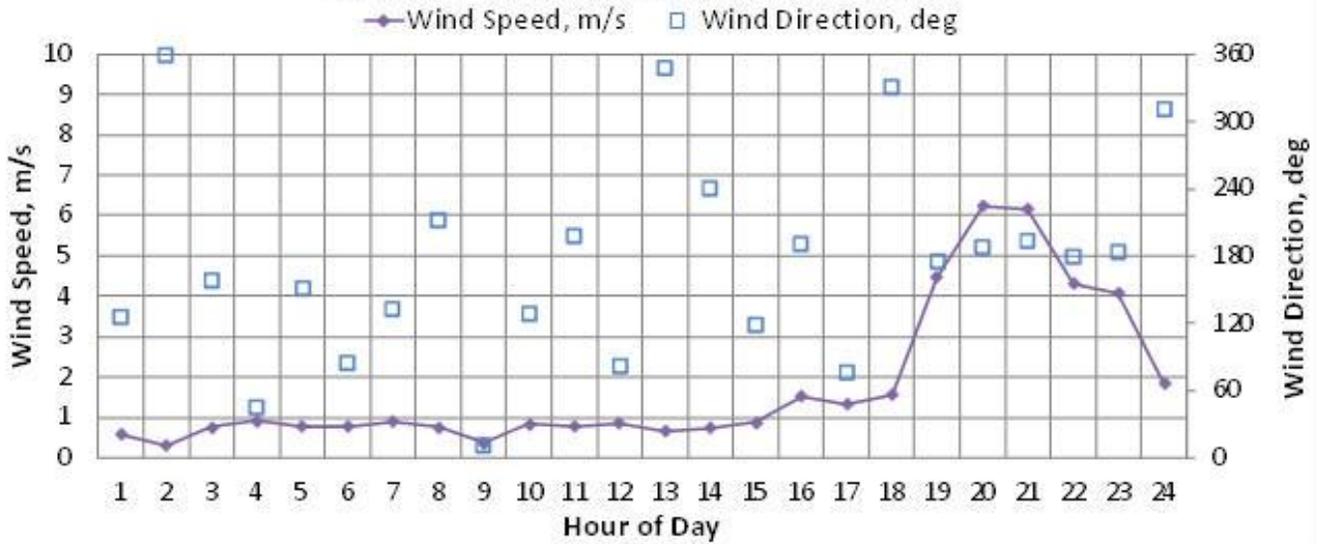
Summary of EER Evidence for Salmon Monitor Value, 34.5 $\mu\text{g}/\text{m}^3$ on 8-19-2012, AQS #16-059-0004 POC 3		
Also included in this request, 24-hour FRM Value (filter based): 31.2 $\mu\text{g}/\text{m}^3$, AQS #16-059-0004 POC 1		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; 97 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	High retreats slightly and ridge axis shifts to become centered over SE ID running from UT through the SE Highlands of Idaho and into Alberta.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows smoke mixed with cloud in the area of interest. Back trajectories intersect smoke and/or fire detects from the Halstead, Mustang, and Powell SBW fires. Hourly trace rises considerably, starting at noon with light and variable winds and concentrations remain above 30 $\mu\text{g}/\text{m}^3$ at midnight even though winds freshen to 6 m/s from the south, indicating a smoke filled valley that brings smoke from multiple directions.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 18.6 to 28.7 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



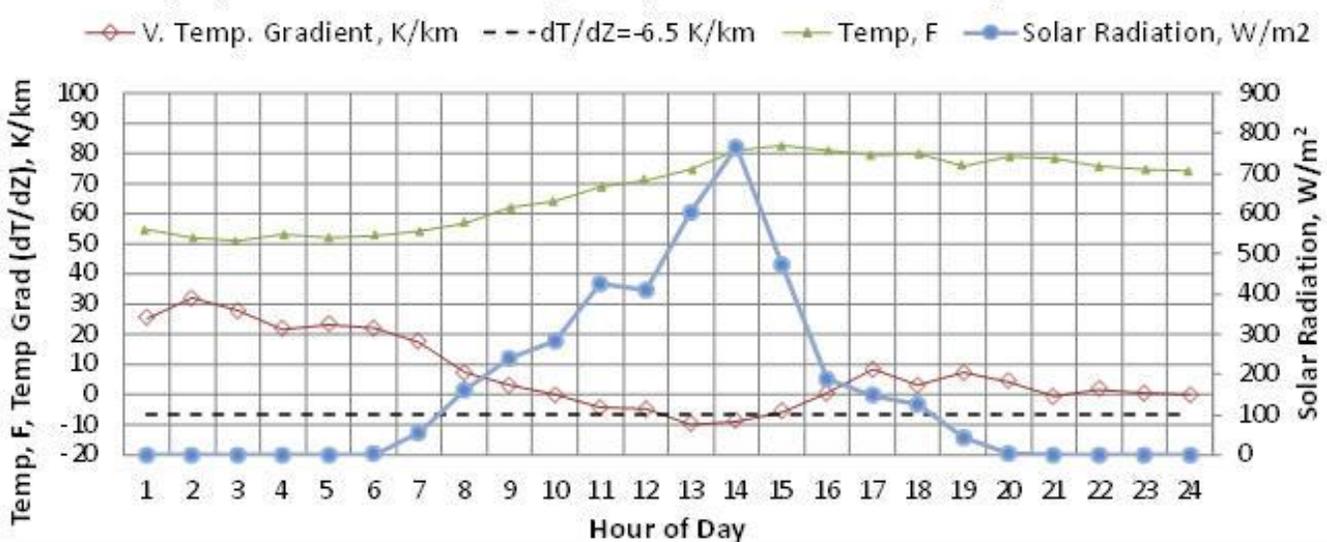
8/19/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



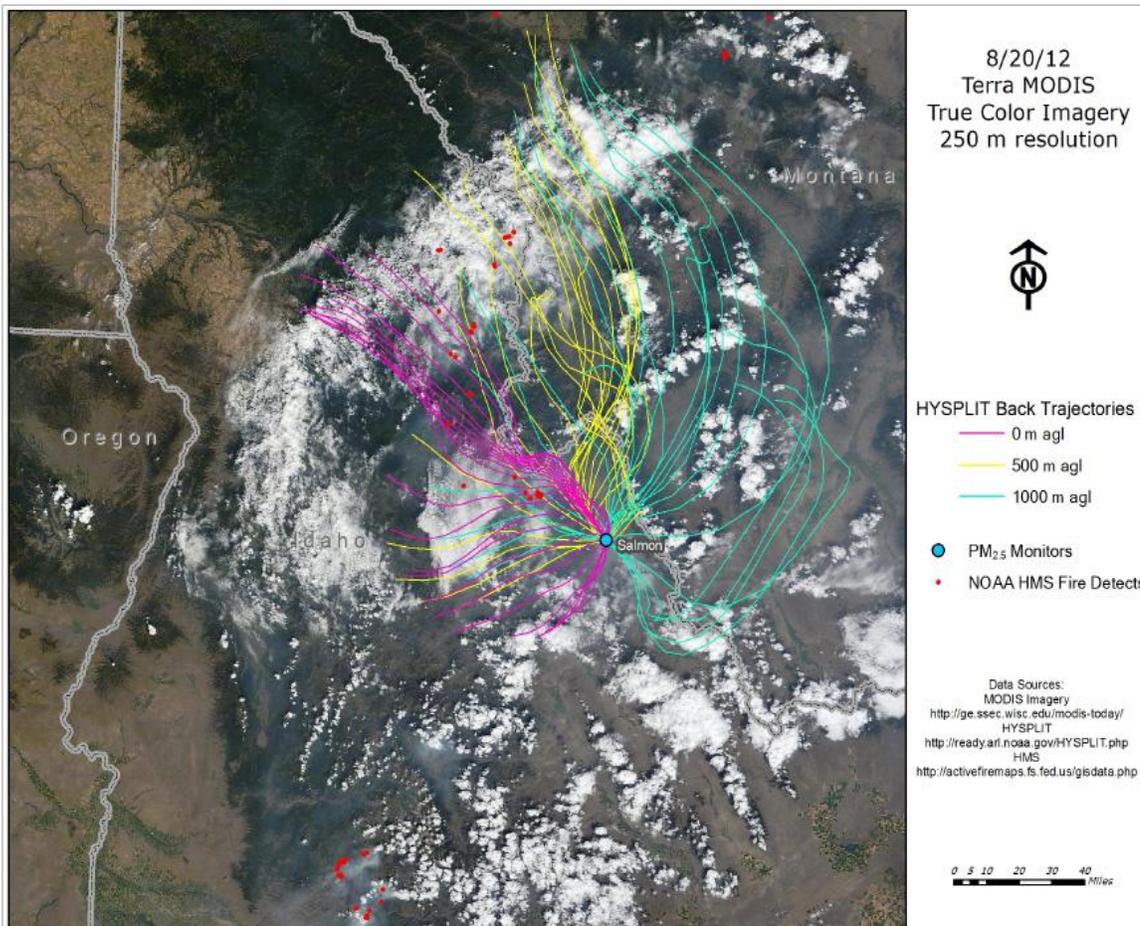
8/19/2012 Wind Speed and Wind Direction



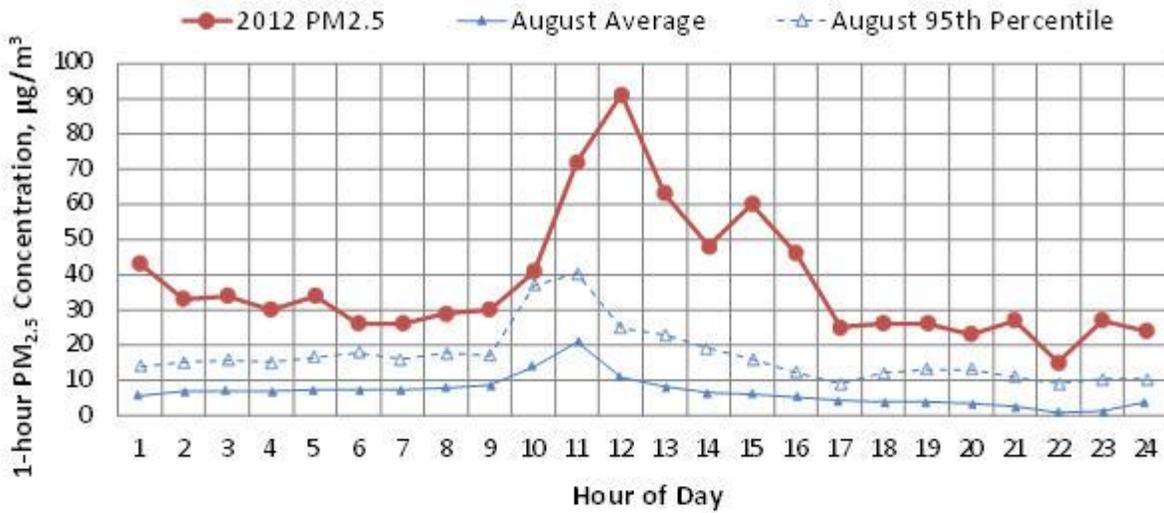
8/19/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



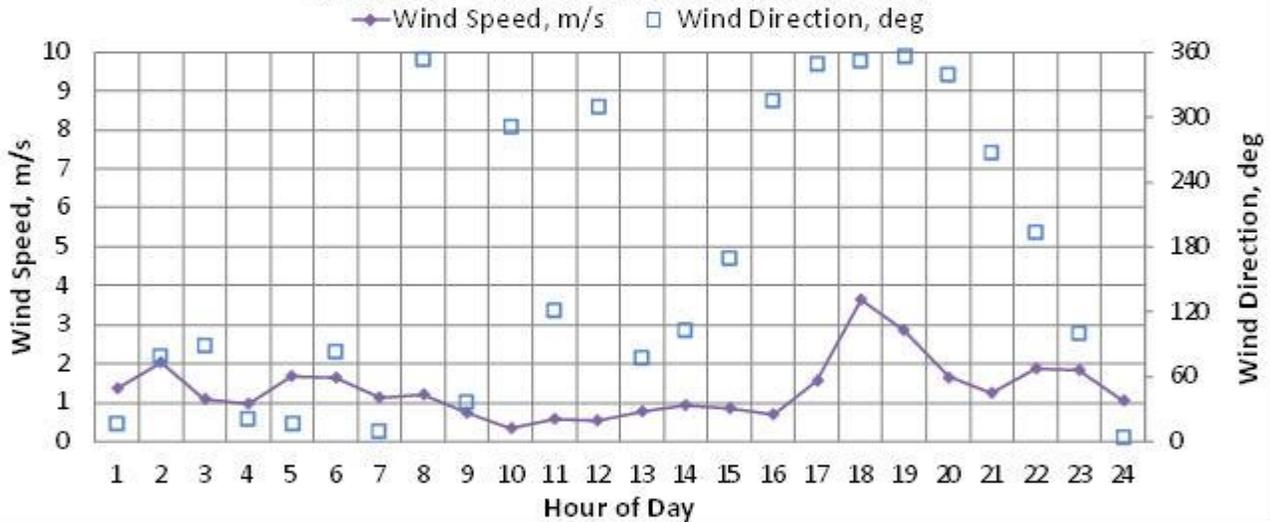
Summary of EER Evidence for Salmon Monitor Value, 37.7 $\mu\text{g}/\text{m}^3$ on 8-20-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; 98 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Weak pressure gradients over ID as ridge strengthens with variable wind direction, but downstream of ridge axis and thus, contains a northerly component.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Morning and afternoon satellite images show light smoke mixed with cloud in the valley around Salmon. Back trajectories intersect smoke and/or fire detects from the Mustang and Powell SBW fires. Hourly trace shows elevated concentrations through the day, with a significant rise midday.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 21.8 to 31.9 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



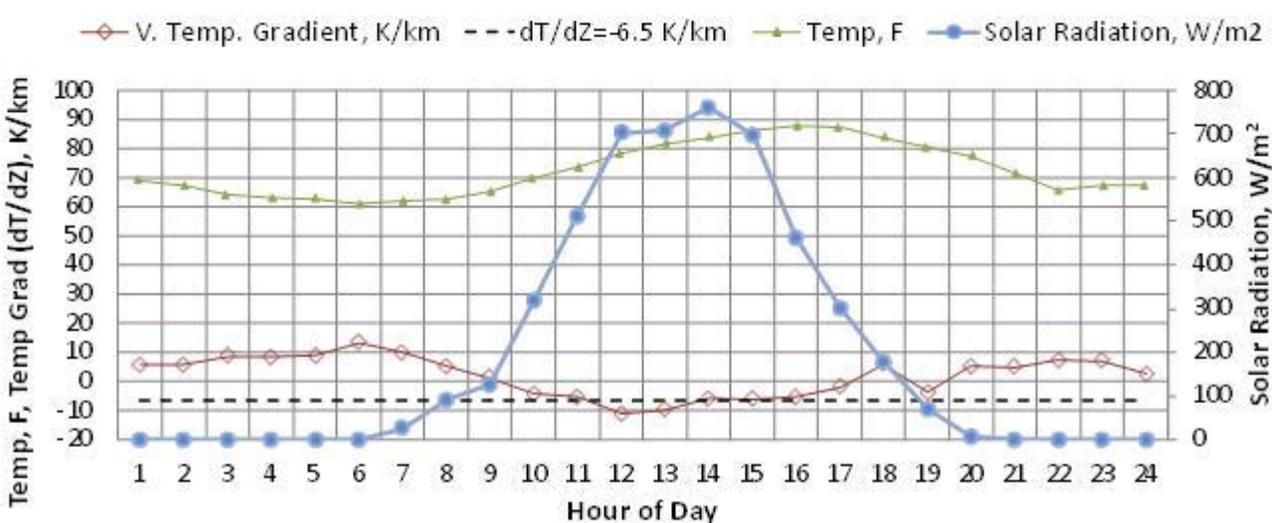
8/20/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



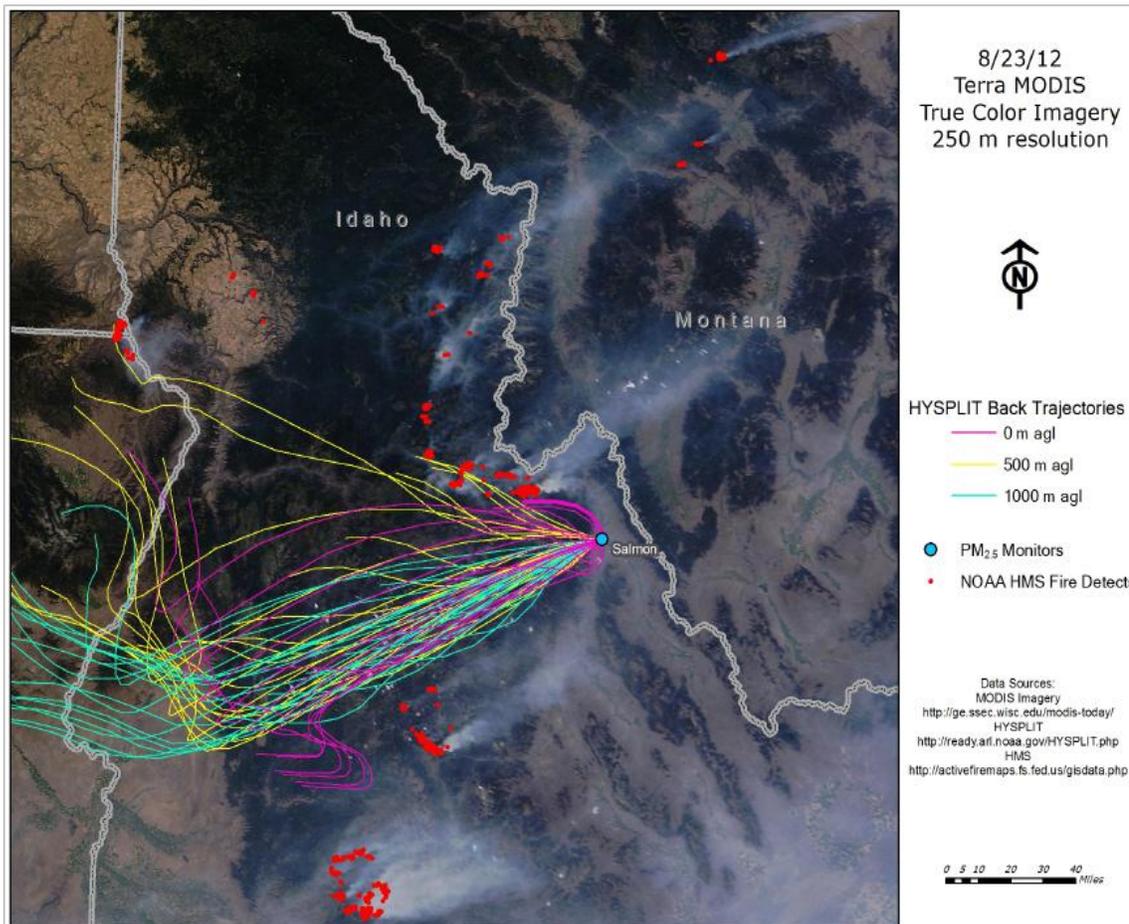
8/20/2012 Wind Speed and Wind Direction



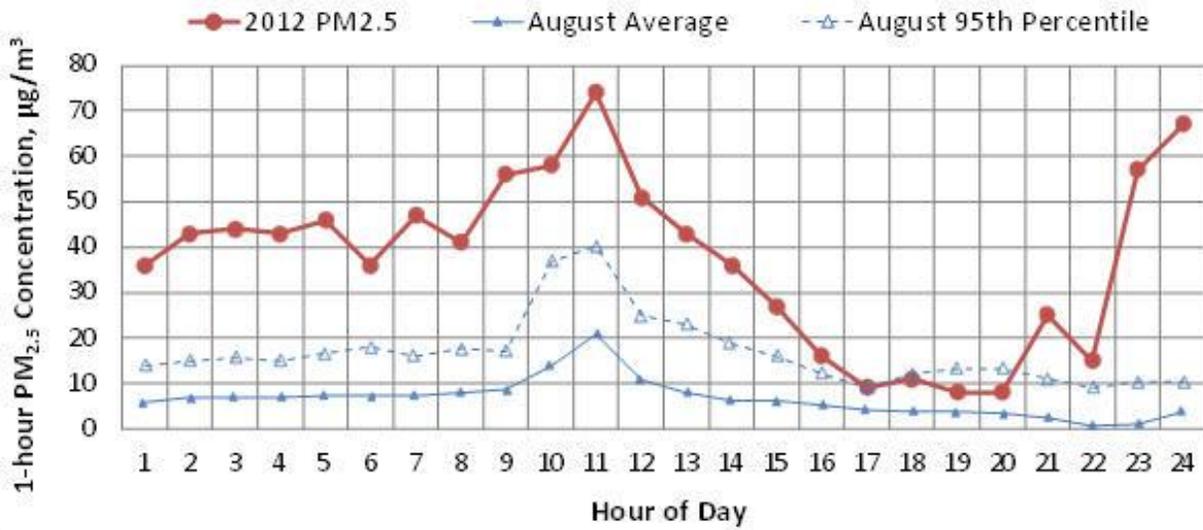
8/20/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



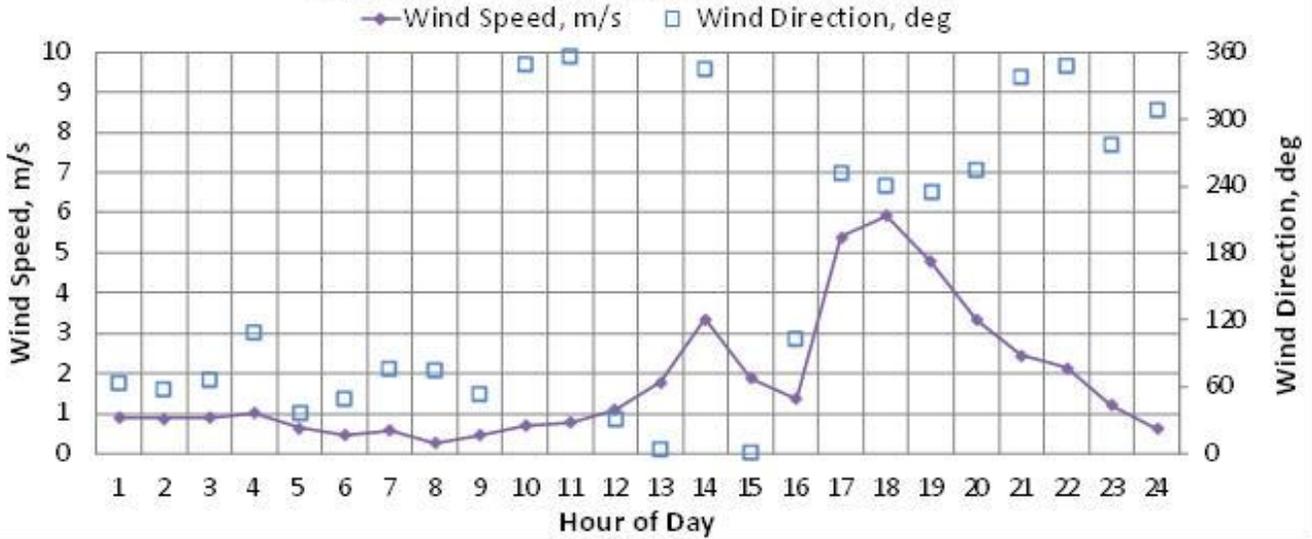
Summary of EER Evidence for Salmon Monitor Value, 35.9 $\mu\text{g}/\text{m}^3$ on 8-23-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; 98 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3 (See Sec. 4)
	Weather Conditions:	Shortwave further suppresses ridge and promotes west-southwest flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows fire plumes blowing northeast. Smoke from Halstead fumigates the upper Salmon River valley, and Mustang smoke fumigates the valley to the north of Salmon. Back trajectories intersect smoke and/or fire detects from the Mustang Complex. Hourly trace shows high and steady morning concentrations, peaking above 70 $\mu\text{g}/\text{m}^3$ at 1100 with northerly valley winds. The valley clears in the afternoon, but smoke moves in again after 2000 with NW winds.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 20 to 30.1 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



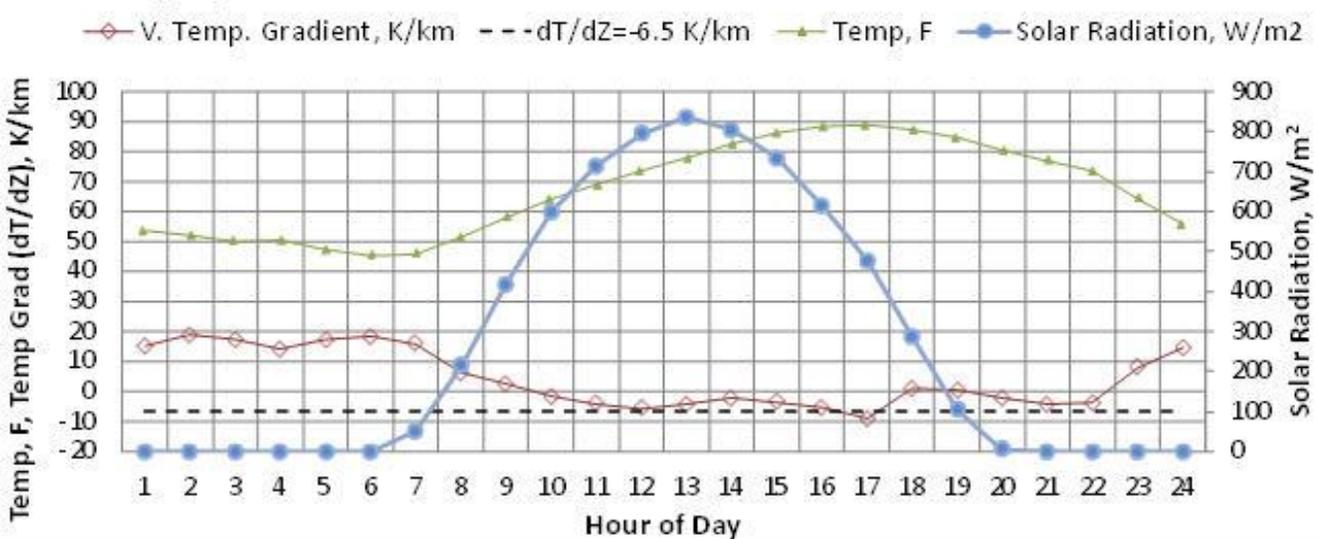
8/23/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



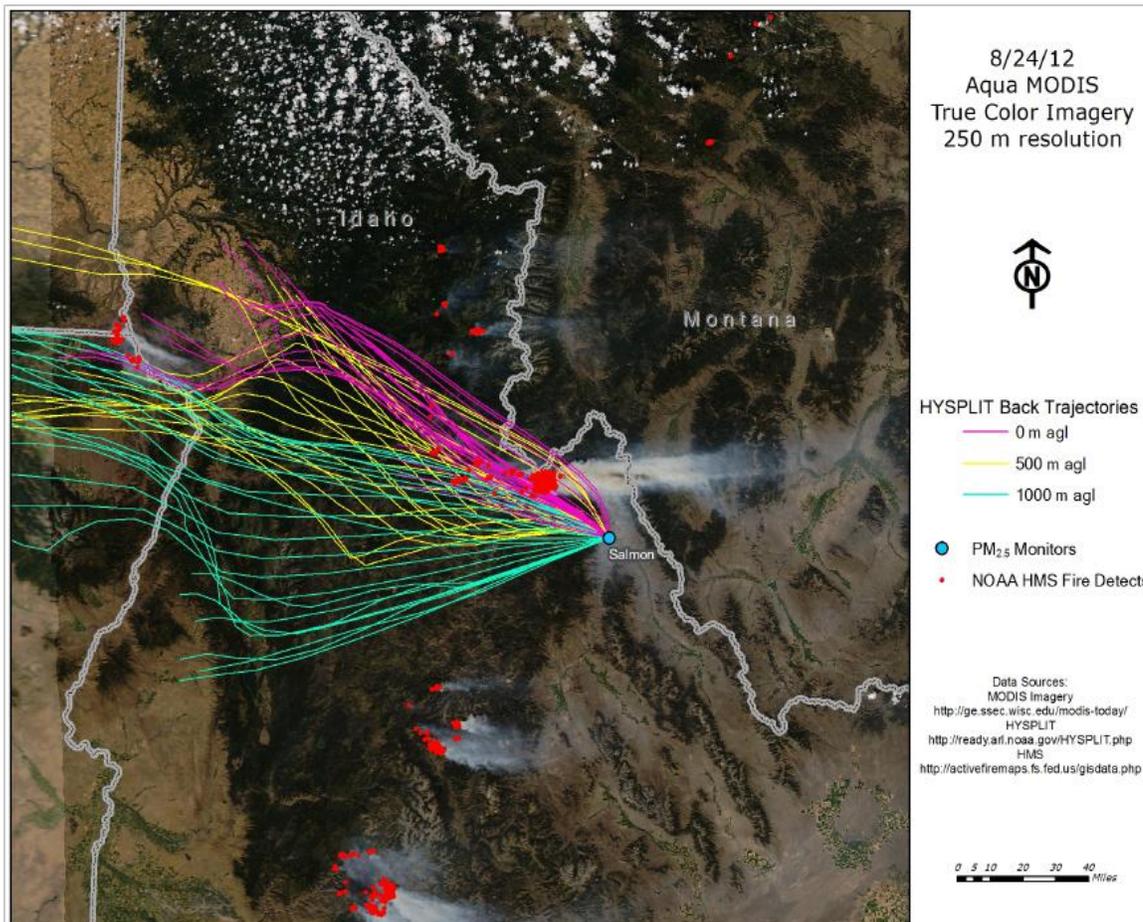
8/23/2012 Wind Speed and Wind Direction



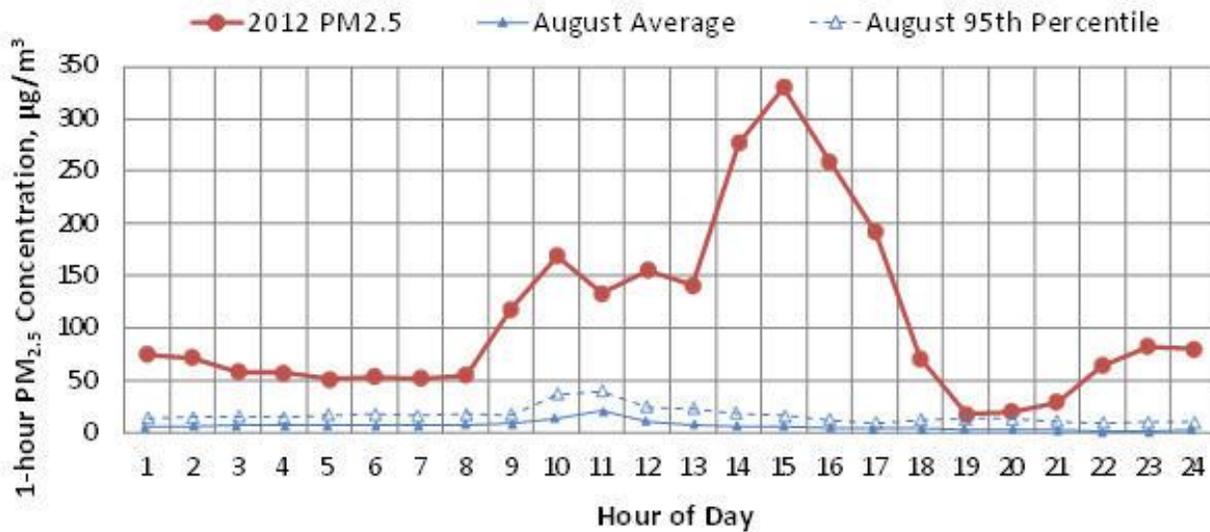
8/23/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



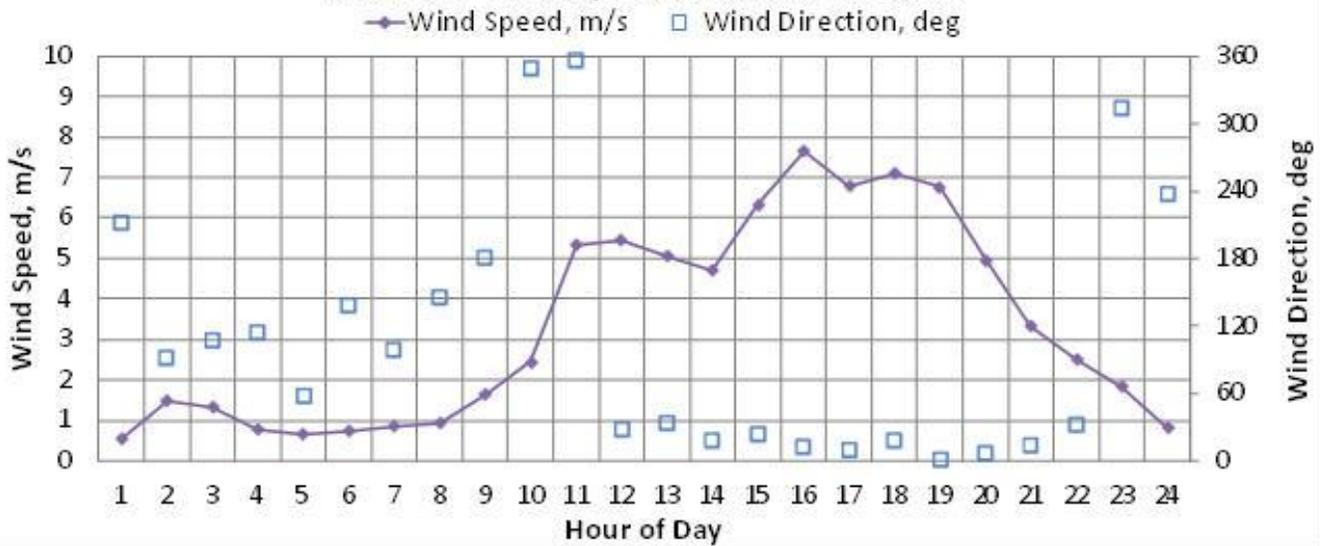
Summary of EER Evidence for Salmon Monitor Value, 108.2 $\mu\text{g}/\text{m}^3$ on 8-24-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Low weakens and fills, but still suppresses ridge and zonal flow results.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows dense Mustang plume blowing east filling the northern end of the valley. Light smoke is visible in Salmon. Back trajectories intersect smoke and/or fire detects from the Mustang Complex and Cache Creek fire in Oregon. Hourly trace shows high and steady morning concentrations rising to extraordinarily high levels over 300 $\mu\text{g}/\text{m}^3$ in the afternoon with N winds, clearing in the evening, then rising again after 2100.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 92.3 to 102.4 $\mu\text{g}/\text{m}^3$ and we conclude there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



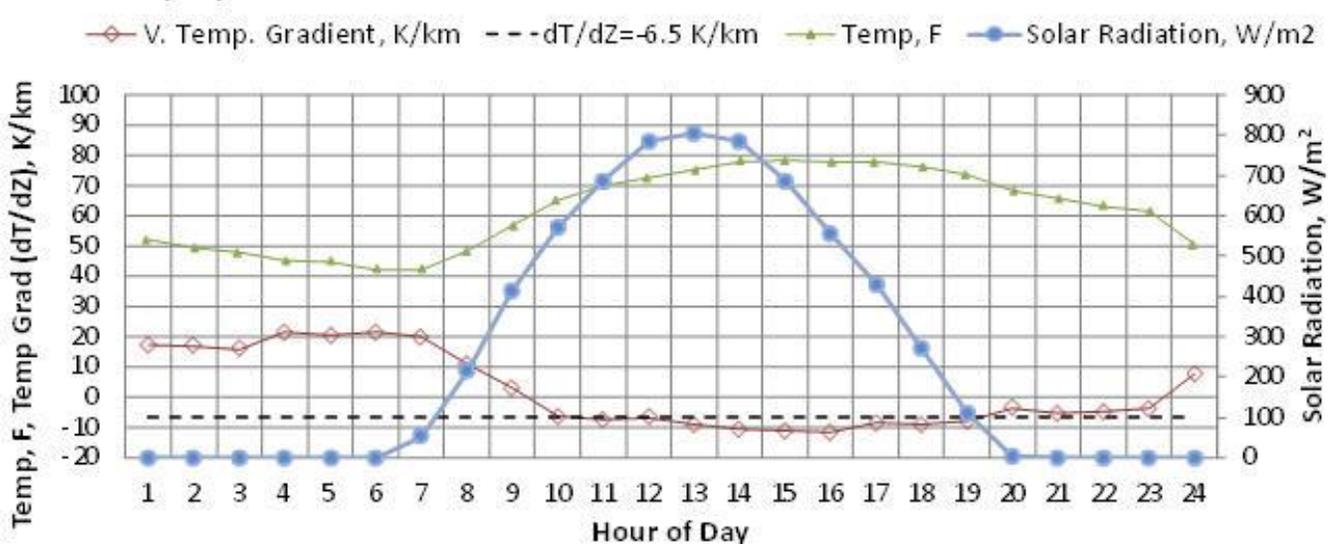
8/24/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



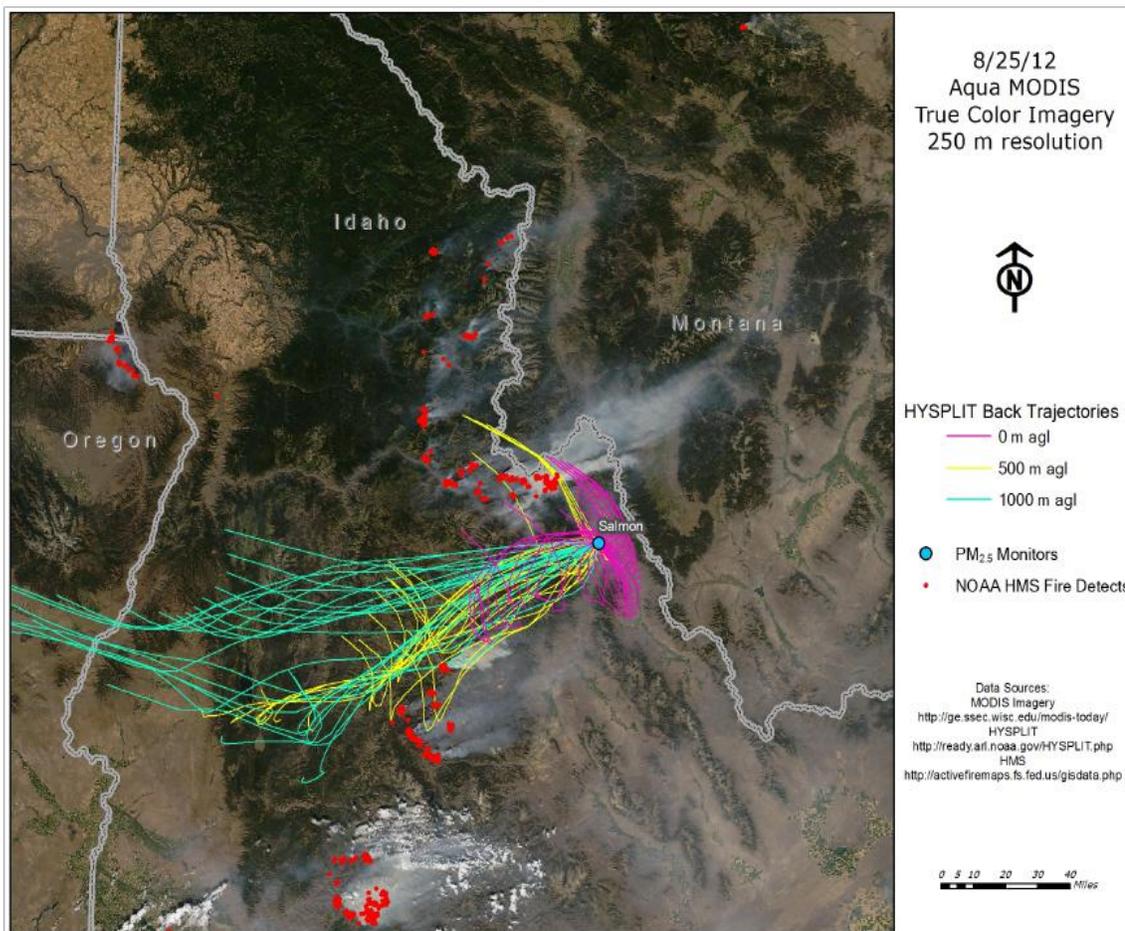
8/24/2012 Wind Speed and Wind Direction



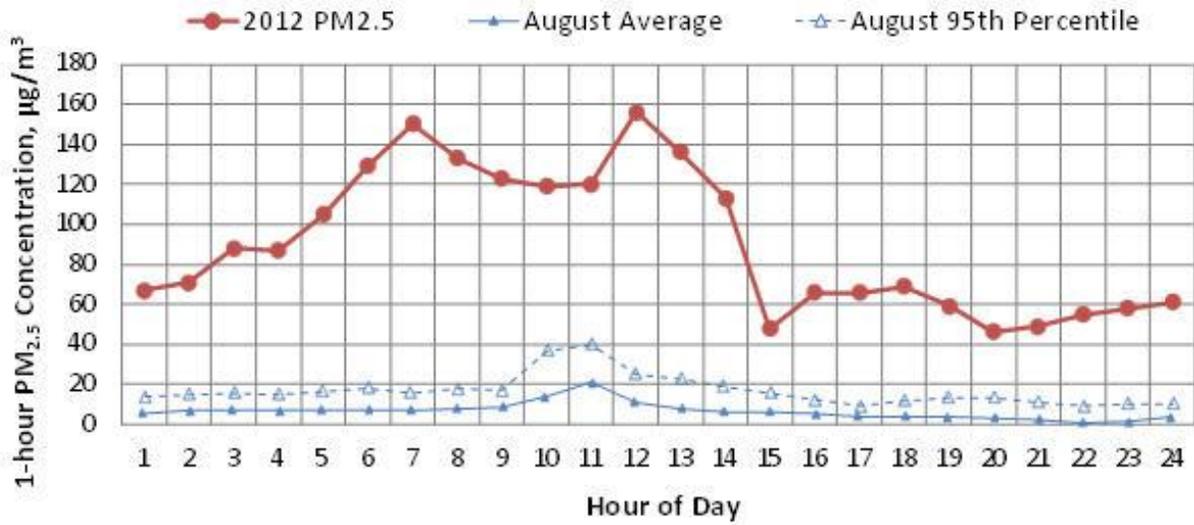
8/24/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



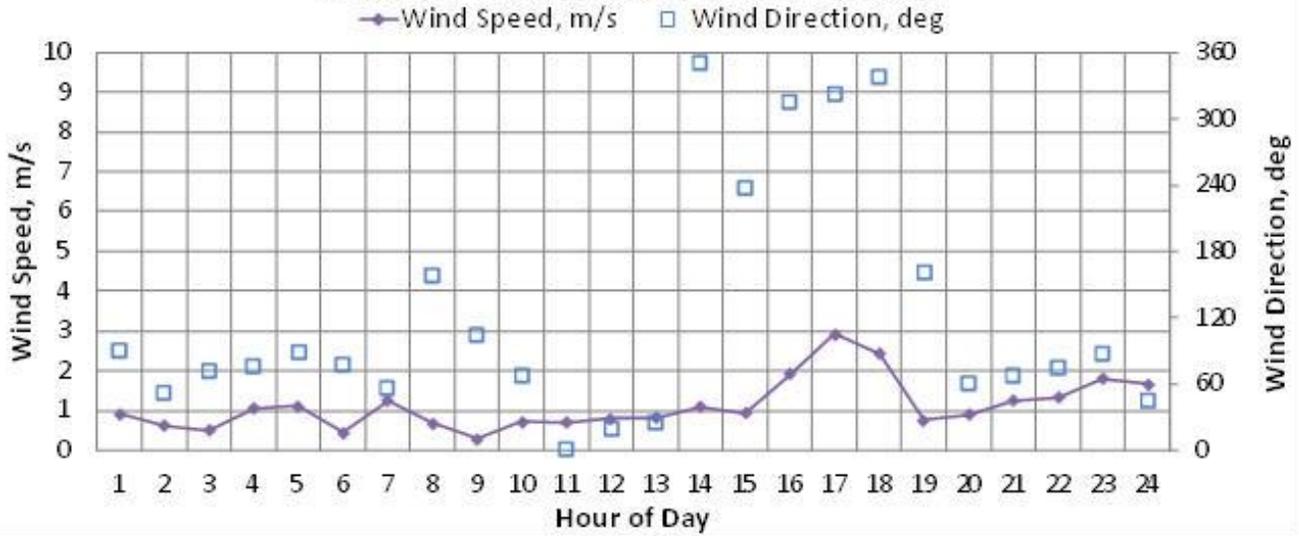
Summary of EER Evidence for Salmon Monitor Value, 91.3 $\mu\text{g}/\text{m}^3$ on 8-25-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3, 4 (See Sec. 4)
	Weather Conditions:	Upper level gradients relax substantially allowing weak zonal flow and local orographic dynamics to dominate.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows local fire plumes blowing northeast. Back trajectories intersect smoke and/or fire detects from the Mustang Complex and Halstead fire. Surface trajectories indicate both southerly and northerly wind direction within the Salmon valley, suggesting advection of drainage flow from both the Mustang and Halstead fires. Hourly trace shows rising and sustained morning concentrations, a spike at 0700 and 1200 with N and NE drainage winds, clearing in the afternoon. However, concentrations never drop below 40 $\mu\text{g}/\text{m}^3$ during the 24-hour period. Wind speeds are low, pointing to slow drainage flow as the overriding smoke advection process for the day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 75.4 to 85.5 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



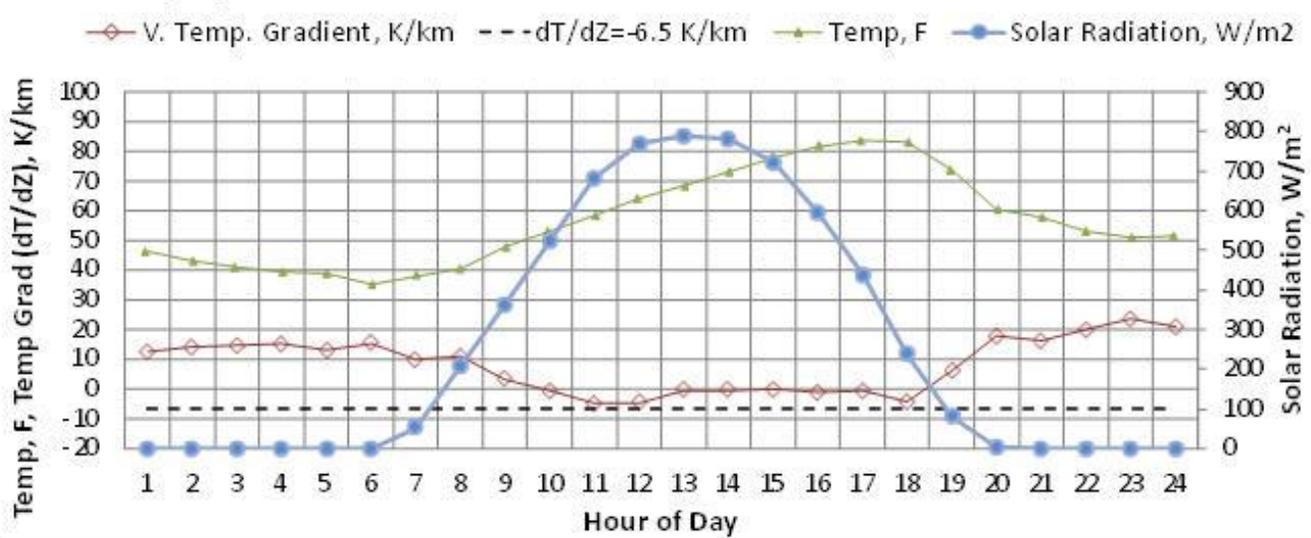
8/25/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



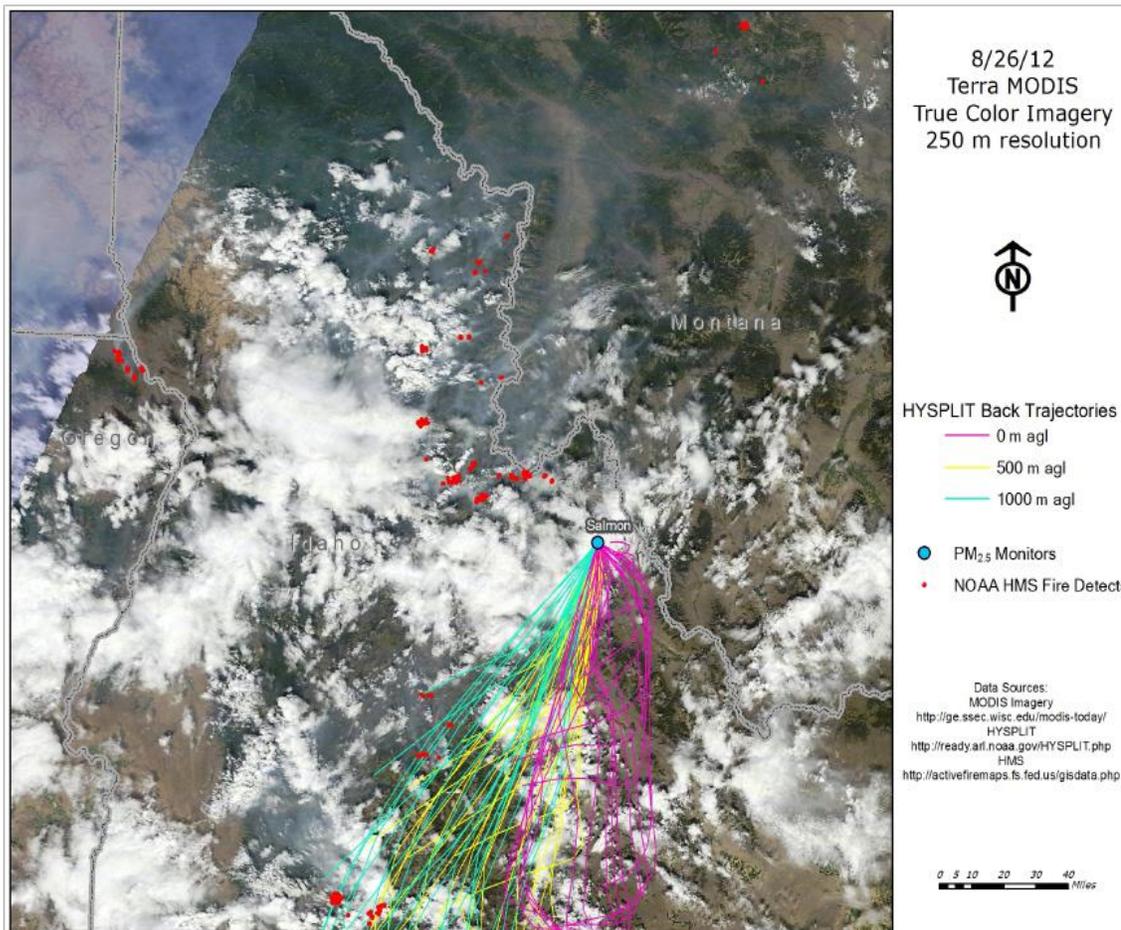
8/25/2012 Wind Speed and Wind Direction



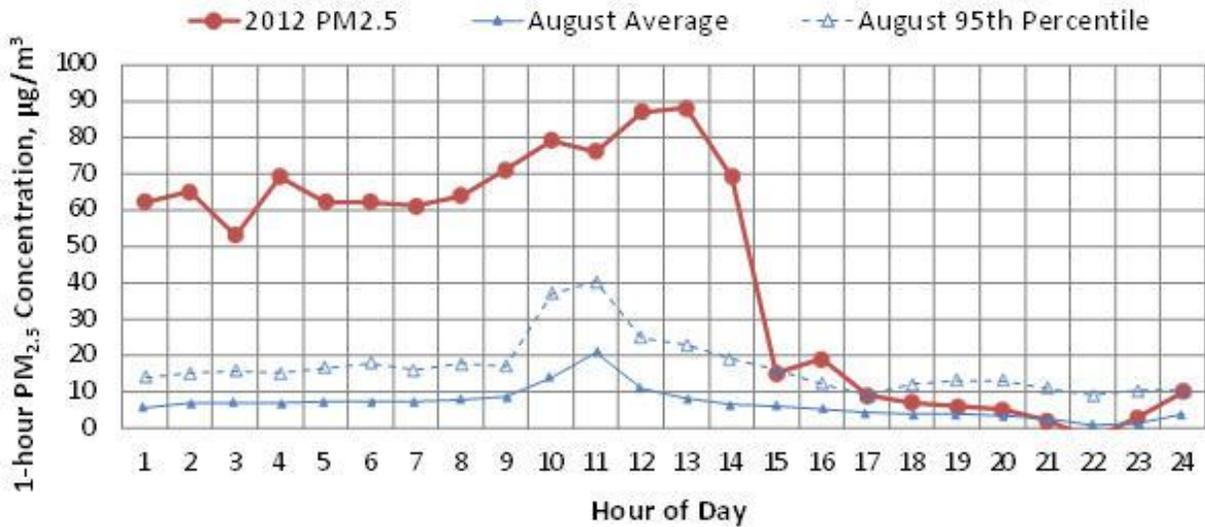
8/25/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



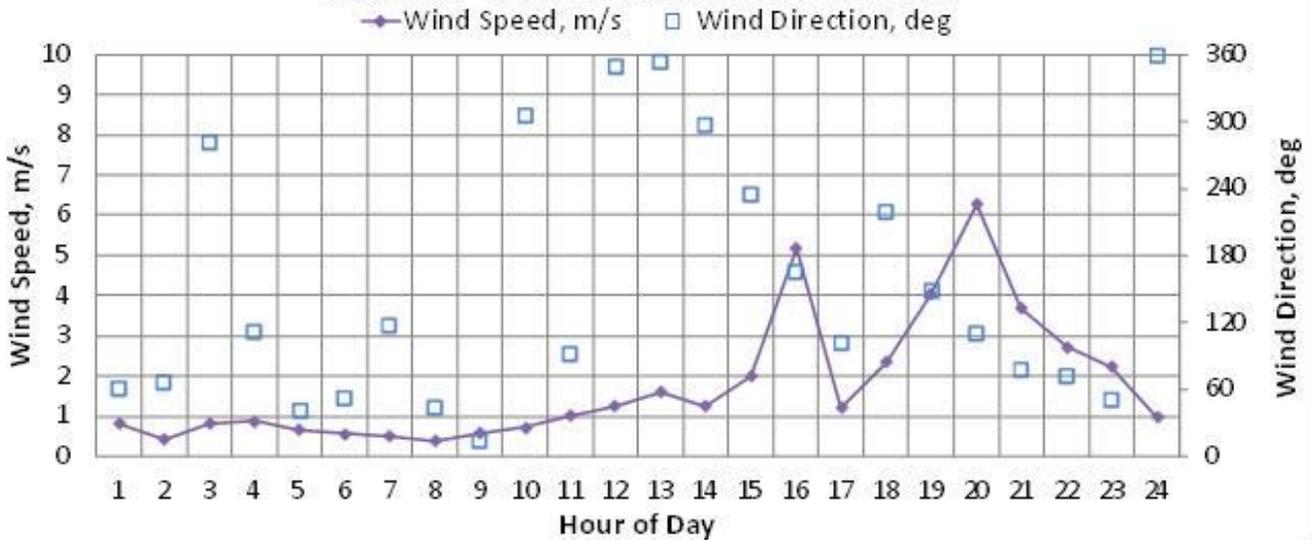
Summary of EER Evidence for Salmon Monitor Value, 45.5 $\mu\text{g}/\text{m}^3$ on 8-26-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 4 (See Sec. 4), with probable valley flow from north, Scenario 1.
	Weather Conditions:	4-Corners High begins to strengthen and move into the Southwest. Coupled with offshore low, southwest flow develops across Idaho.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows light smoke in valley interspersed with clouds. Back trajectories intersect smoke and/or fire detects from the Halstead and Trinity Ridge fires. Hourly trace shows sustained high concentrations reaching over 80 $\mu\text{g}/\text{m}^3$ with northerly valley winds around 1200 - 1300, followed by wind increases during which valley is scoured out.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 29.6 to 39.7 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



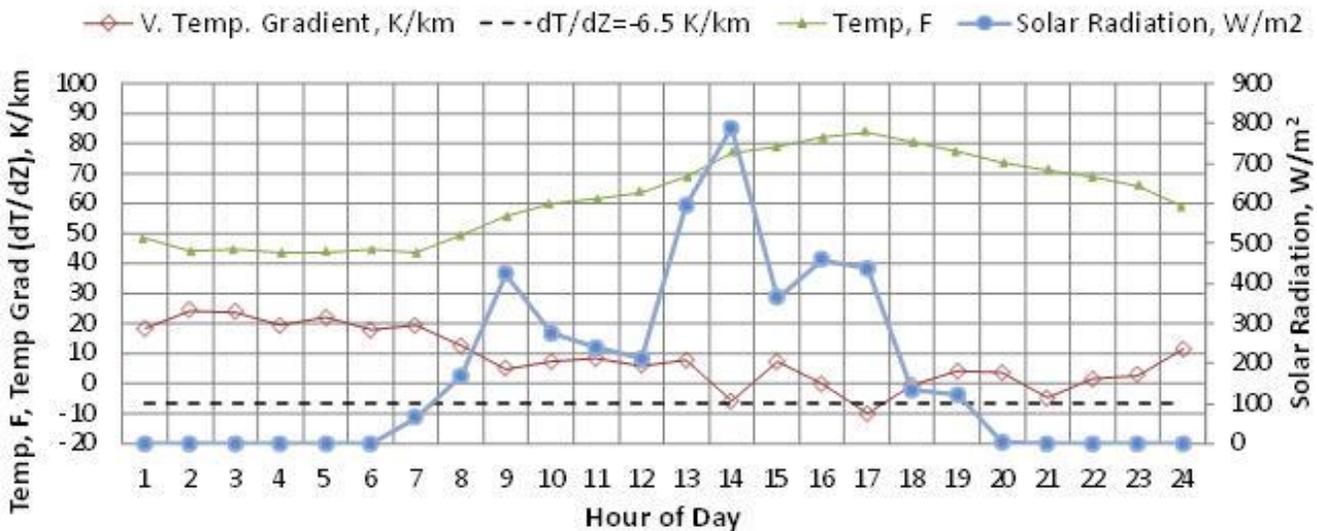
8/26/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



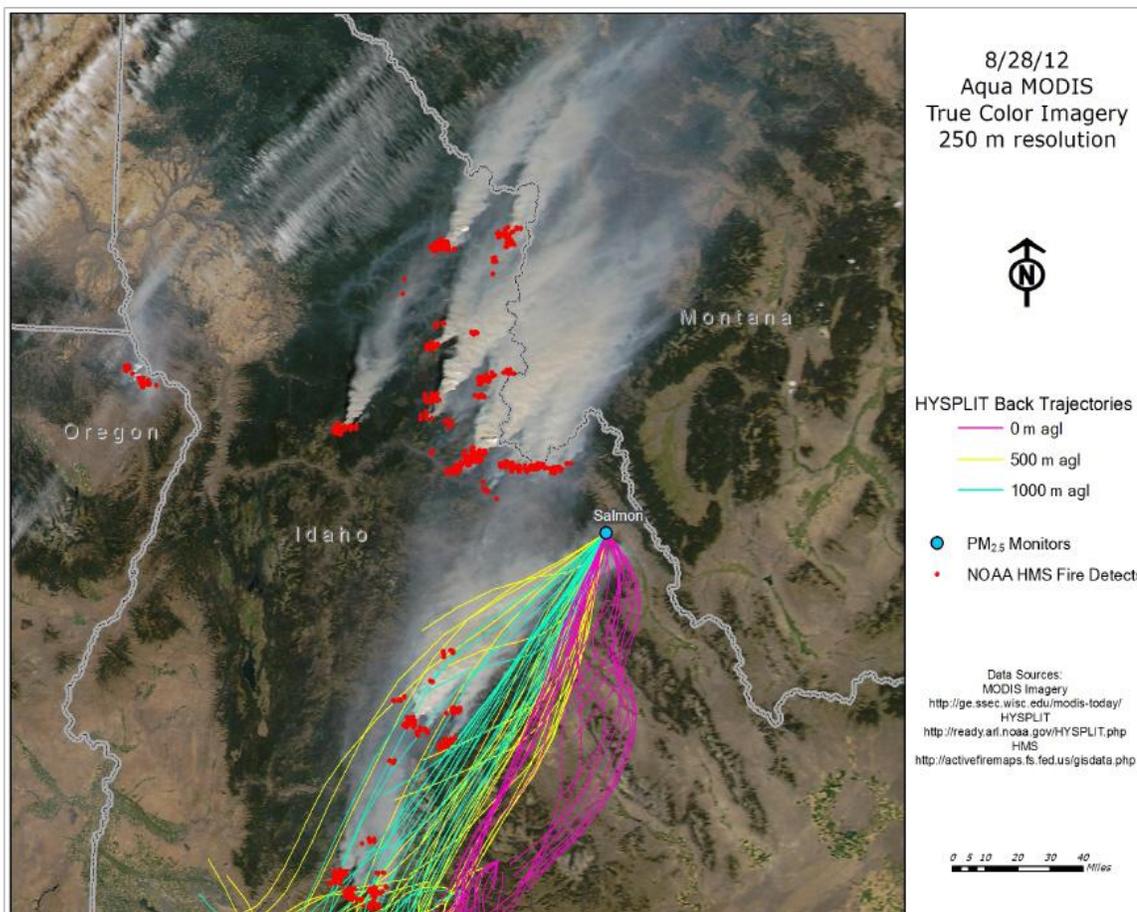
8/26/2012 Wind Speed and Wind Direction



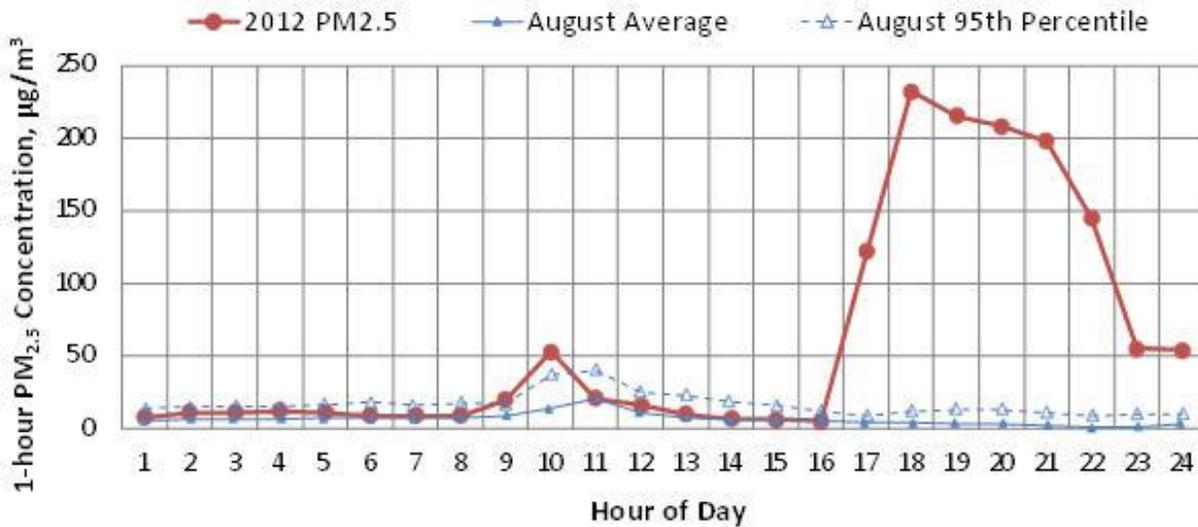
8/26/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



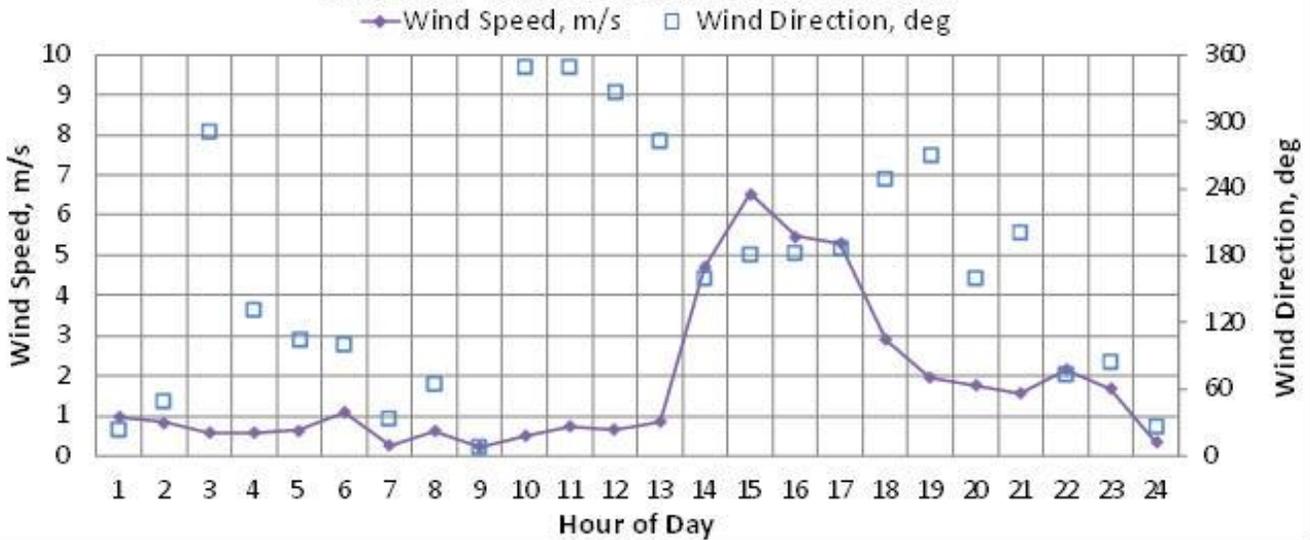
Summary of EER Evidence for Salmon Monitor Value, 58.2 $\mu\text{g}/\text{m}^3$ on 8-28-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 4 (See Sec. 4)
	Weather Conditions:	4-Corners High shifts the ridge axis east of Idaho providing southwest flow as off shore low weakens into an open wave trough.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows thick, vigorous plumes streaming northeast from all local fires. The Halstead plume aims directly at Salmon. Back trajectories intersect smoke and/or fire detects from the Halstead and Trinity Ridge fires. Hourly trace shows concentrations below 95 th percentile until 1700 pm, when concentrations rise rapidly up 200 $\mu\text{g}/\text{m}^3$ in two hours. The spike occurs after wind speeds increase to 5 – 6 m/s and the wind direction switches to the south then SW.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 42.3 to 52.4 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS “but for” this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



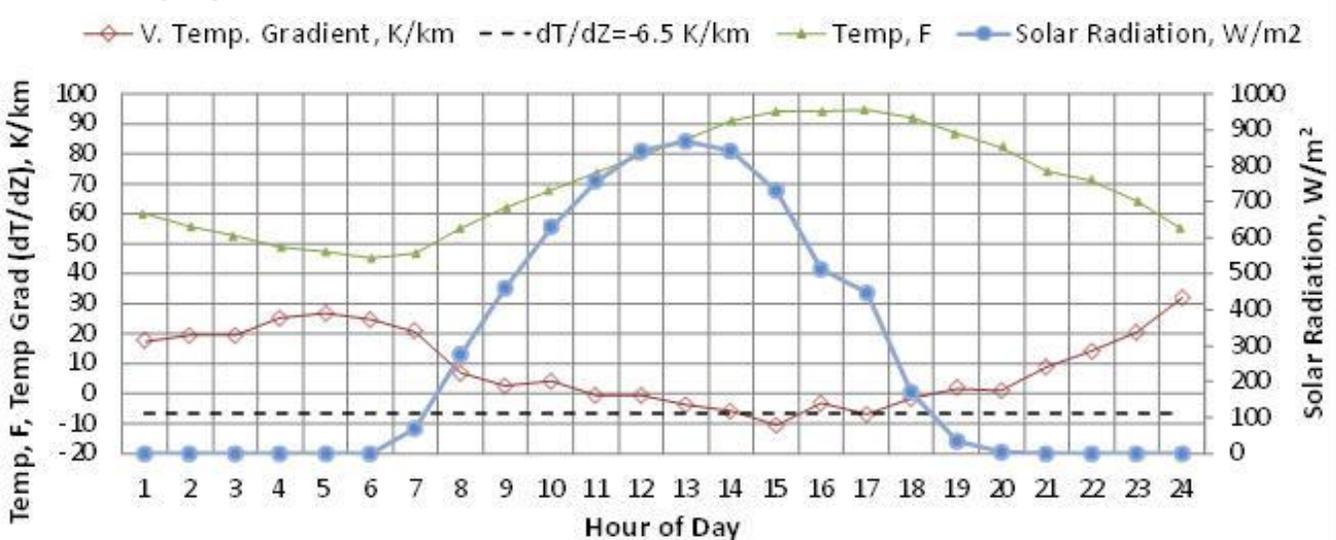
8/28/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



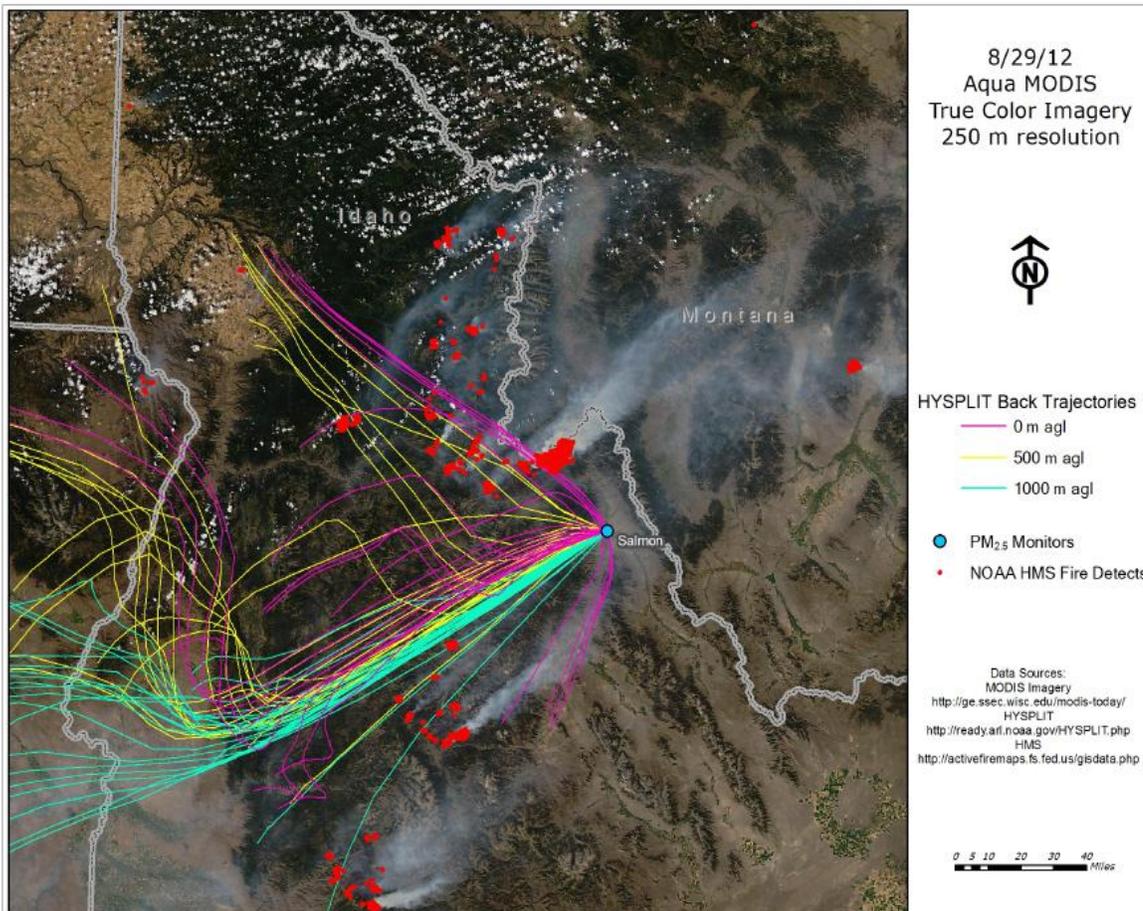
8/28/2012 Wind Speed and Wind Direction



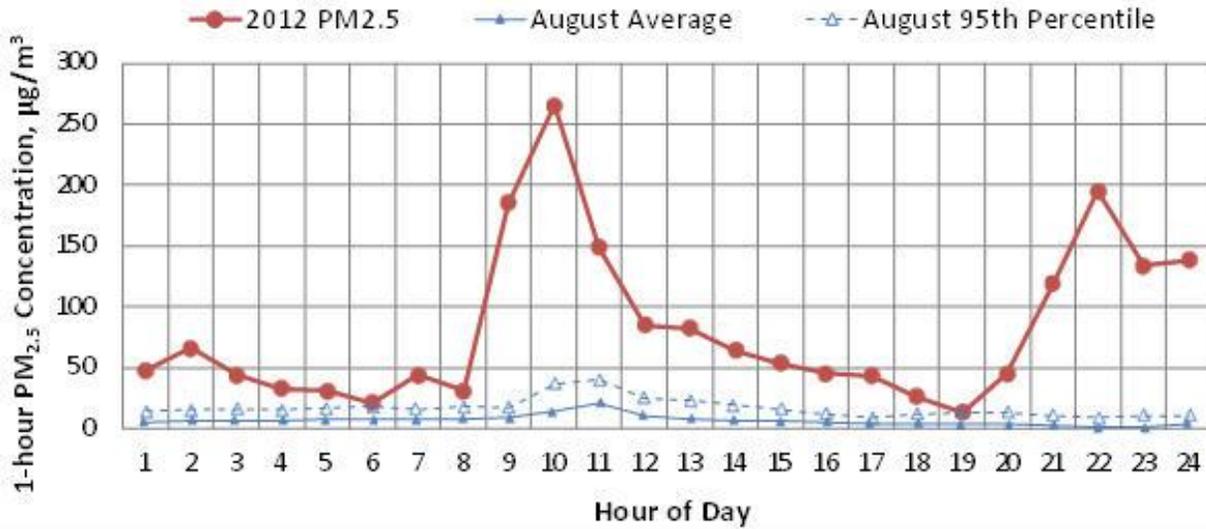
8/28/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



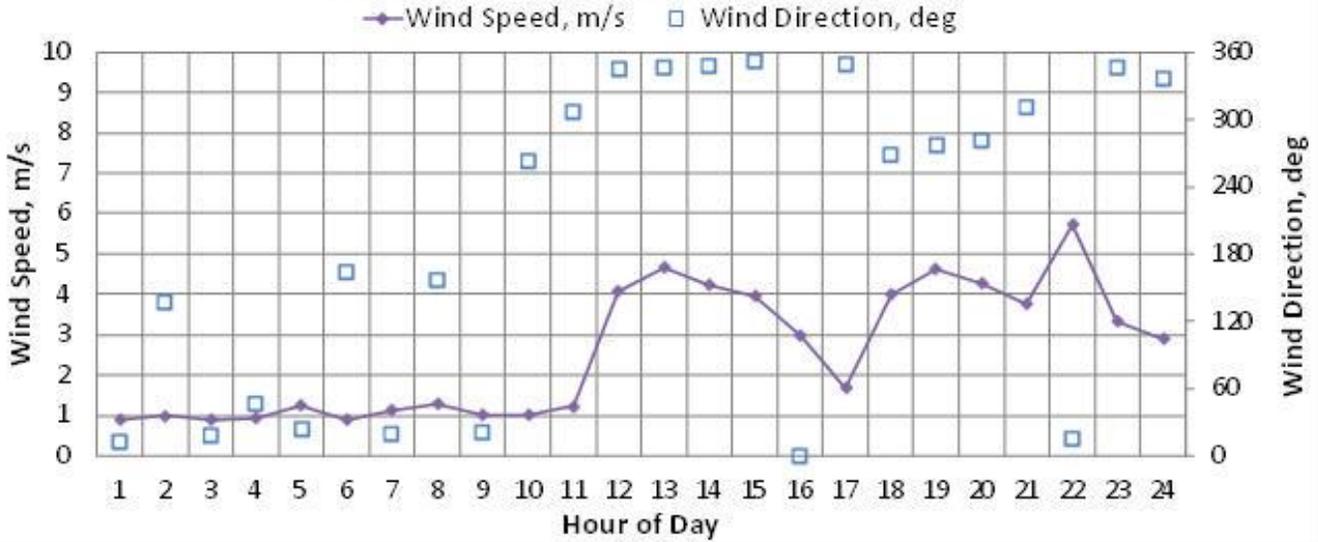
Summary of EER Evidence for Salmon Monitor Value, 78.1 $\mu\text{g}/\text{m}^3$ on 8-29-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3, 4 (See Sec. 4)
	Weather Conditions:	Open wave trough produces more westerly component across Idaho as 4-Corners high is marginally suppressed.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows smoke blowing northeast from all local fires. Smoke is visible in the Salmon valley. Back trajectories intersect smoke and/or fire detects from the Halstead, Mustang, and McGuire Complex fires. Hourly PM _{2.5} trace shows two large spikes peaking at 1000 with winds from the W and 2200 with valley flows from the north end of the valley where heavy smoke is visible. Concentrations remain above 100 $\mu\text{g}/\text{m}^3$ at midnight.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 62.2 to 72.3 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



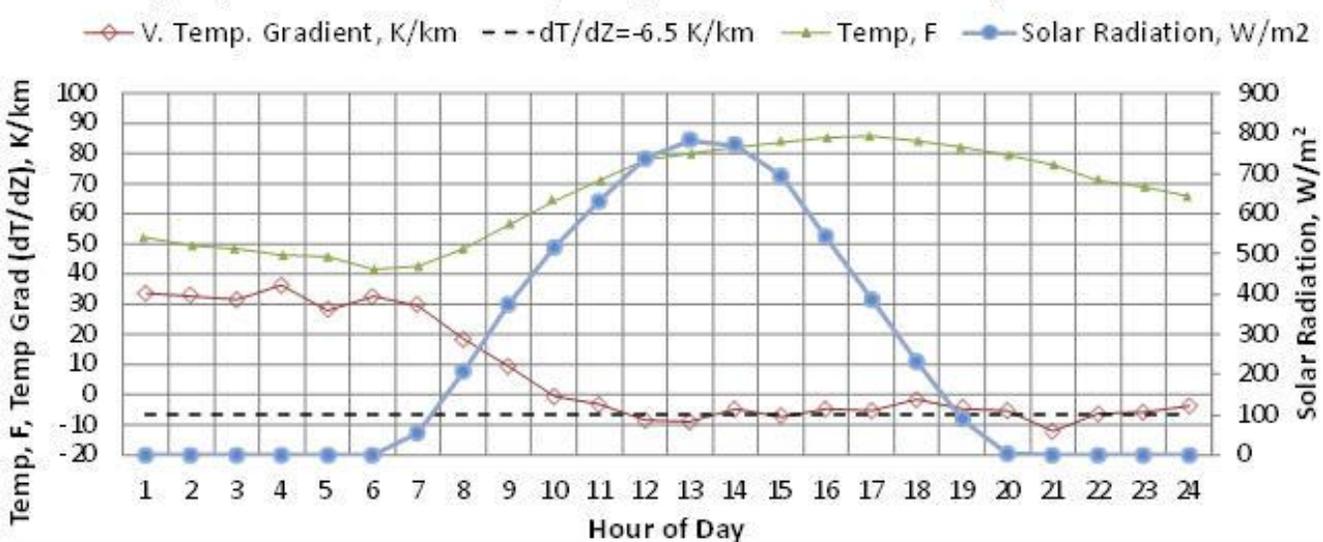
8/29/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



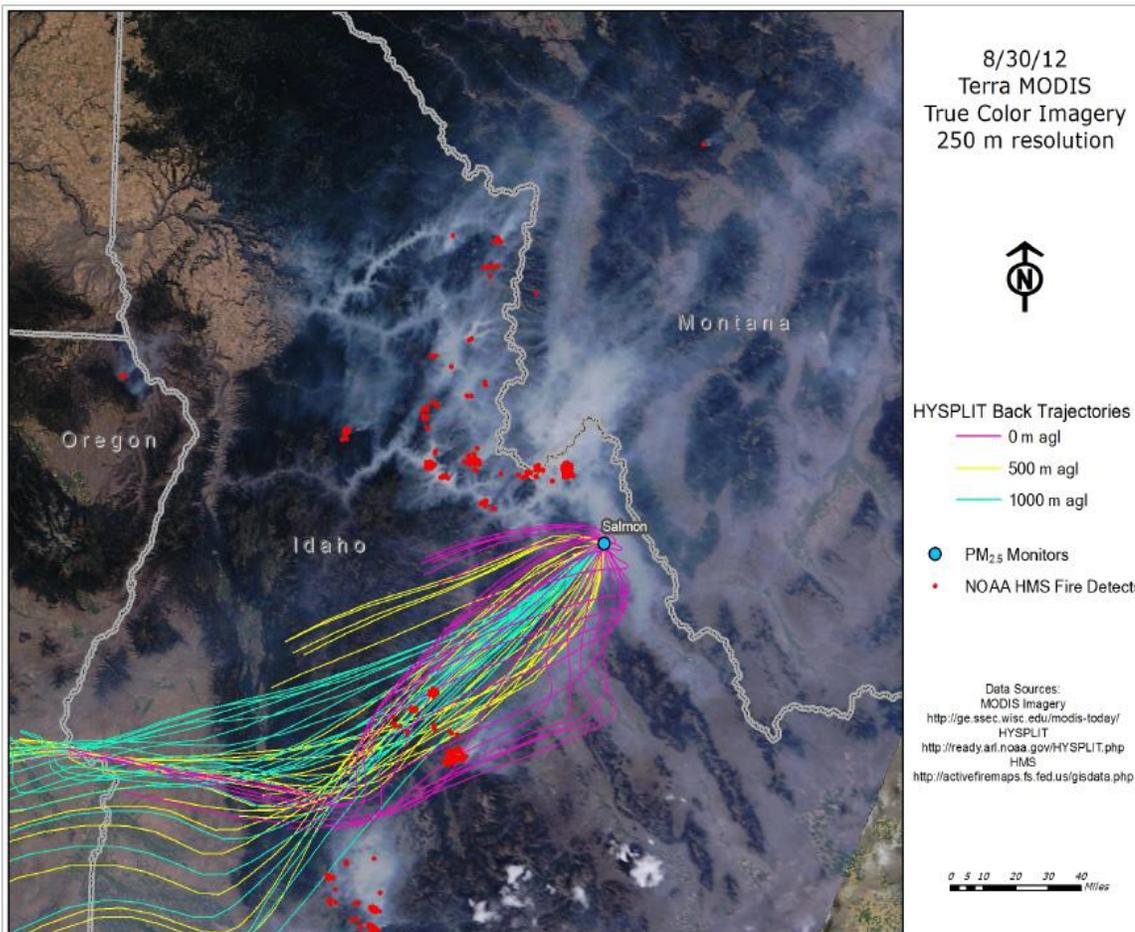
8/29/2012 Wind Speed and Wind Direction



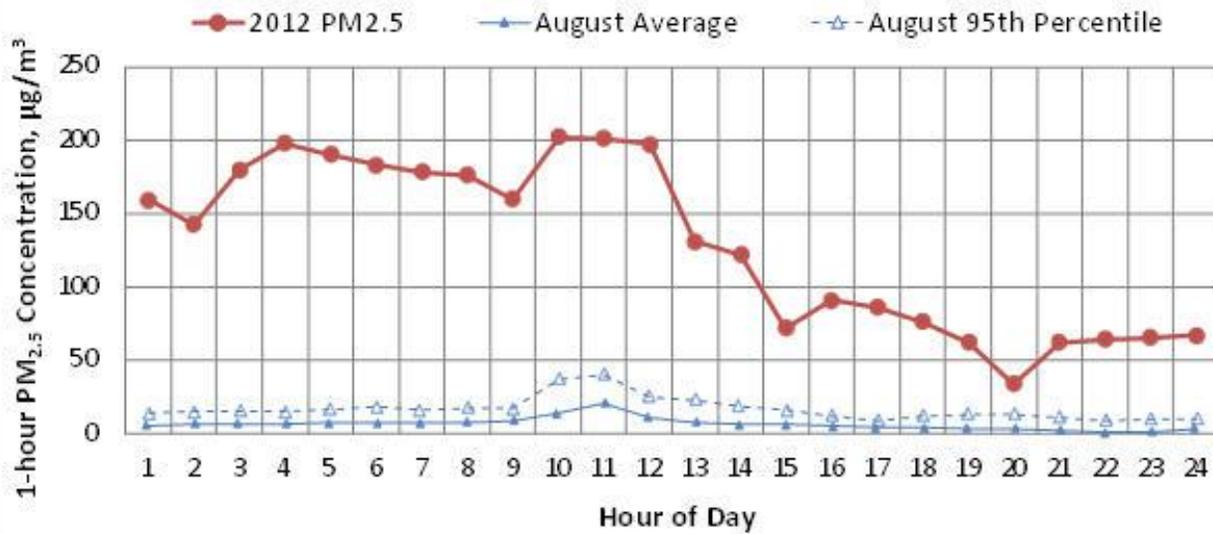
8/29/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



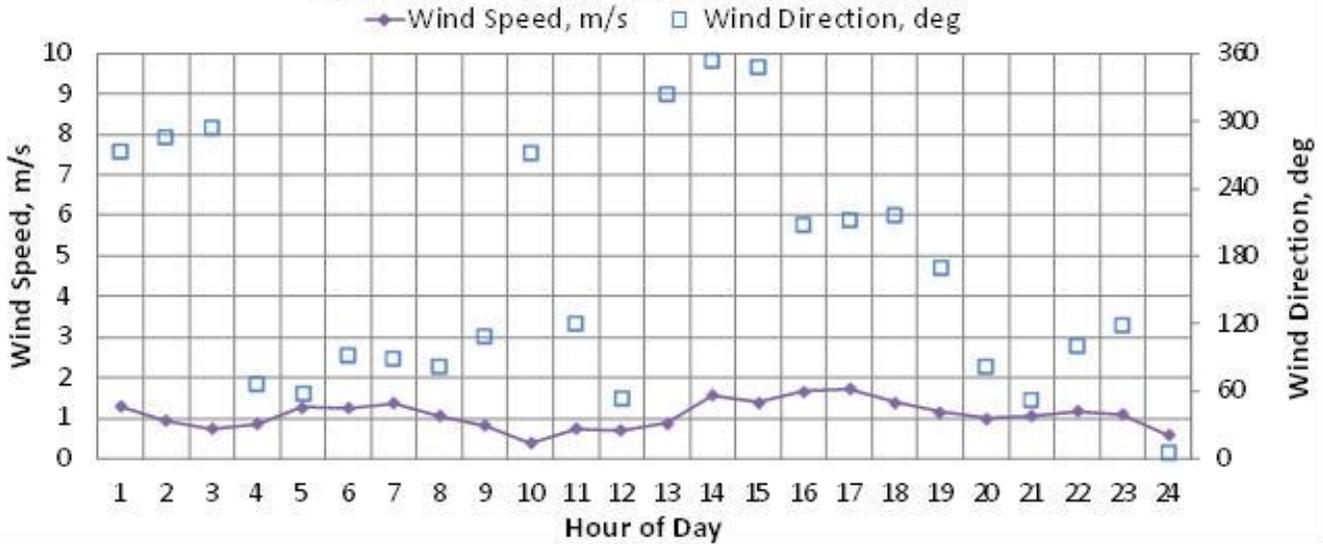
Summary of EER Evidence for Salmon Monitor Value, 132 $\mu\text{g}/\text{m}^3$ on 8-30-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 3, 4 (See Sec. 4)
	Weather Conditions:	Low pressure system in Central British Columbia and associated trough axis further suppresses 4-Corners High and shifts Idaho flow to a southwest direction.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows thick smoke occupying the Salmon valley and within the Middle Fork, Clearwater, and Lochsa drainages. Back trajectories intersect smoke and/or fire detects from the Halstead and Trinity Ridge fires. Hourly trace shows sustained high values all morning, trapped from the previous day, then some clearing in the afternoon, though concentrations drop below 50 $\mu\text{g}/\text{m}^3$ for only one hour during the 24-hour period.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 116 to 126 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



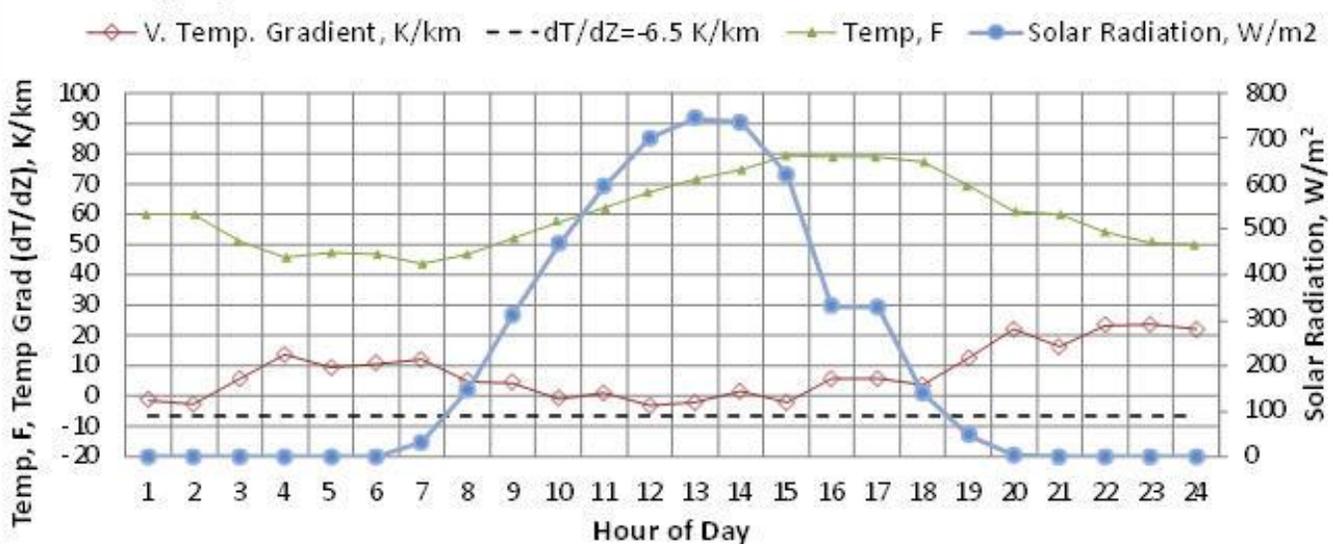
8/30/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



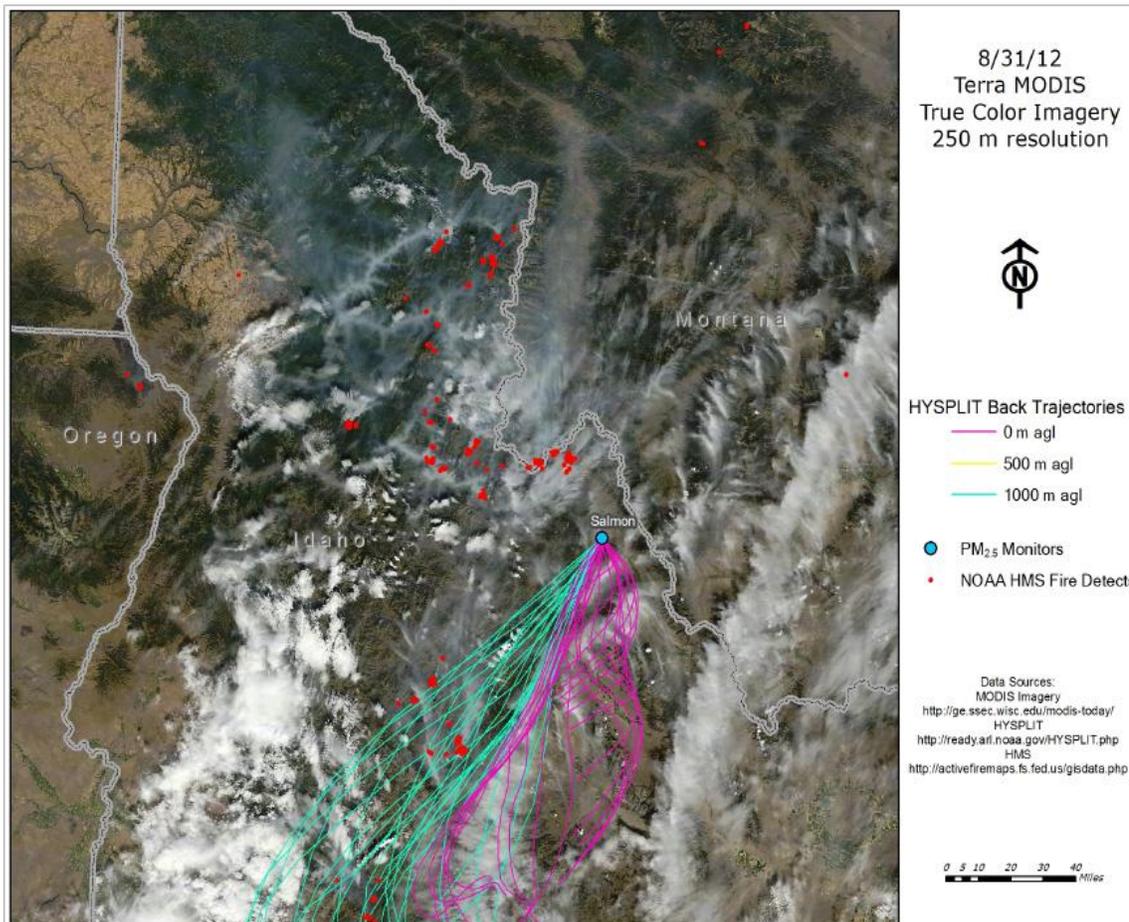
8/30/2012 Wind Speed and Wind Direction



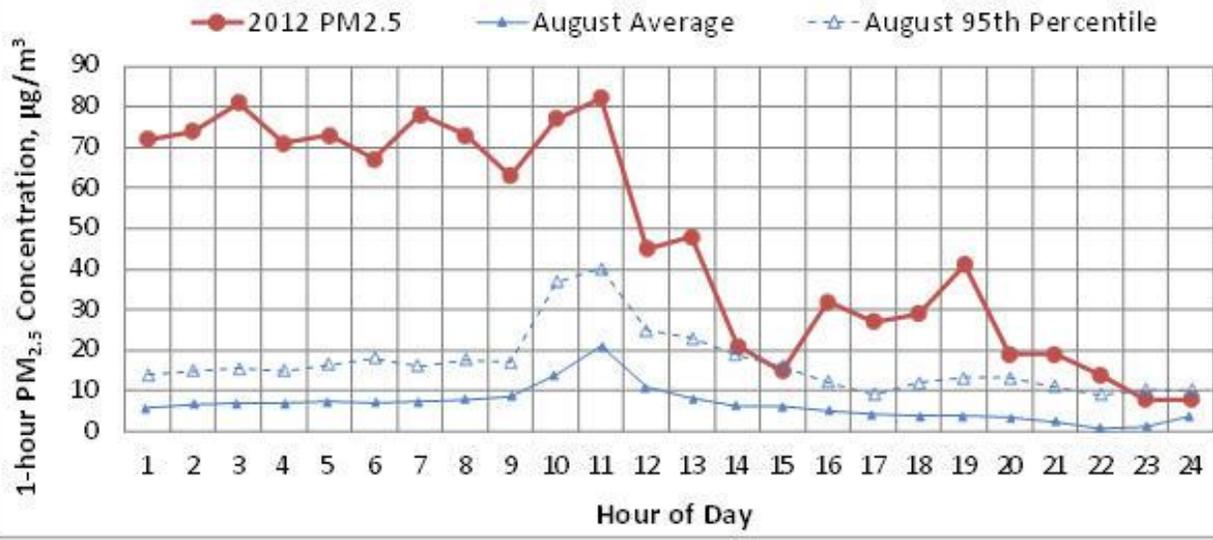
8/30/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



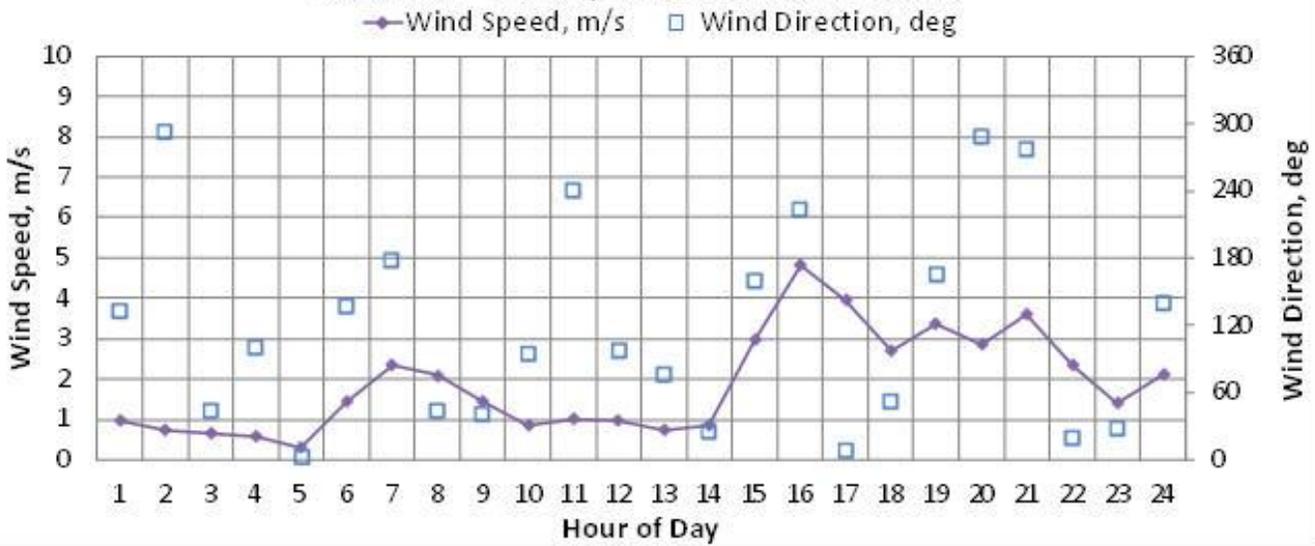
Summary of EER Evidence for Salmon Monitor Value, 49.8 $\mu\text{g}/\text{m}^3$ on 8-31-2012, AQS #16-059-0004 POC 3		
Also included in this request, 24-hour FRM Value (filter based): 45.1 $\mu\text{g}/\text{m}^3$, AQS #16-059-0004 POC 1		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 3, 4 (See Sec. 4)
	Weather Conditions:	Offshore trough axis intensifies and provides stronger southerly component to flow over Idaho.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows smoke interspersed with cloud. Visible smoke in the river valleys reflect a strong overnight temperature inversion trapping smoke overnight at ~70 – 80 $\mu\text{g}/\text{m}^3$. Back trajectories intersect smoke and/or fire detects from the Halstead and Trinity Ridge fires. Hourly trace shows sustained high values during the morning, then clearing in the afternoon when the wind speeds pick up.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 33.9 to 44.0 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS “but for” this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



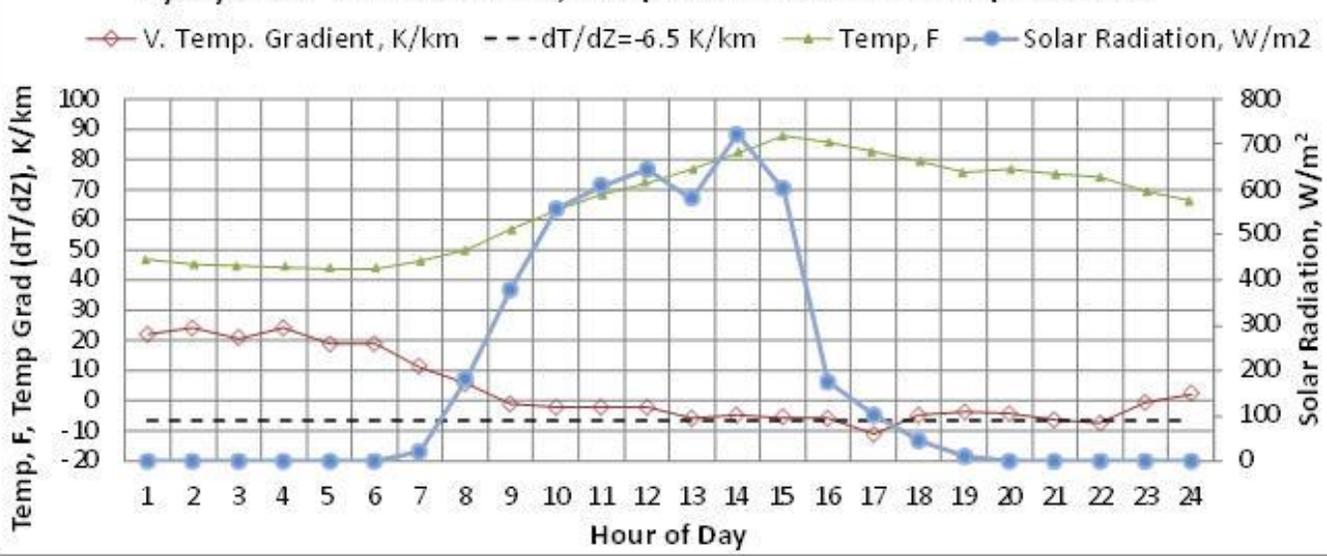
8/31/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



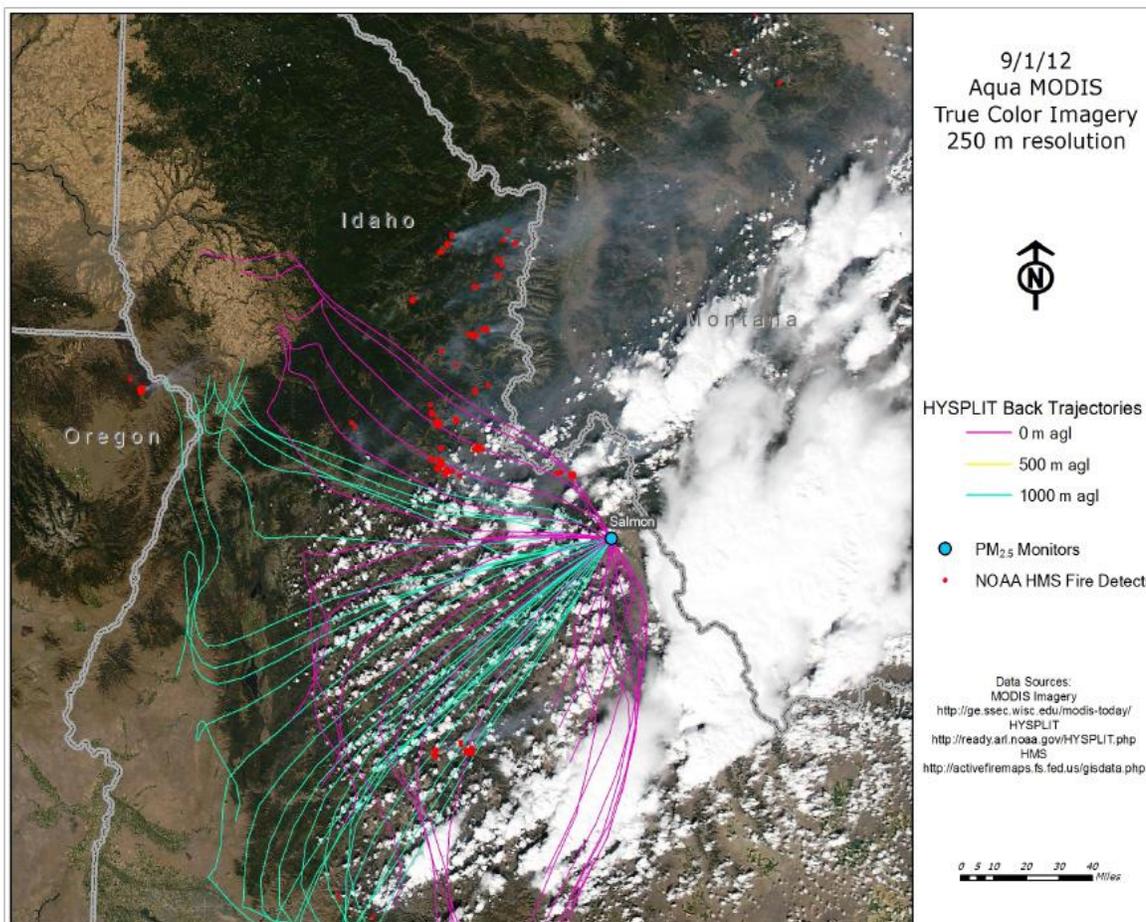
8/31/2012 Wind Speed and Wind Direction



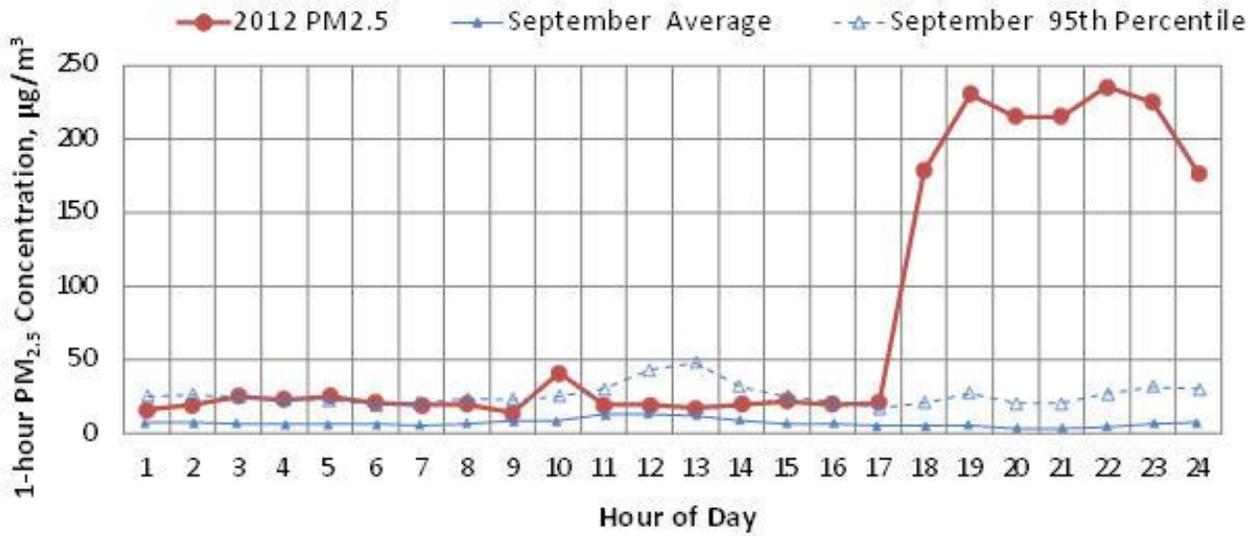
8/31/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



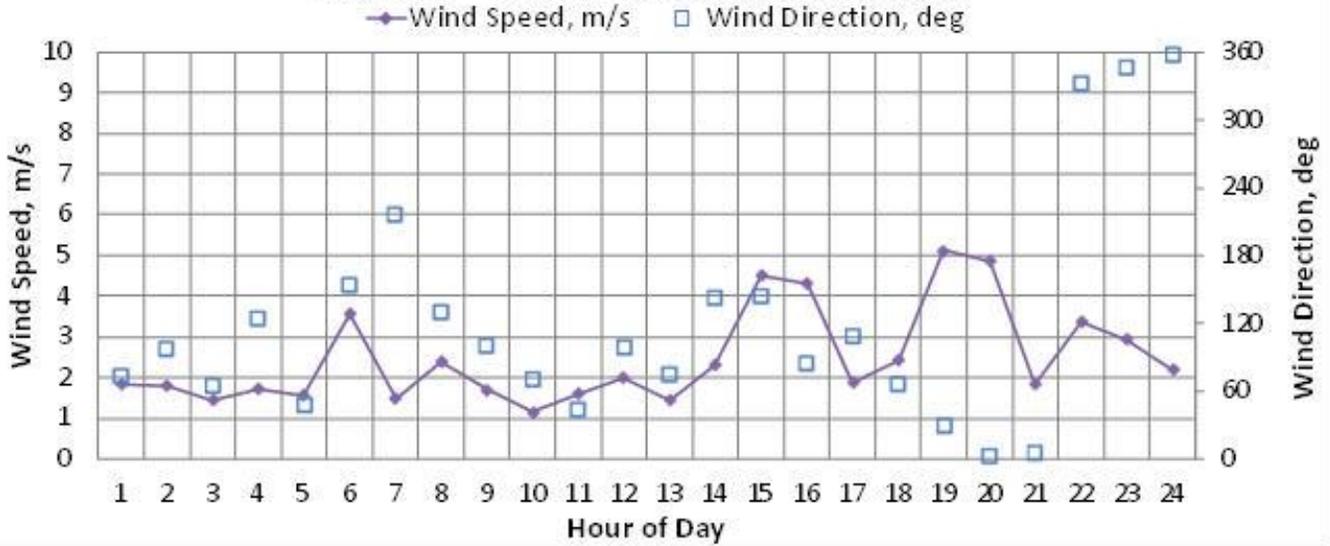
Summary of EER Evidence for Salmon Monitor Value, 69.4 $\mu\text{g}/\text{m}^3$ on 9-1-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1 with Scenarios 2, 3, 4 also probably contributing. (See Sec. 4)
	Weather Conditions:	Weak embedded shortwave with baroclinic trough shifts flow from southerly to westerly as trough axis approaches from the Pacific Coast.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows smoke filling the valley north of Salmon with smoke as it blows eastward from Mustang Complex. Back trajectories intersect smoke and/or fire detects from the Halstead, Mustang, and Cache Creek fires. Hourly trace shows sustained low values until 1700, with a small spike at 1000. Concentrations rise rapidly at 1800 with NW and N valley flows and stay above 150 $\mu\text{g}/\text{m}^3$ through midnight. Higher concentrations correspond to more northerly wind directions, suggesting valley flows from the Mustang Complex.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 53.5 to 63.6 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



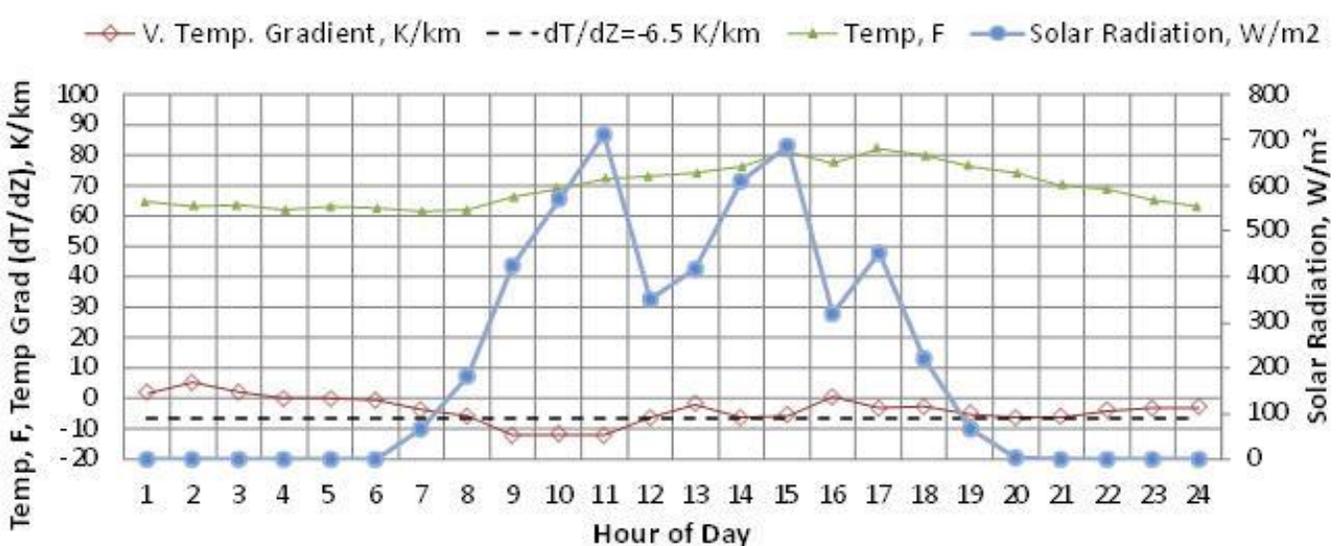
9/1/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



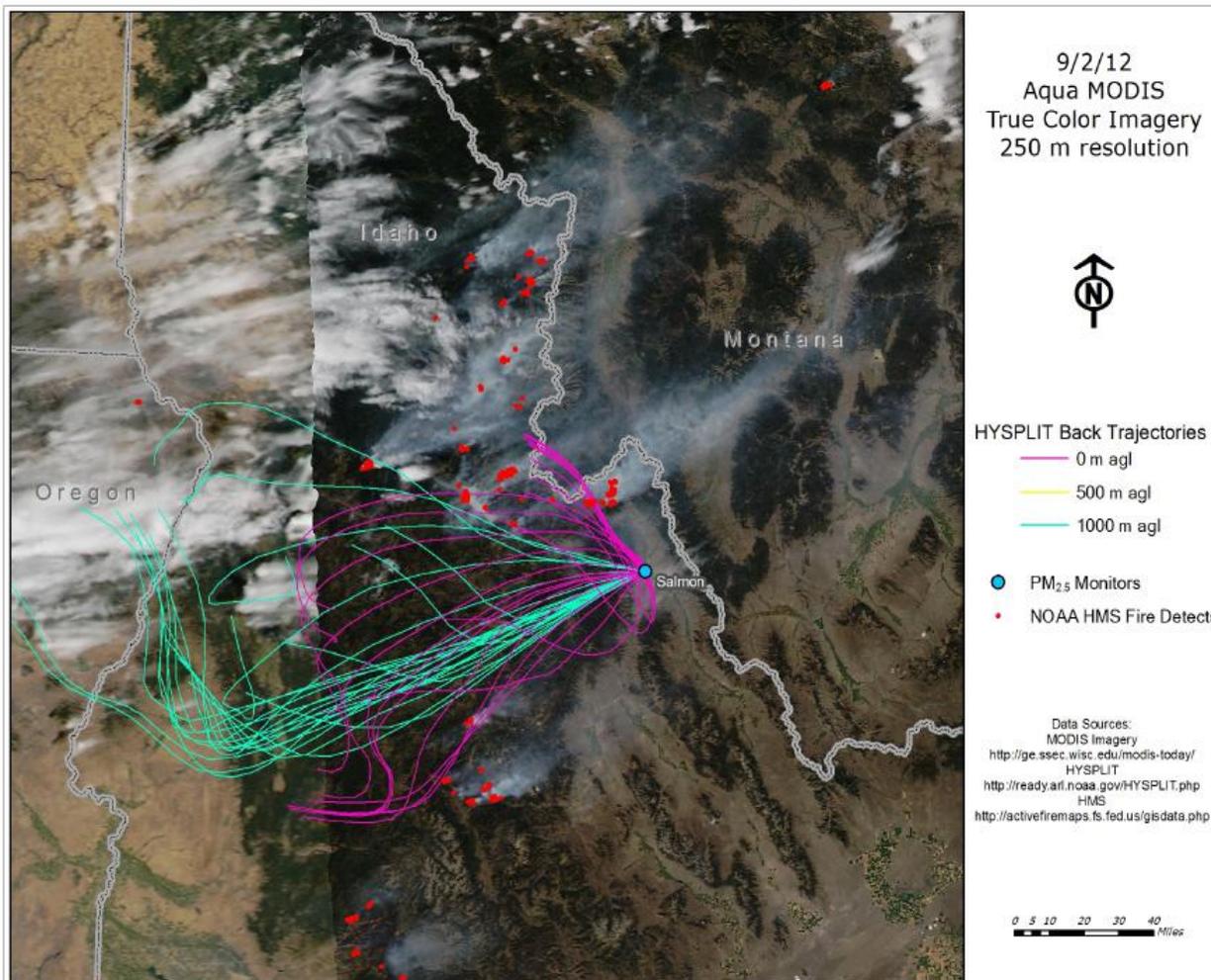
9/1/2012 Wind Speed and Wind Direction



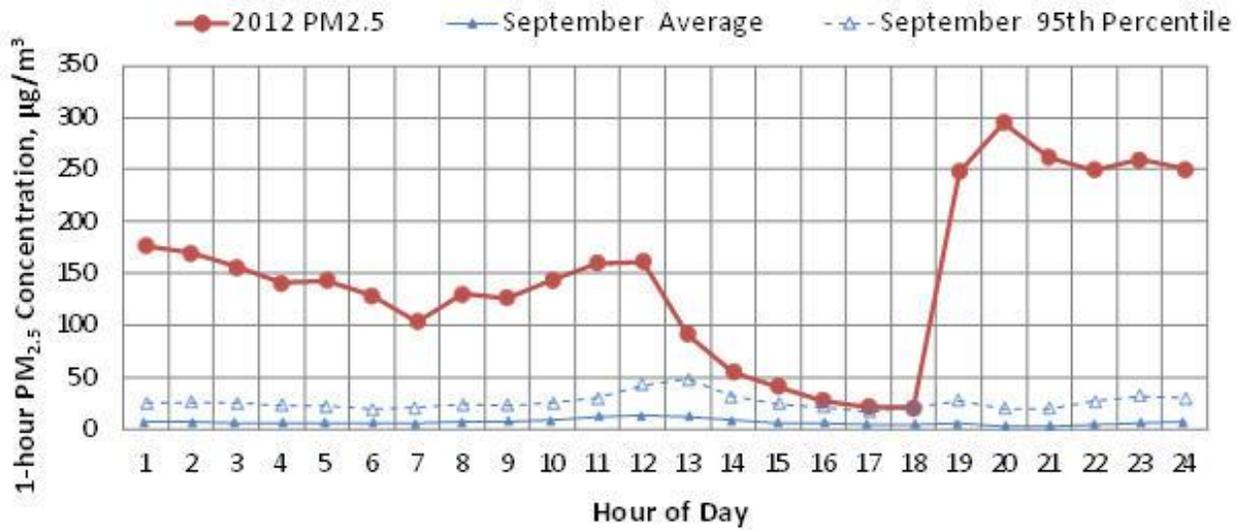
9/1/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



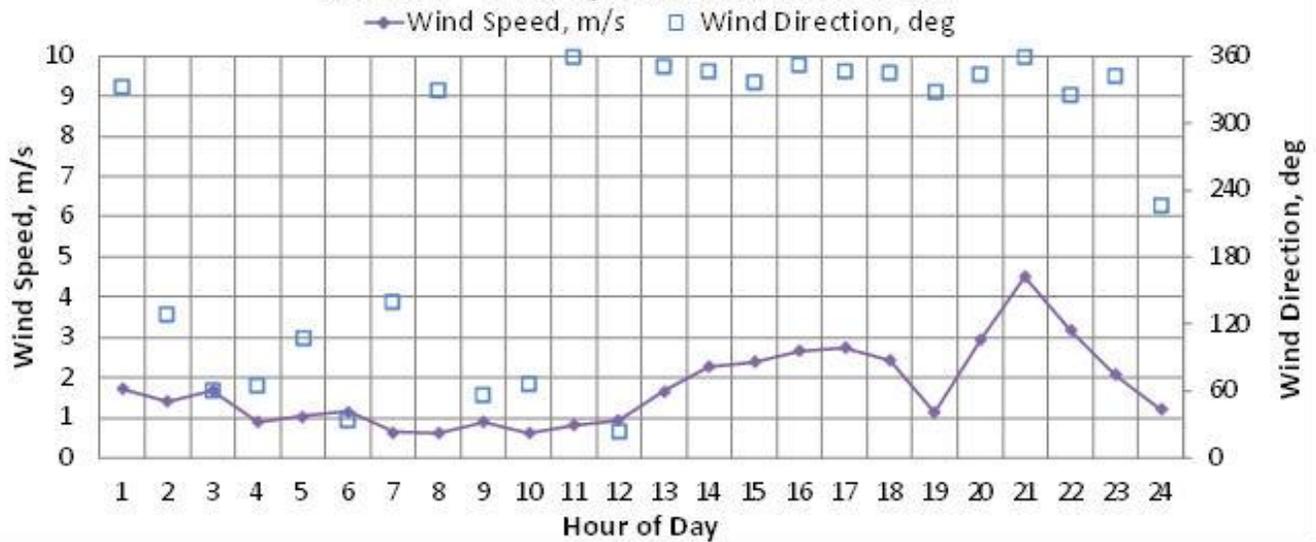
Summary of EER Evidence for Salmon Monitor Value, 145.2 $\mu\text{g}/\text{m}^3$ on 9-2-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1 with Scenarios 2, 3, 4 also probably contributing. (See Sec. 4)
	Weather Conditions:	Embedded shortwave provides zonal flow aloft.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows smoke production from all local fires. Light smoke is visible in Salmon and heavy smoke fills the north end of the valley. Back trajectories intersect smoke and/or fire detects from the Halstead, Mustang, and McGuire Complex fires. Hourly trace shows sustained high values during the morning above 100 $\mu\text{g}/\text{m}^3$, with some clearing in the afternoon. Concentrations rise rapidly to ~ 300 $\mu\text{g}/\text{m}^3$ between 1800 and 1900 with northerly valley flow bringing smoke from the Mustang Complex up valley where it remains ~250 $\mu\text{g}/\text{m}^3$ through midnight.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 129 to 139 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



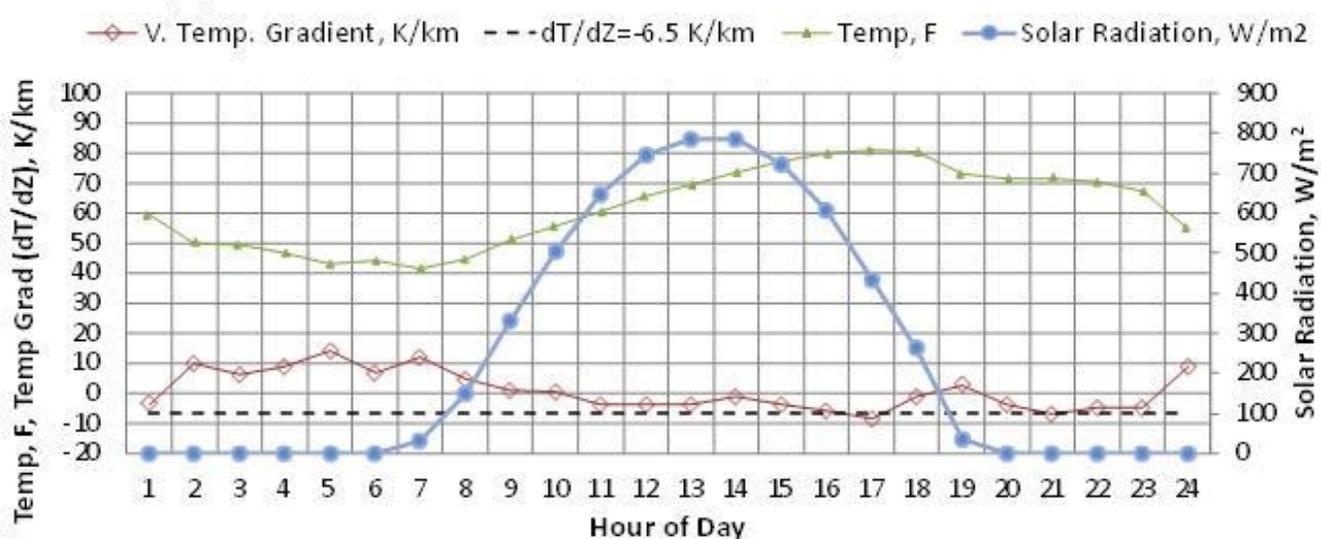
9/2/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



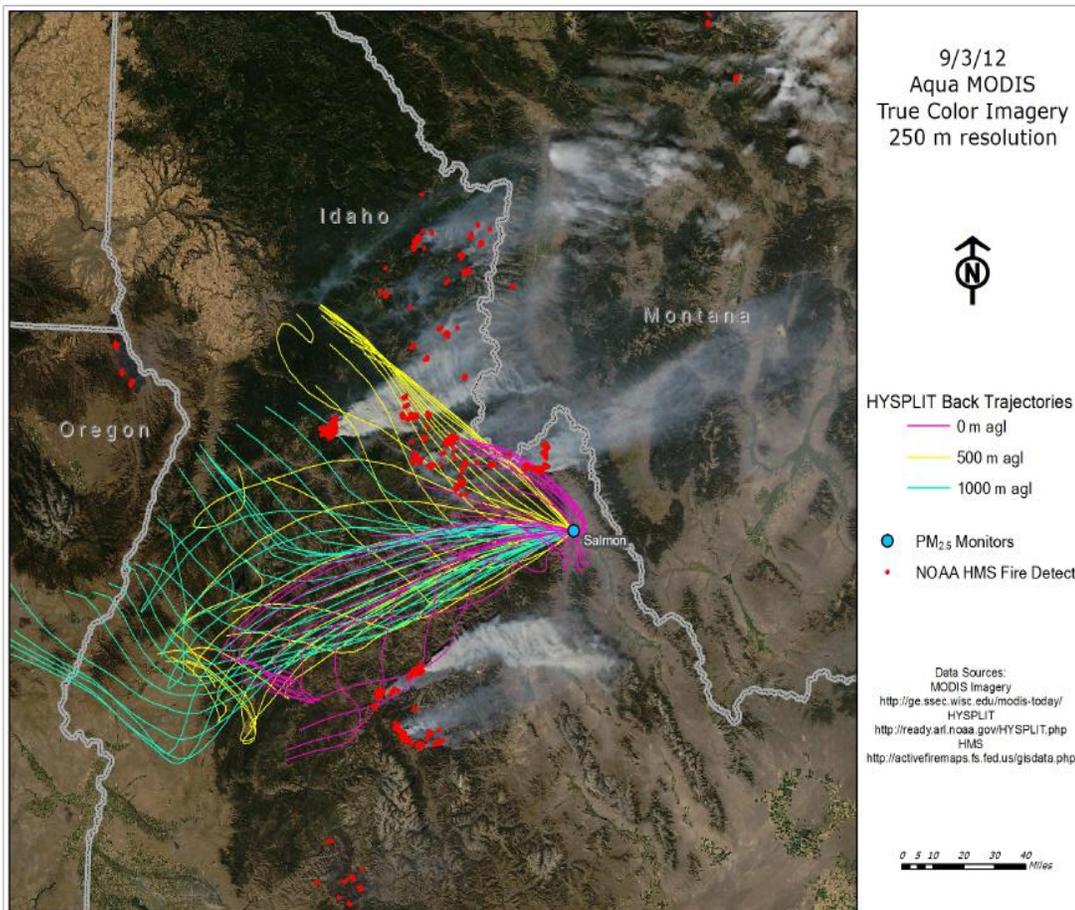
9/2/2012 Wind Speed and Wind Direction



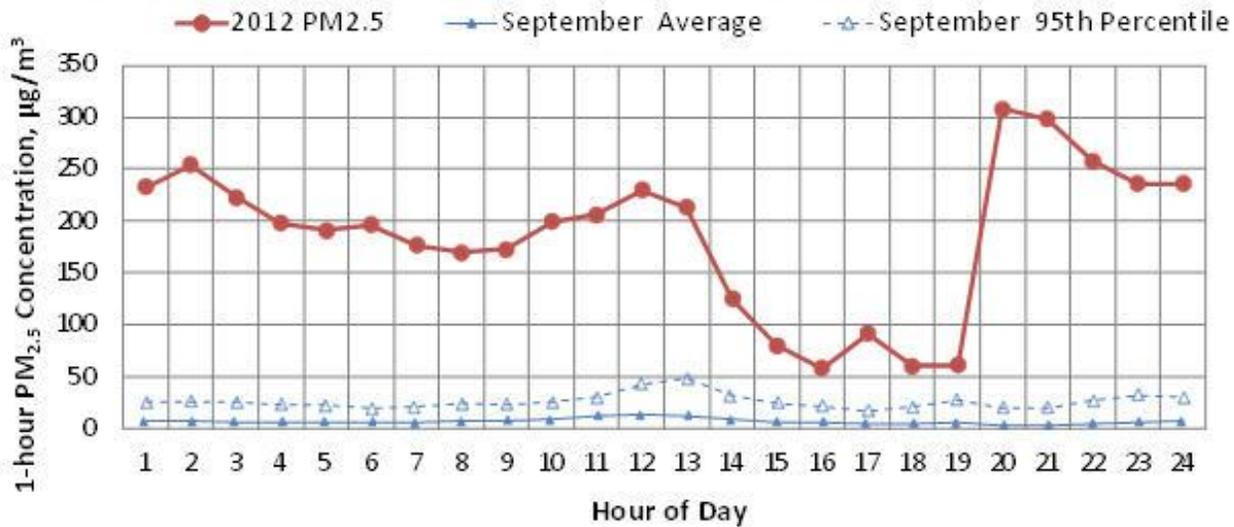
9/2/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



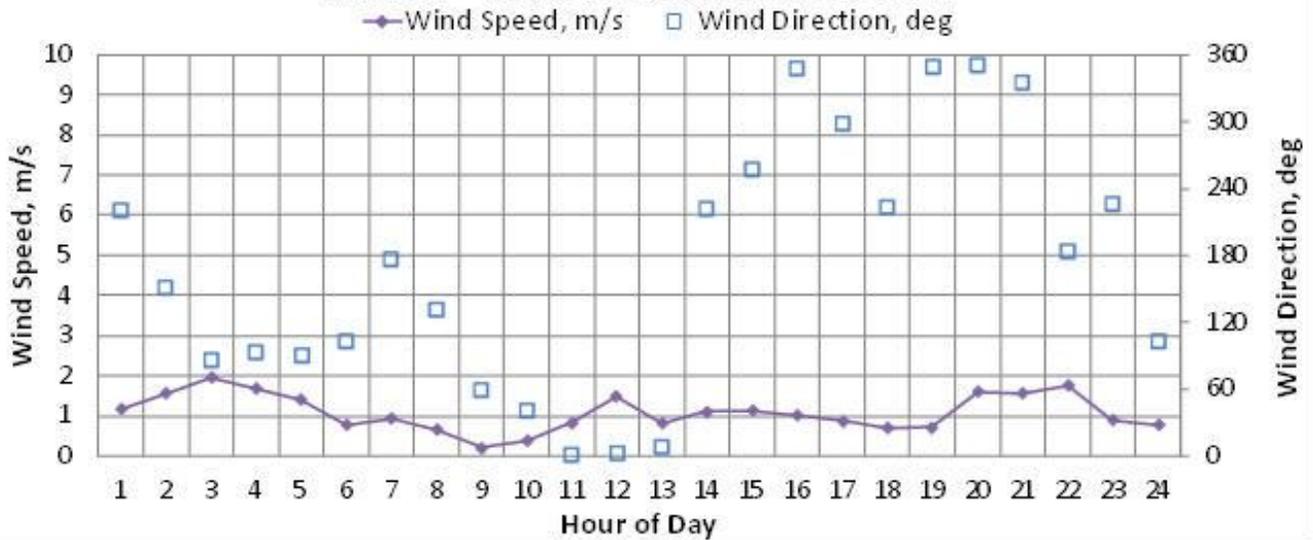
Summary of EER Evidence for Salmon Monitor Value, 186.9 $\mu\text{g}/\text{m}^3$ on 9-3-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1 with Scenarios 2, 3, 4 also probably contributing. (See Sec. 4)
	Weather Conditions:	Low pressures in northern Alberta and Saskatchewan suppress ridge across Idaho providing S-SW flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows dense smoke plumes blowing east from all local fires. Light smoke is visible in Salmon and dense smoke in the north end of the valley. Back trajectories intersect smoke and/or fire detects from the Halstead, Mustang, and McGuire Complex fires. Hourly trace shows sustained high values during the morning trapped from the previous day, with some clearing in the afternoon. Concentrations rise rapidly at 2000 with north winds and stay above 200 $\mu\text{g}/\text{m}^3$ through midnight, indicating valley flow from the Mustang Complex.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 171 to 181 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



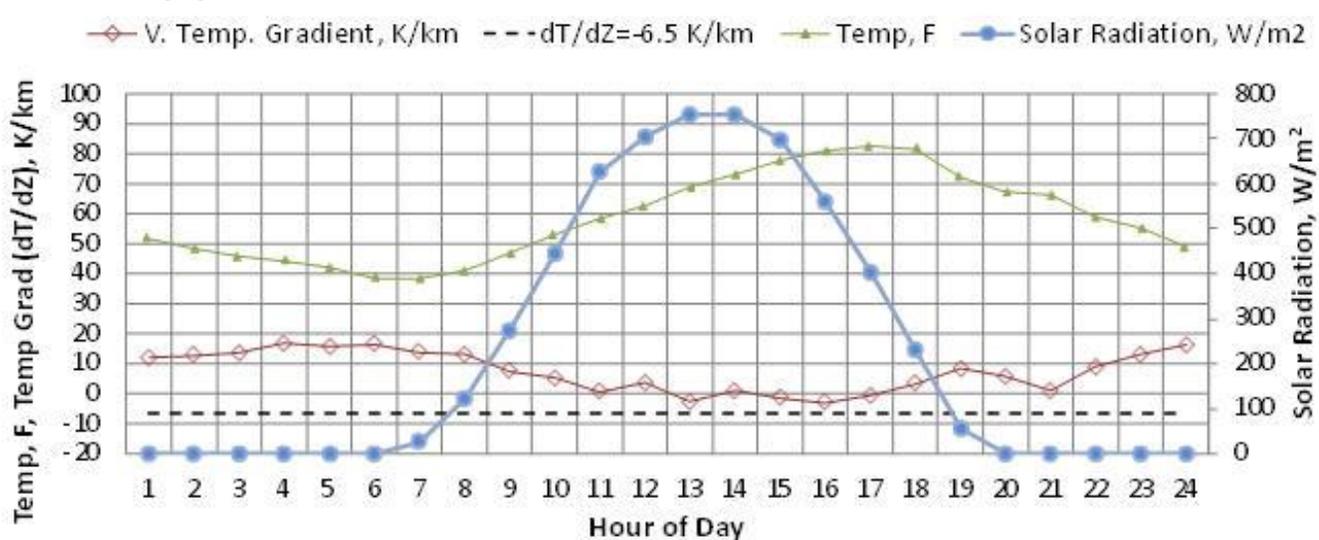
9/3/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



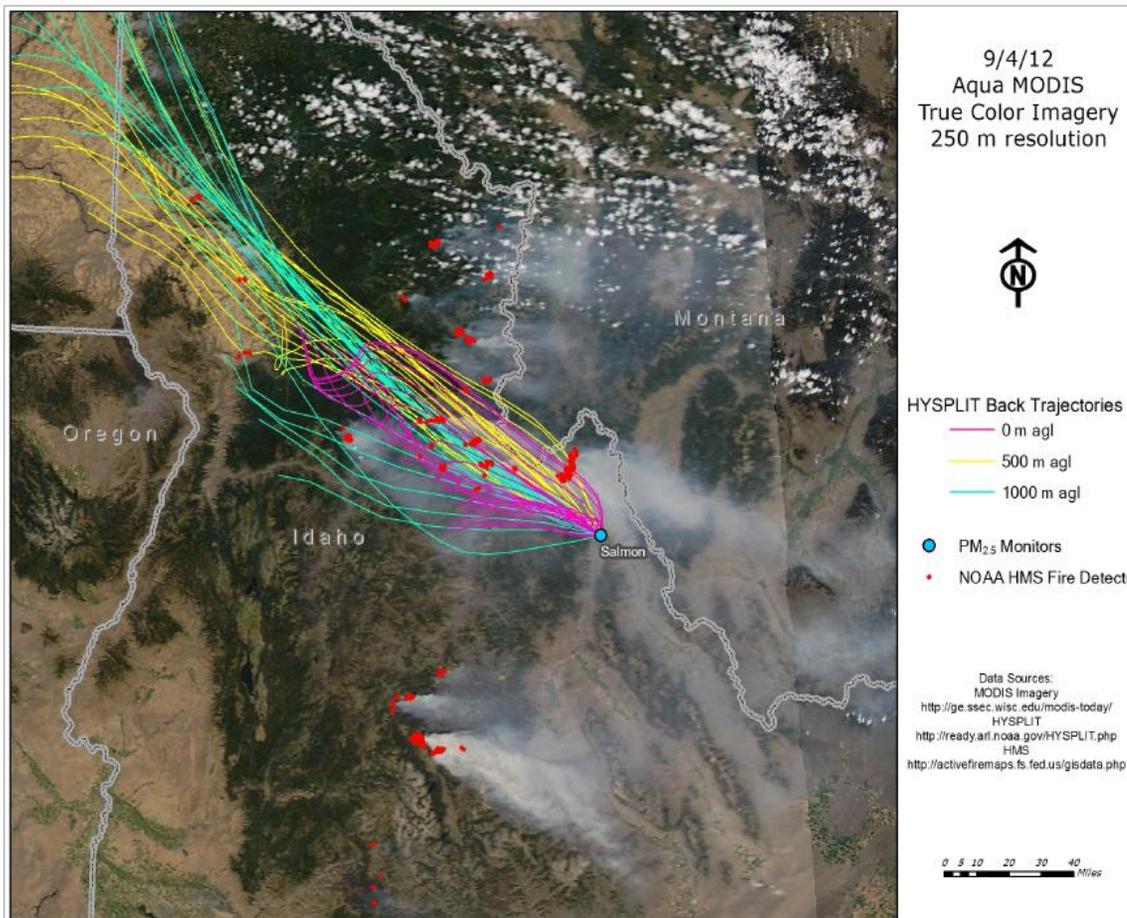
9/3/2012 Wind Speed and Wind Direction



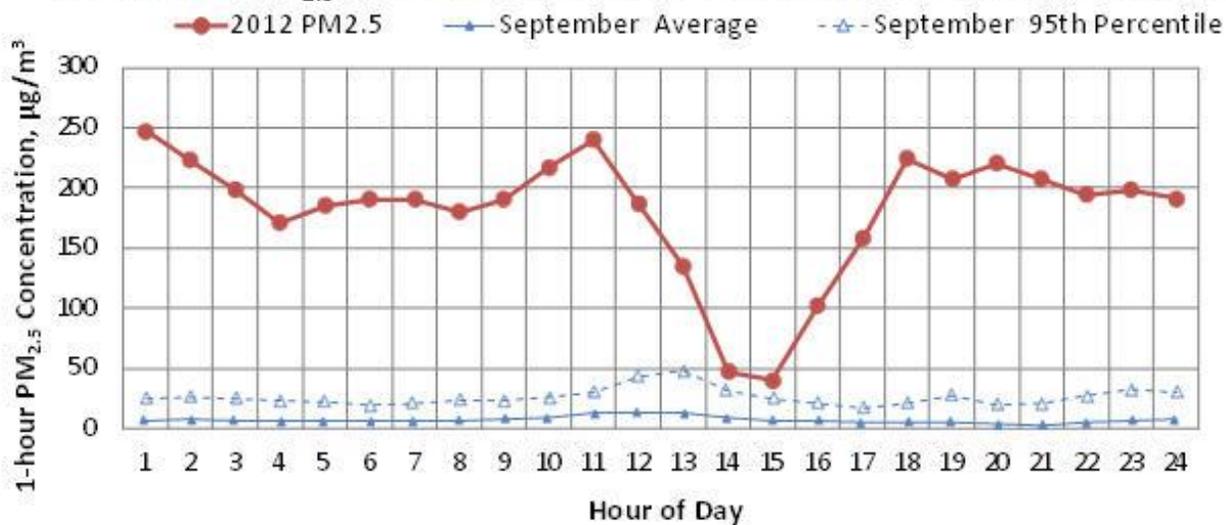
9/3/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



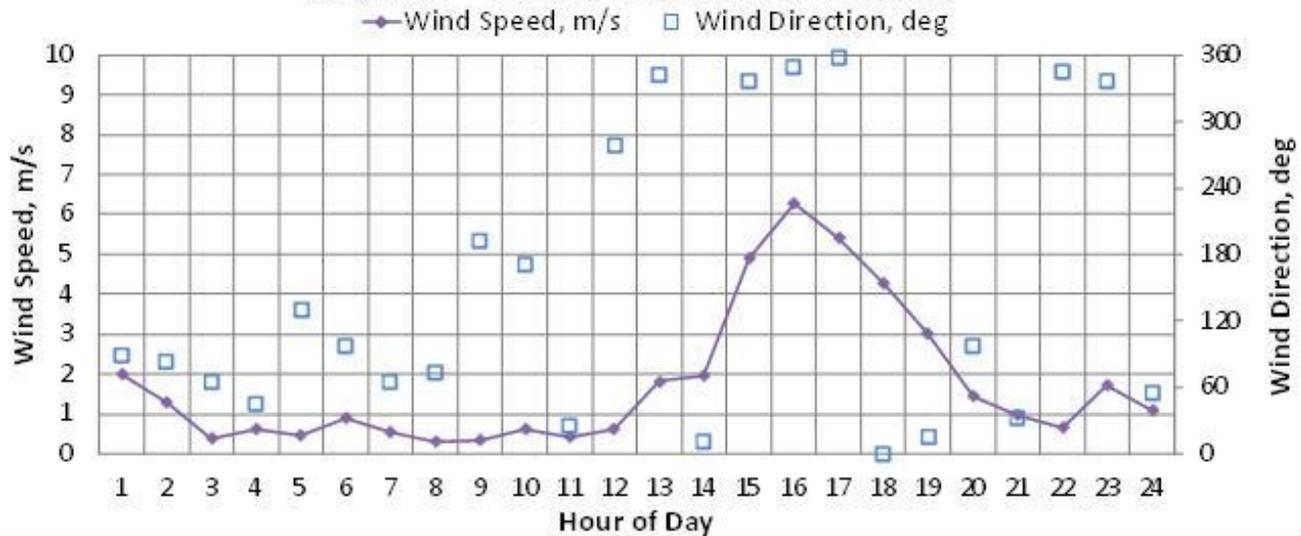
Summary of EER Evidence for Salmon Monitor Value, 182.7 $\mu\text{g}/\text{m}^3$ on 9-4-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3 (See Sec. 4)
	Weather Conditions:	Low pressure in northern Saskatchewan and Manitoba suppress ridge over Idaho with ridging upstream promoting west-northwest flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Smoke fills the Lemhi and southern Salmon River Valleys in the morning satellite image. Afternoon satellite image shows thick smoke engulfing Salmon from the north and northwest. Back trajectories intersect smoke and/or fire detects from the Mustang and McGuire Complex fires. Hourly trace shows sustained high values with light winds during the morning, with some clearing between 1400 and 1500. Concentrations rise rapidly again starting at 1600 with north winds and stay close to 200 $\mu\text{g}/\text{m}^3$ through midnight, suggesting up-valley flow from the Mustang Complex.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 167 to 177 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



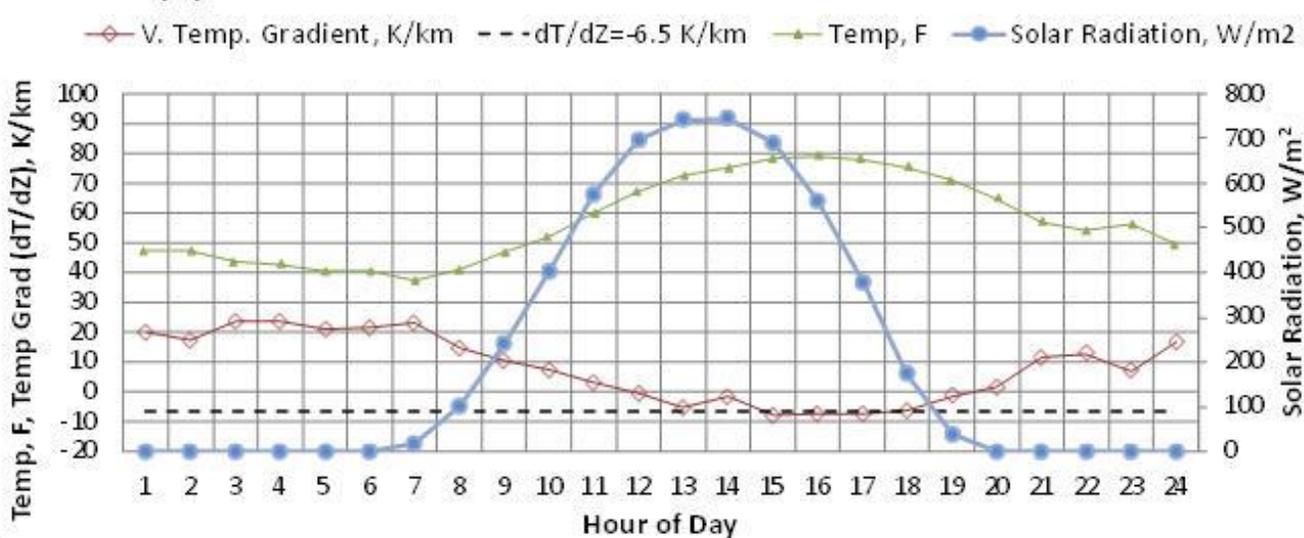
9/4/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



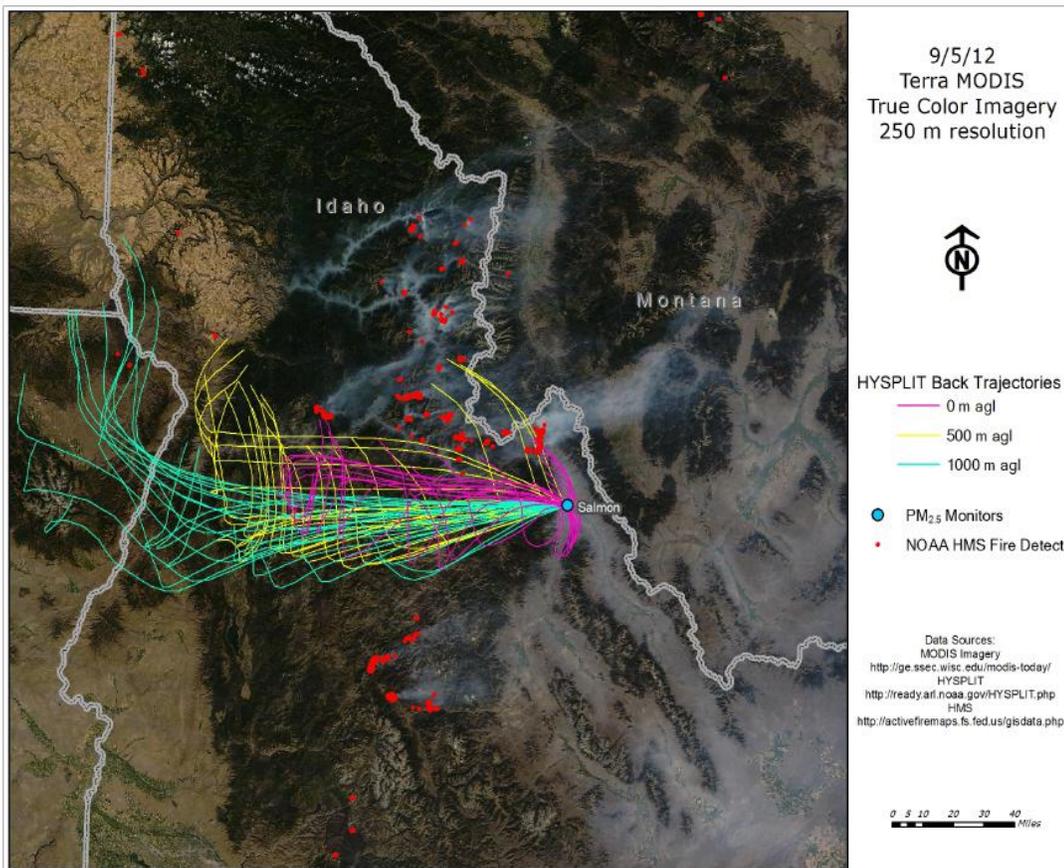
9/4/2012 Wind Speed and Wind Direction



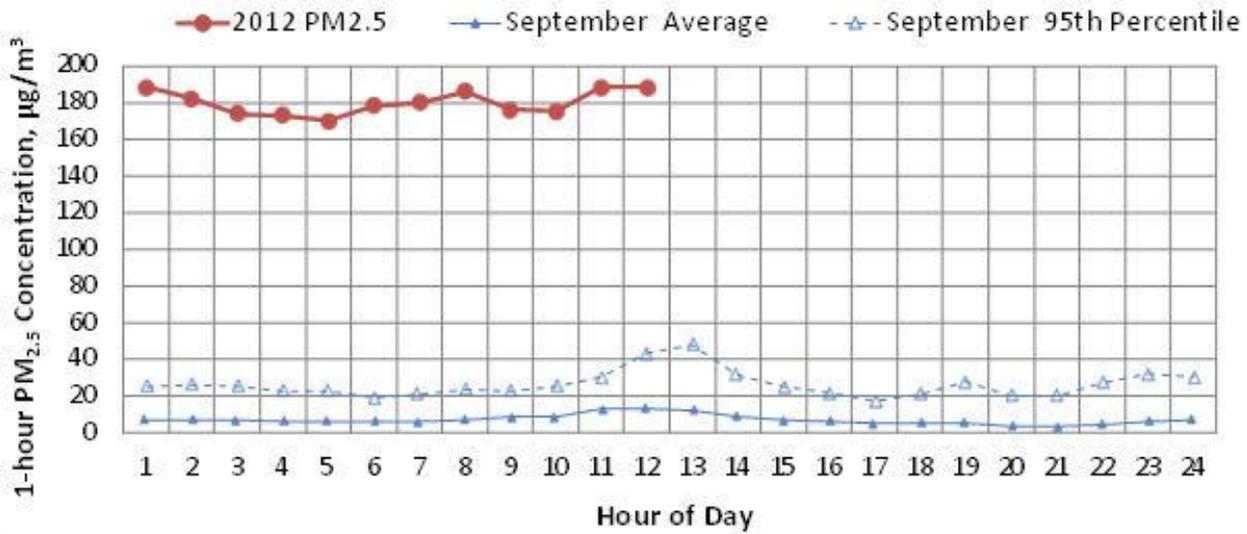
9/4/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



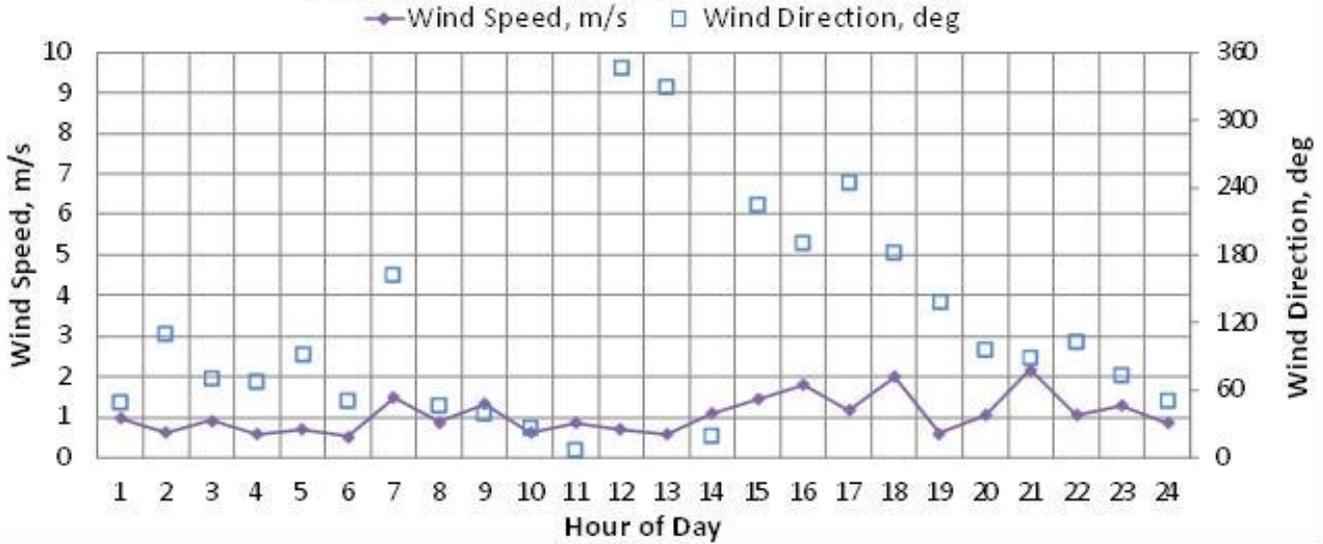
Summary of EER Evidence for Salmon Monitor Value, 97.8 $\mu\text{g}/\text{m}^3$ on 9-5-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3 (See Sec. 4)
	Weather Conditions:	Low pressure in northern Manitoba suppresses ridge over Idaho with ridging upstream promoting west-northwest flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows plumes blowing east from Halstead and Mustang and smoke filling valleys and river drainages. Back trajectories intersect smoke and/or fire detects from the Mustang and McGuire Complex fires. Surface trajectories travel north and south along the Salmon Valley, bringing drainage smoke from Halstead and Mustang to the monitor. Hourly trace shows sustained high values around 180 $\mu\text{g}/\text{m}^3$ until noon indicating Salmon remains socked in from the previous day. Wind speeds are low during the period and the inversion never breaks. Monitor data is not available after 1200 but the 24-hour concentration is at least 97.8 $\mu\text{g}/\text{m}^3$ by noon.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 81.9 to 92 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



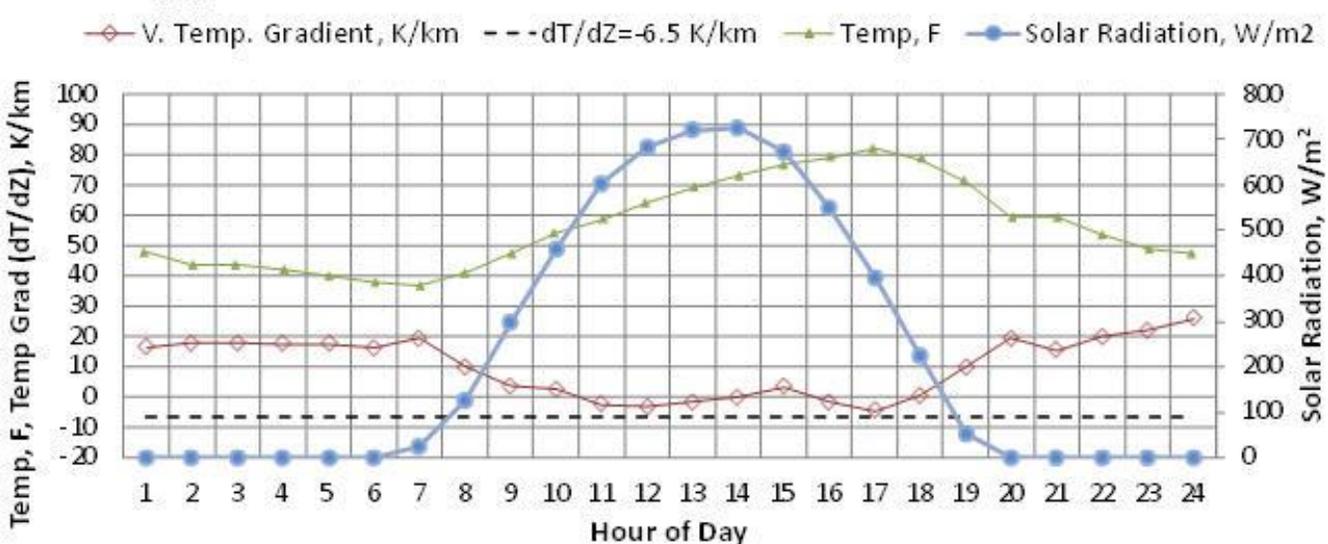
9/5/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



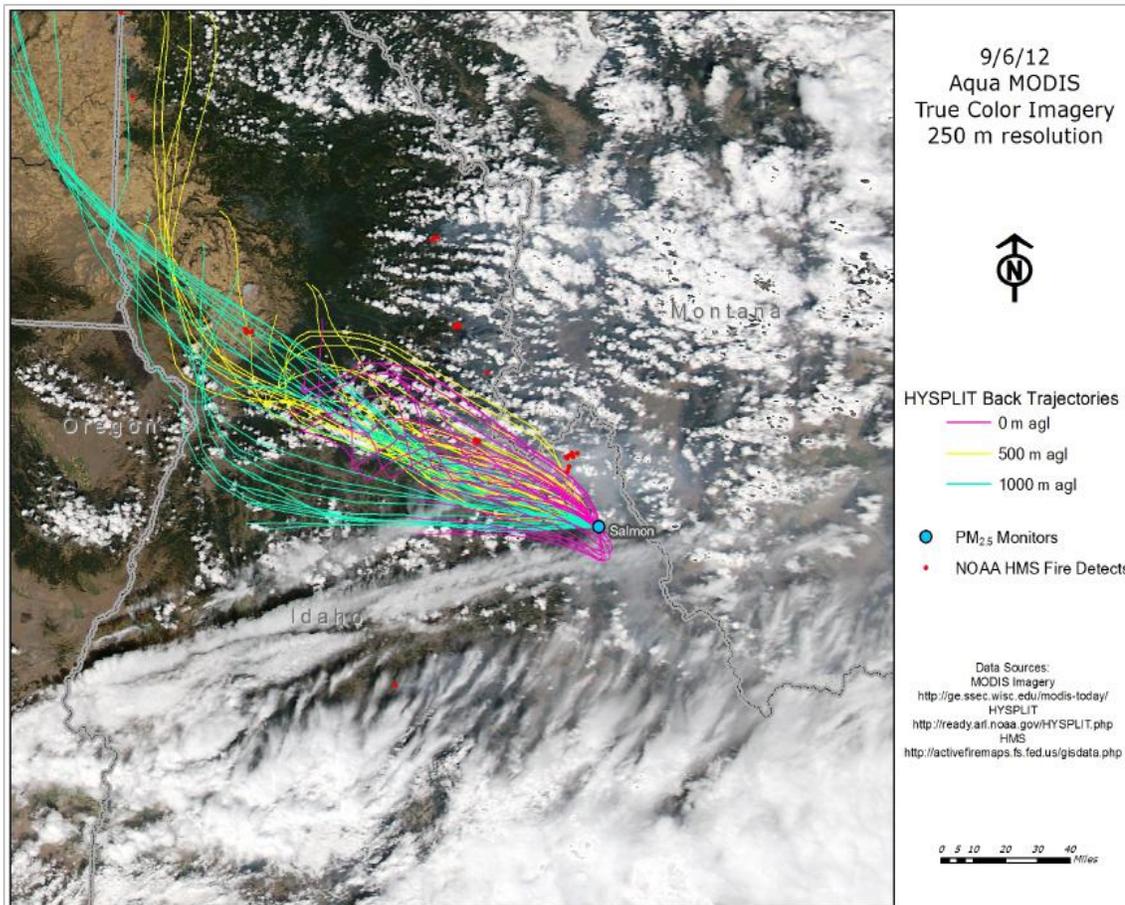
9/5/2012 Wind Speed and Wind Direction



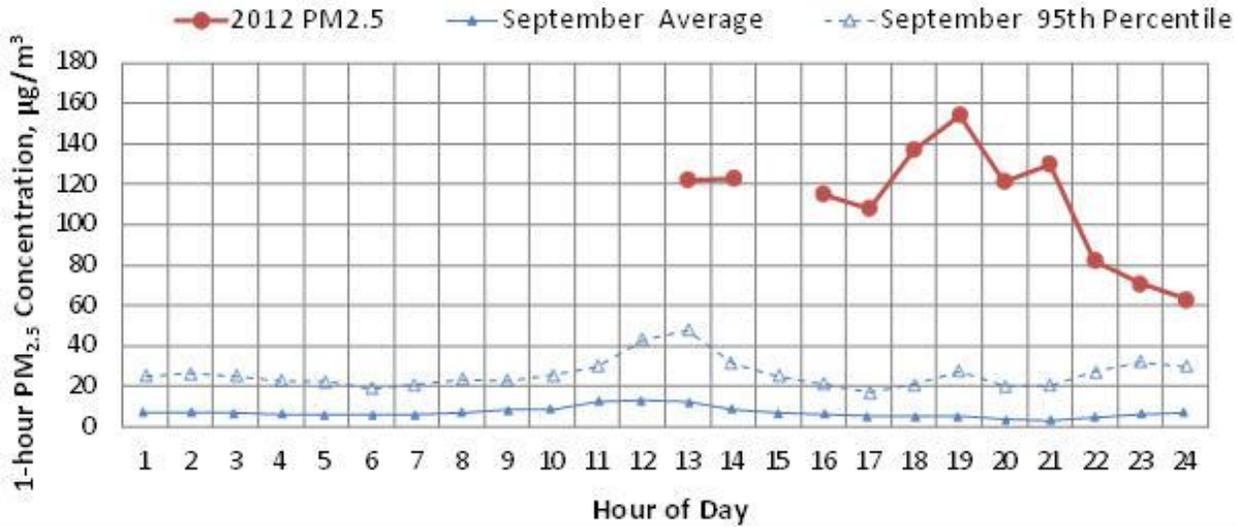
9/5/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



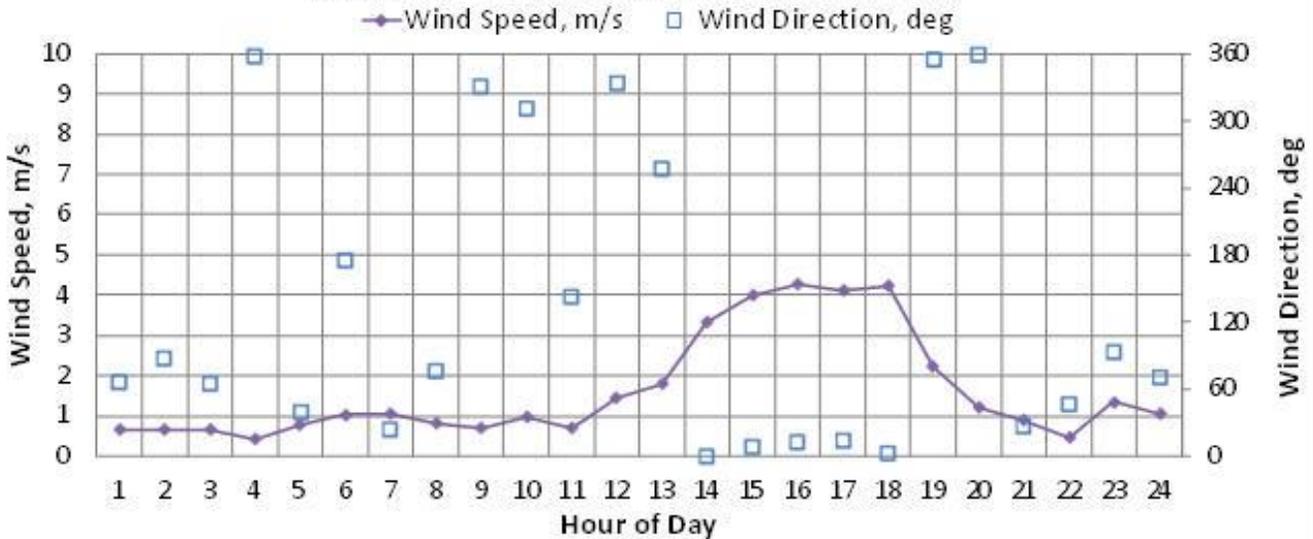
Summary of EER Evidence for Salmon Monitor Value, 48.4 $\mu\text{g}/\text{m}^3$ on 9-6-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Off shore low weakens into open wave and forces strong steering of meridional to zonal flow across central Idaho.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning and afternoon satellite images show smoke mixed with clouds. Back trajectories intersect smoke and/or fire detects from the Mustang Complex. Smoke is visible in Salmon. Hourly trace is missing data for half the day, the recorded hours are all above the 24-hour NAAQS. Afternoon winds from the north bring elevated concentrations to Salmon 1800 to 2100.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 32.5 to 42.6 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



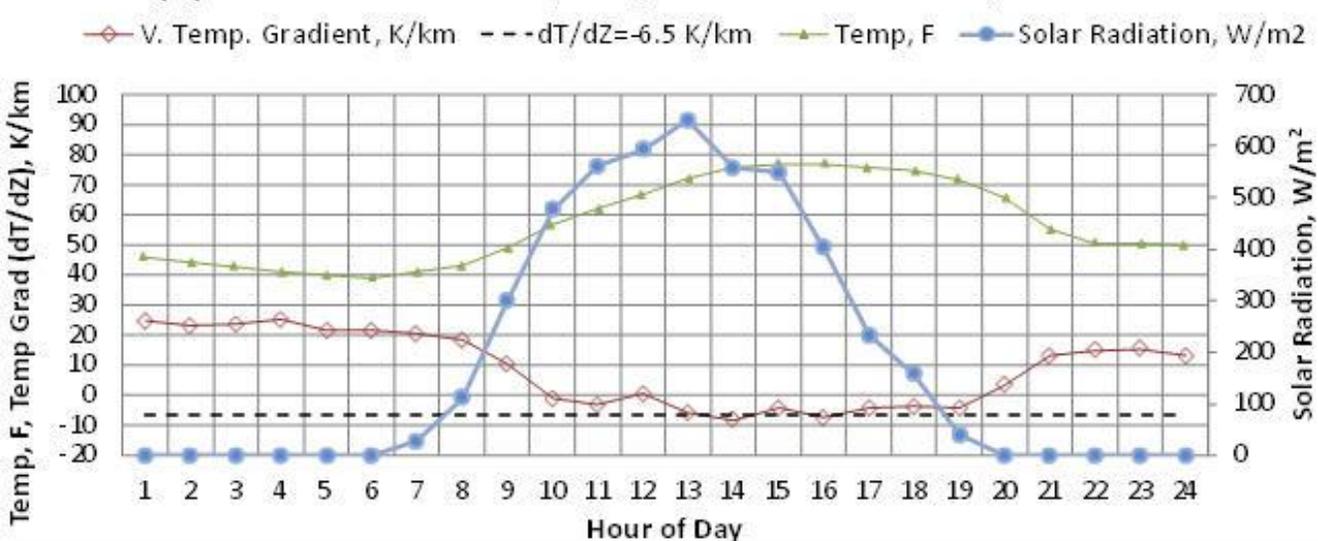
9/6/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



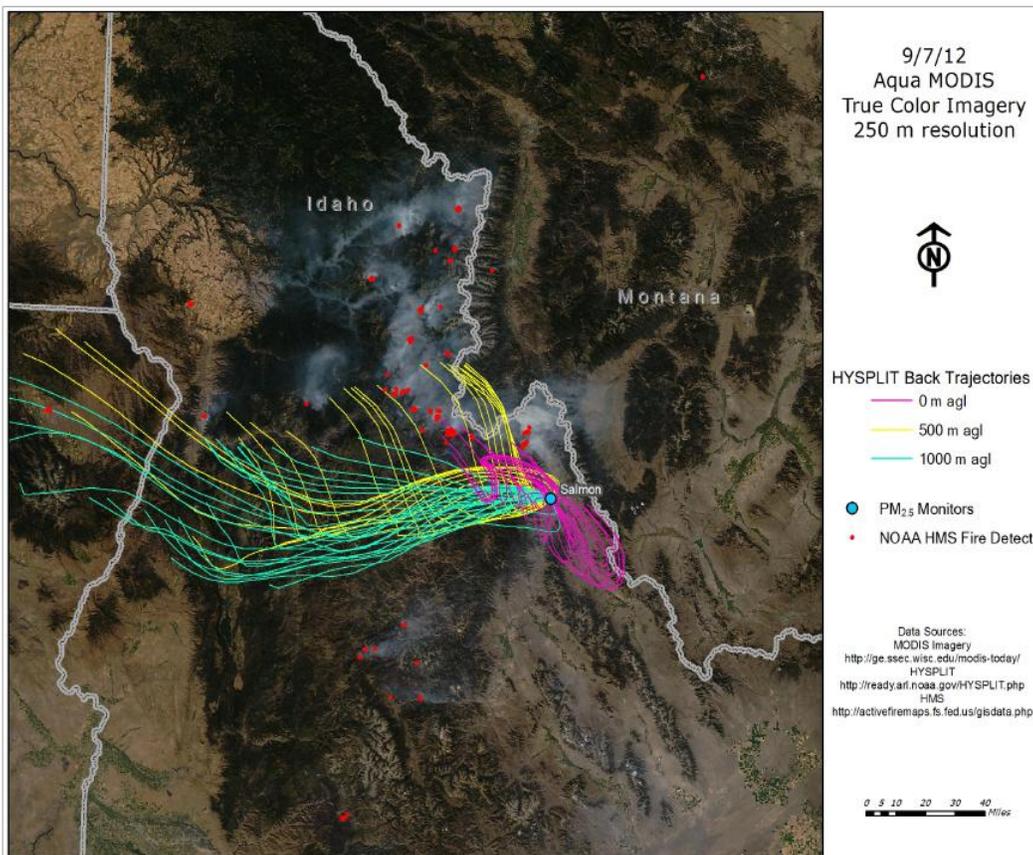
9/6/2012 Wind Speed and Wind Direction



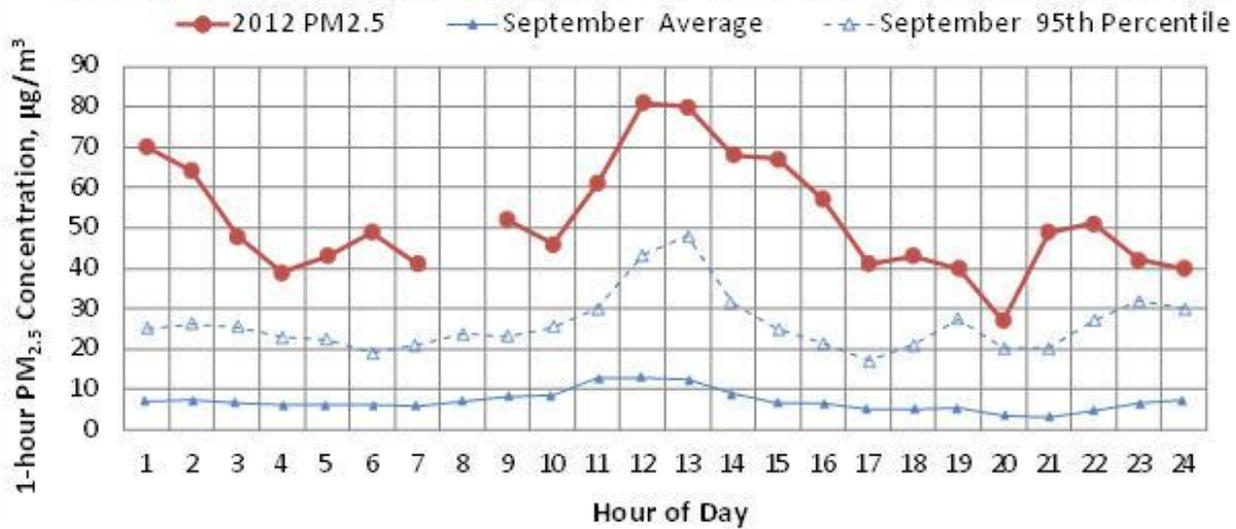
9/6/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



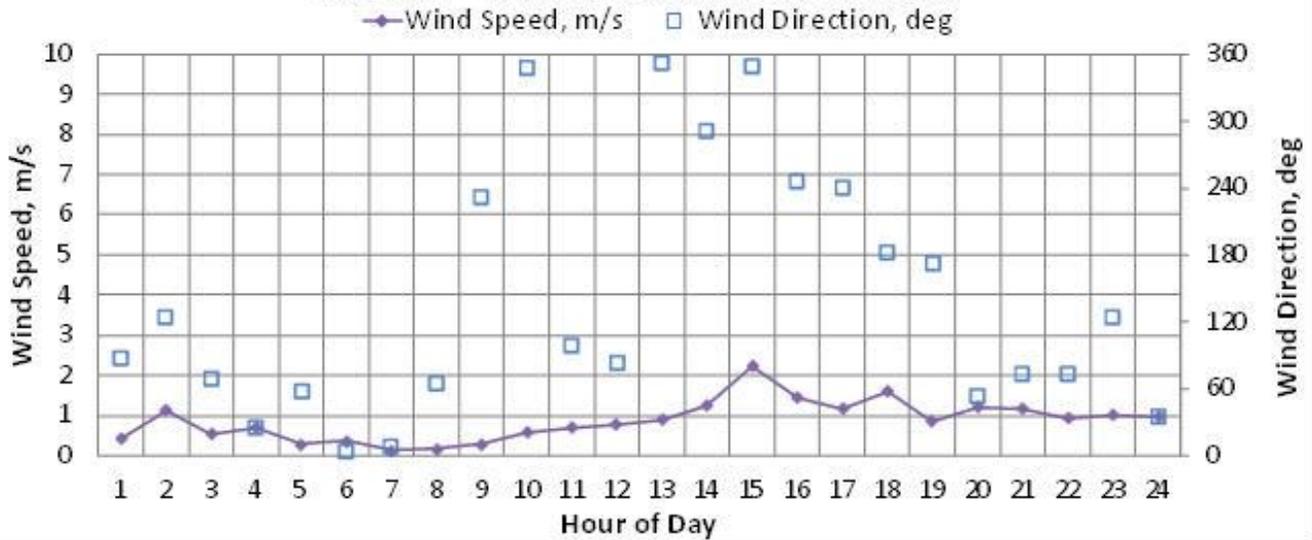
Summary of EER Evidence for Salmon Monitor Value, 53.1 $\mu\text{g}/\text{m}^3$ on 9-7-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Weak Rex block develops offshore limiting wind speeds aloft and generally allowing orographically-driven dynamics to thrive.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows smoke organized not into plumes but displaying seep and creep behavior that occurs with low winds. Back trajectories intersect smoke and/or fire detects from the Mustang, McGuire, and Sheep fires. Surface trajectory does not travel far during the period and wanders in various directions, providing further evidence of stagnant conditions. Temperature inversion never breaks. Hourly trace is generally elevated throughout the day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 37.2 to 47.3 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



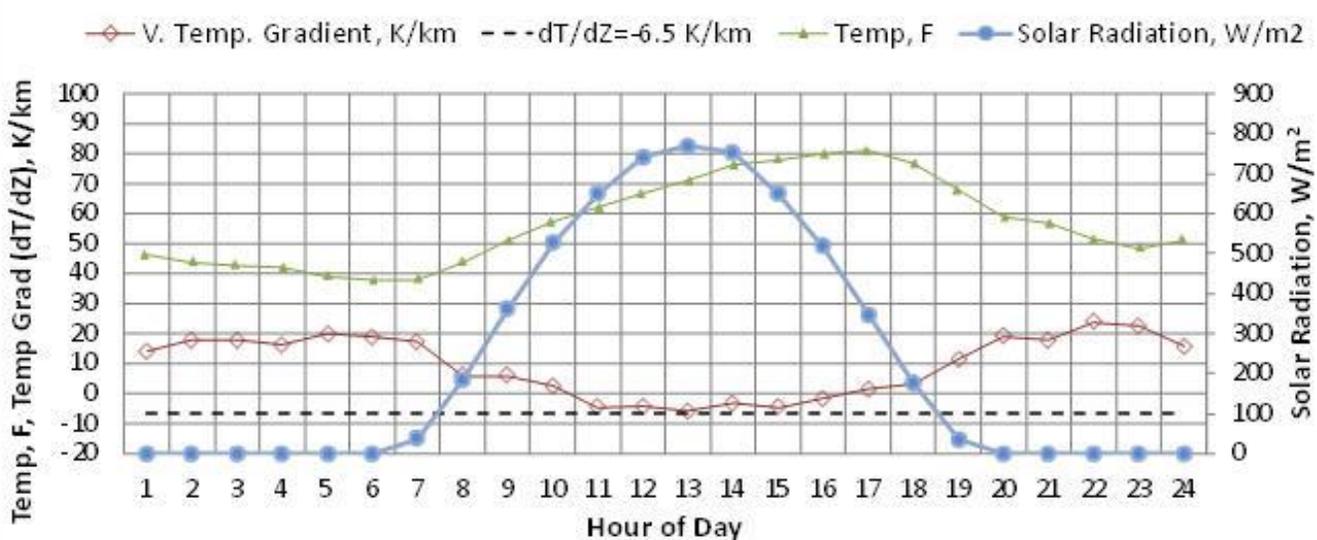
9/7/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



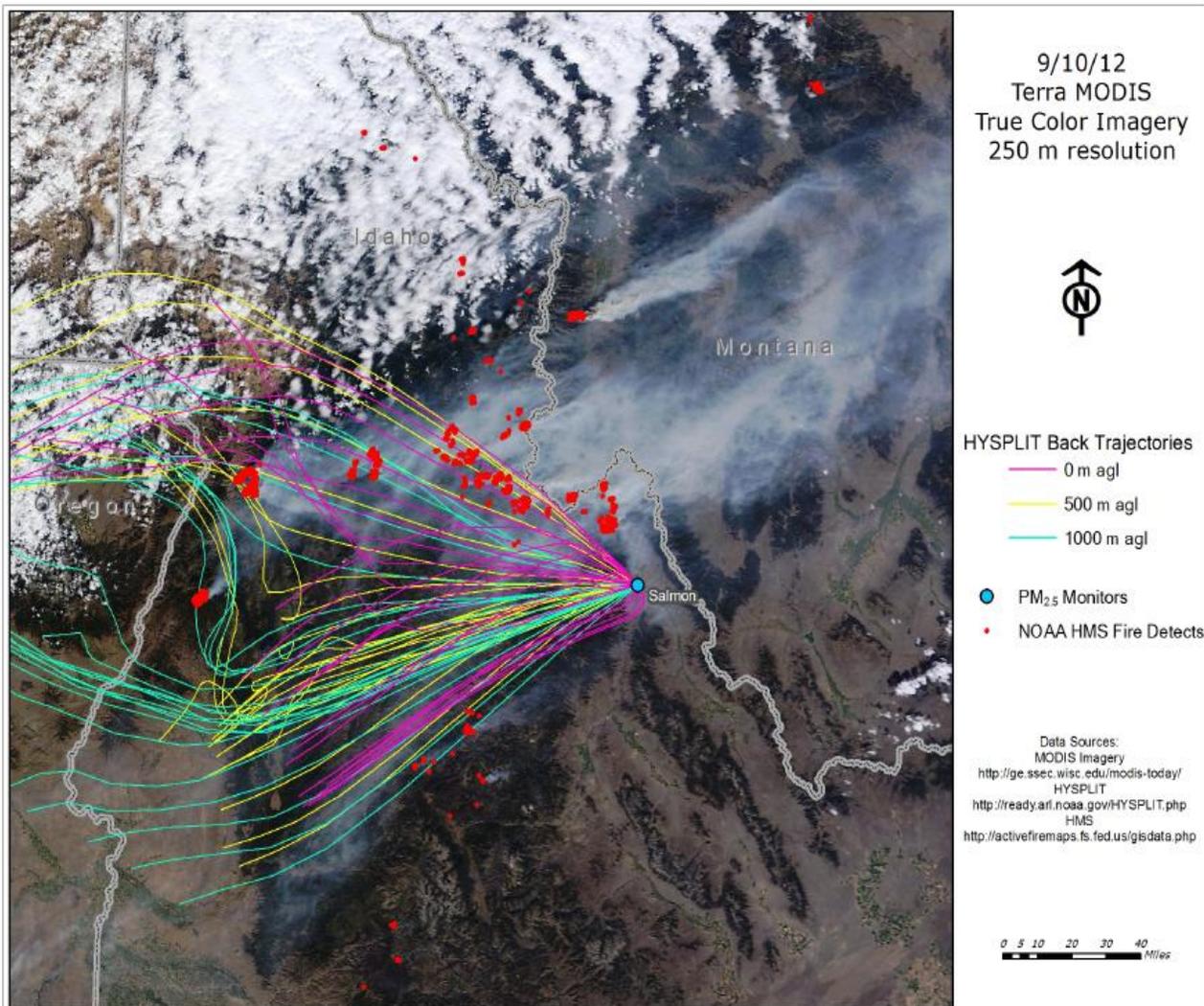
9/7/2012 Wind Speed and Wind Direction



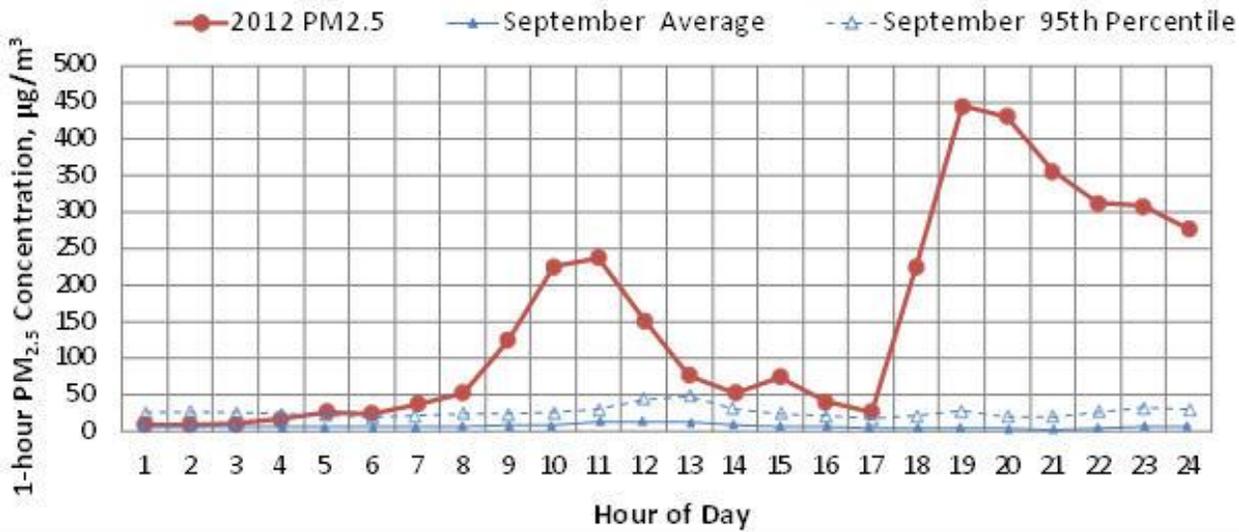
9/7/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



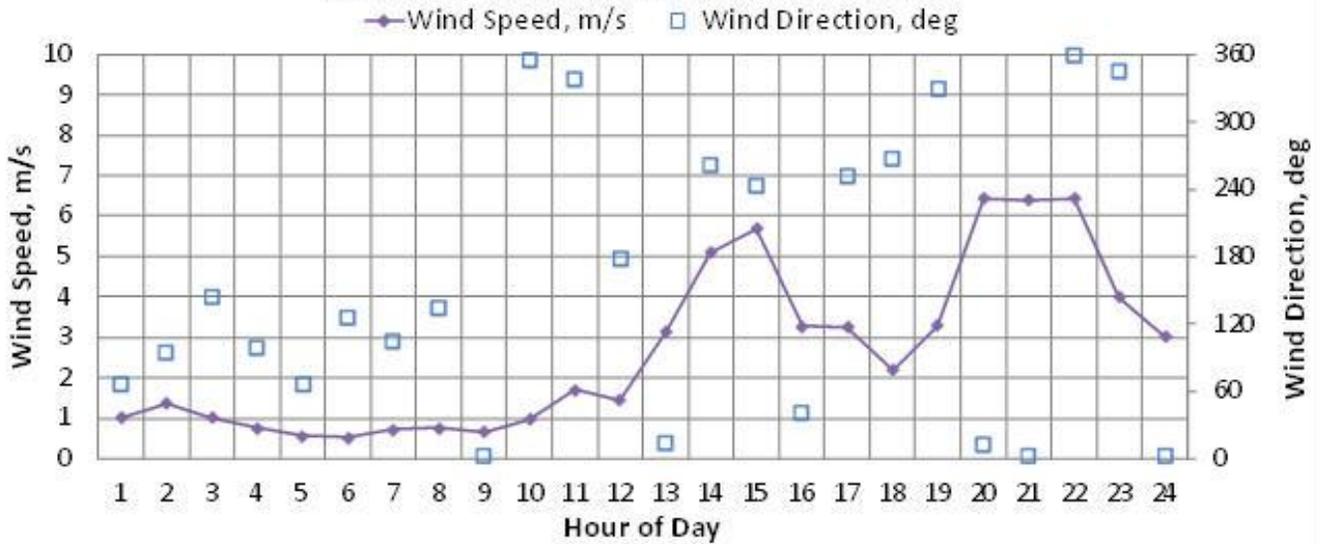
Summary of EER Evidence for Salmon Monitor Value, 136.4 $\mu\text{g}/\text{m}^3$ on 9-10-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1 with potential contributions from Scenarios 2, 3, 4 (See Sec. 4)
	Weather Conditions:	Trough axis along the Pacific NW coast provides southwest-west flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows dense smoke from the Mustang fire fumigating the end of the valley north of Salmon. Light smoke is visible in Salmon. Back trajectories intersect smoke and/or fire detects from the Mustang, McGuire, Sheep, Wesley, and Halstead fires. Hourly trace indicates a possible plume hit during the late morning and up valley flow from the north after 1700.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 120 to 131 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



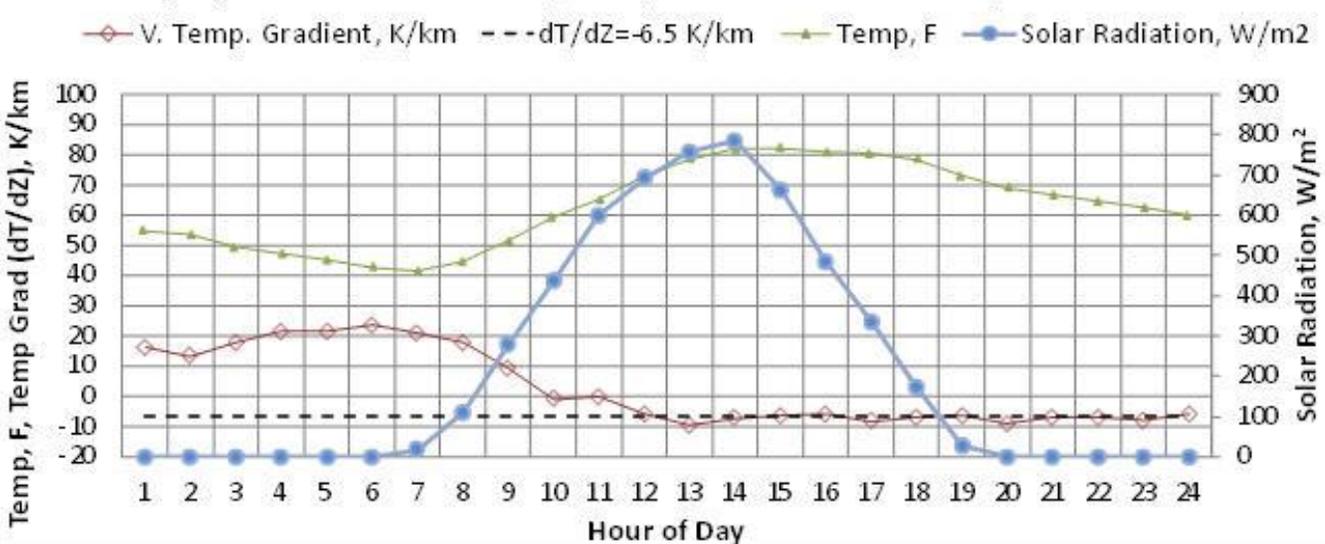
9/10/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



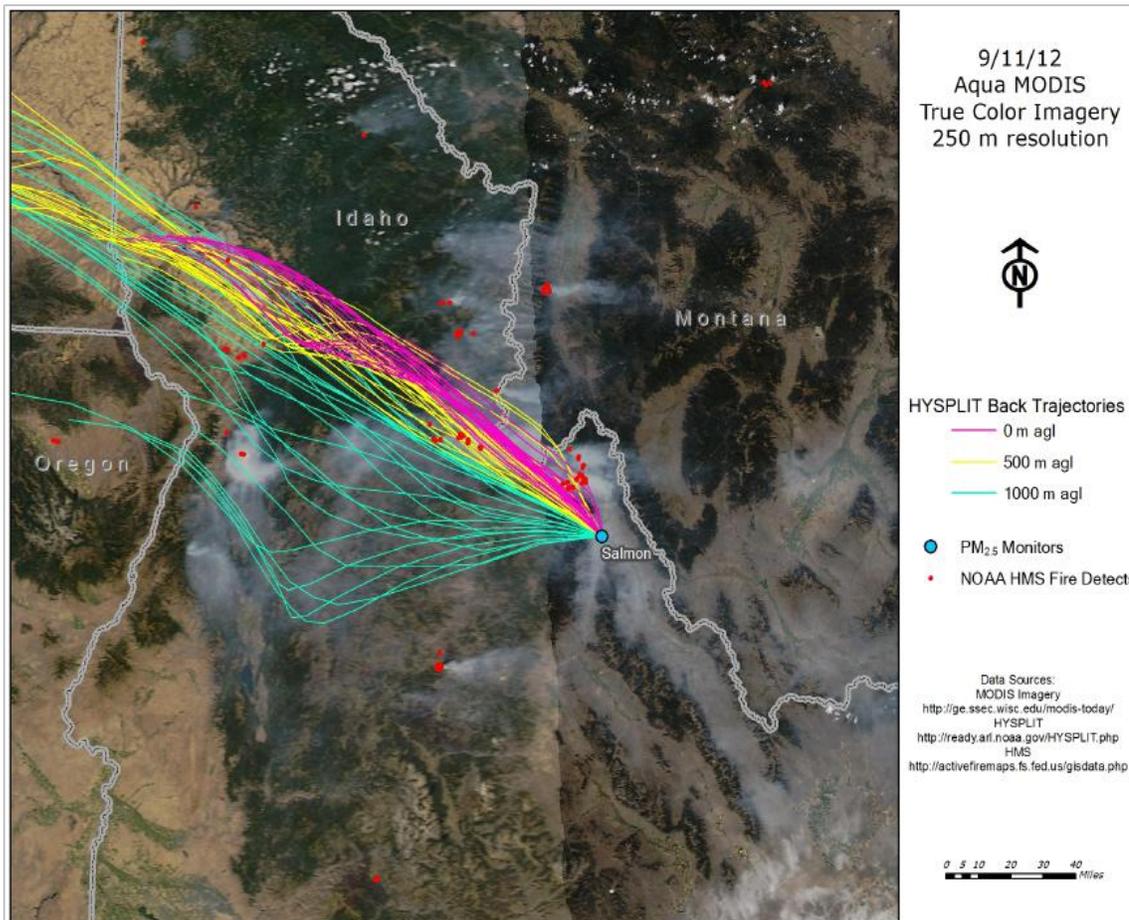
9/10/2012 Wind Speed and Wind Direction



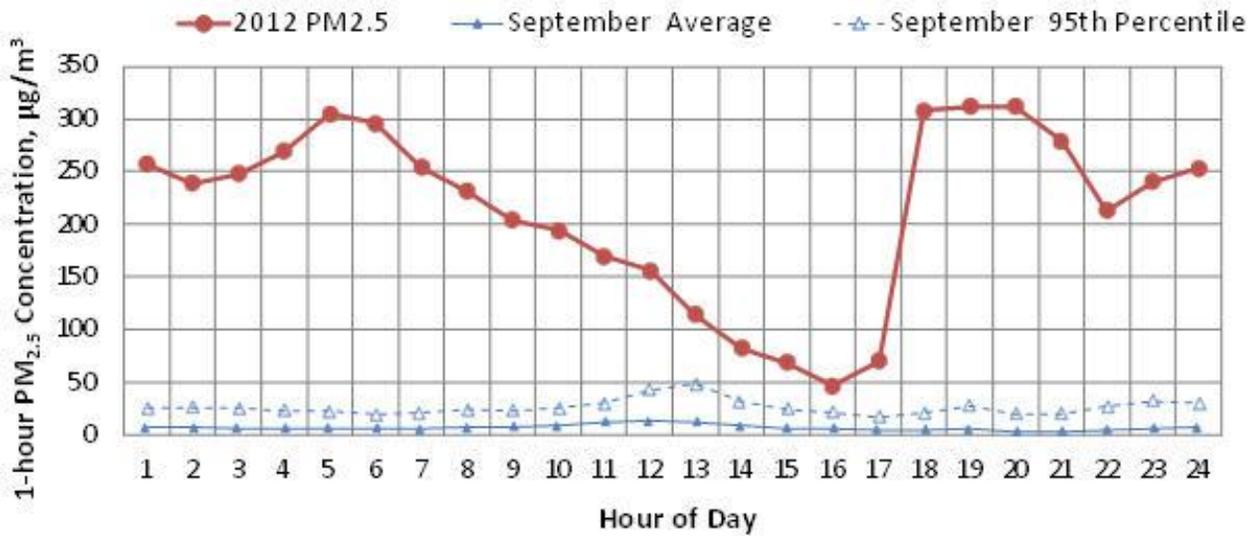
9/10/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



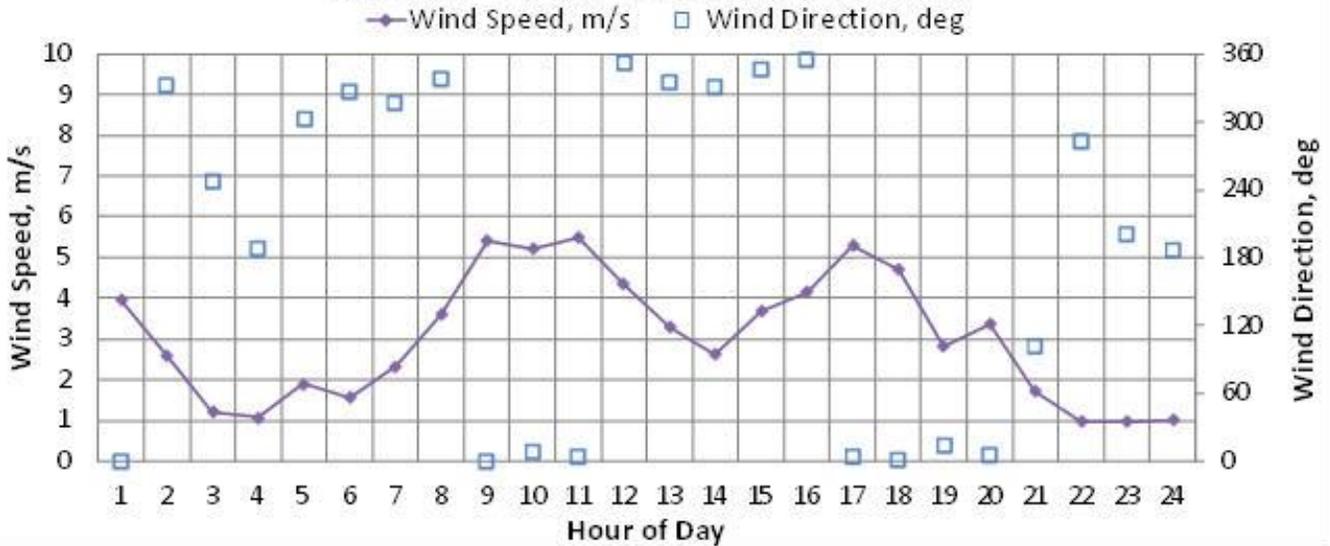
Summary of EER Evidence for Salmon Monitor Value, 214.3 $\mu\text{g}/\text{m}^3$ on 9-11-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3, 4 (See Sec. 4)
	Weather Conditions:	Trough axis moves onshore bringing west-northwest transport flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite shows smoke trapped in Salmon from the previous day. Afternoon satellite image shows smoke in Salmon and surrounding valleys, most dense in the north end of the valley. Back trajectories intersect smoke and/or fire detects from the Mustang, McGuire, Sheep, and Wesley fires. Hourly trace shows extremely high values in the morning, declining throughout the day until north valley flows bring the dense smoke back into Salmon around 1800 where it again becomes trapped.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 198 to 208 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



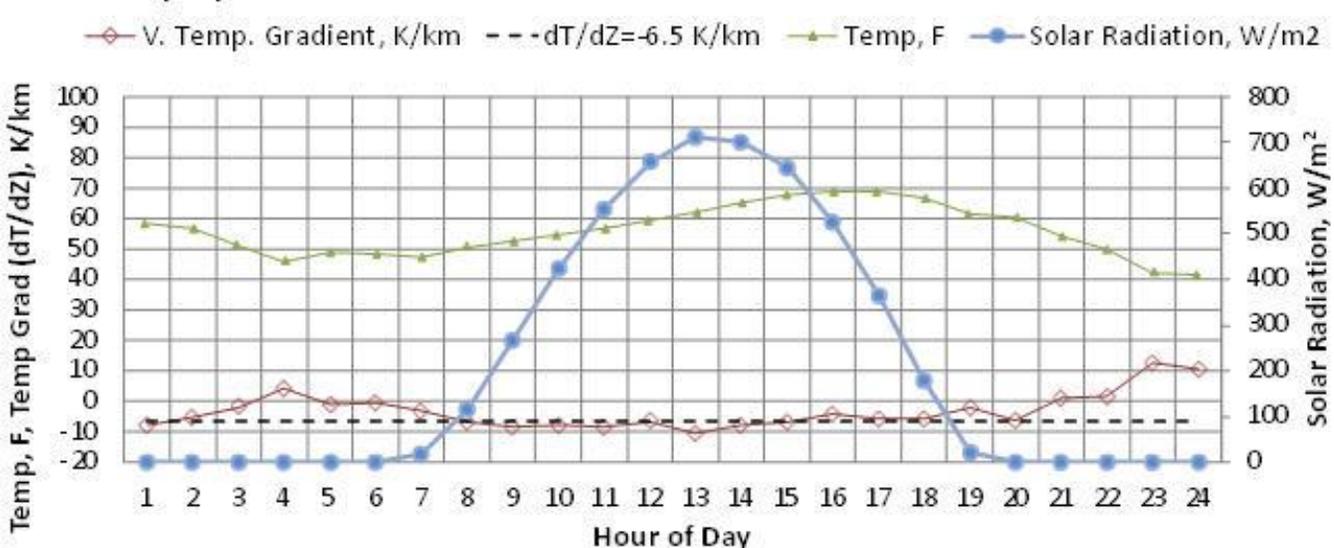
9/11/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



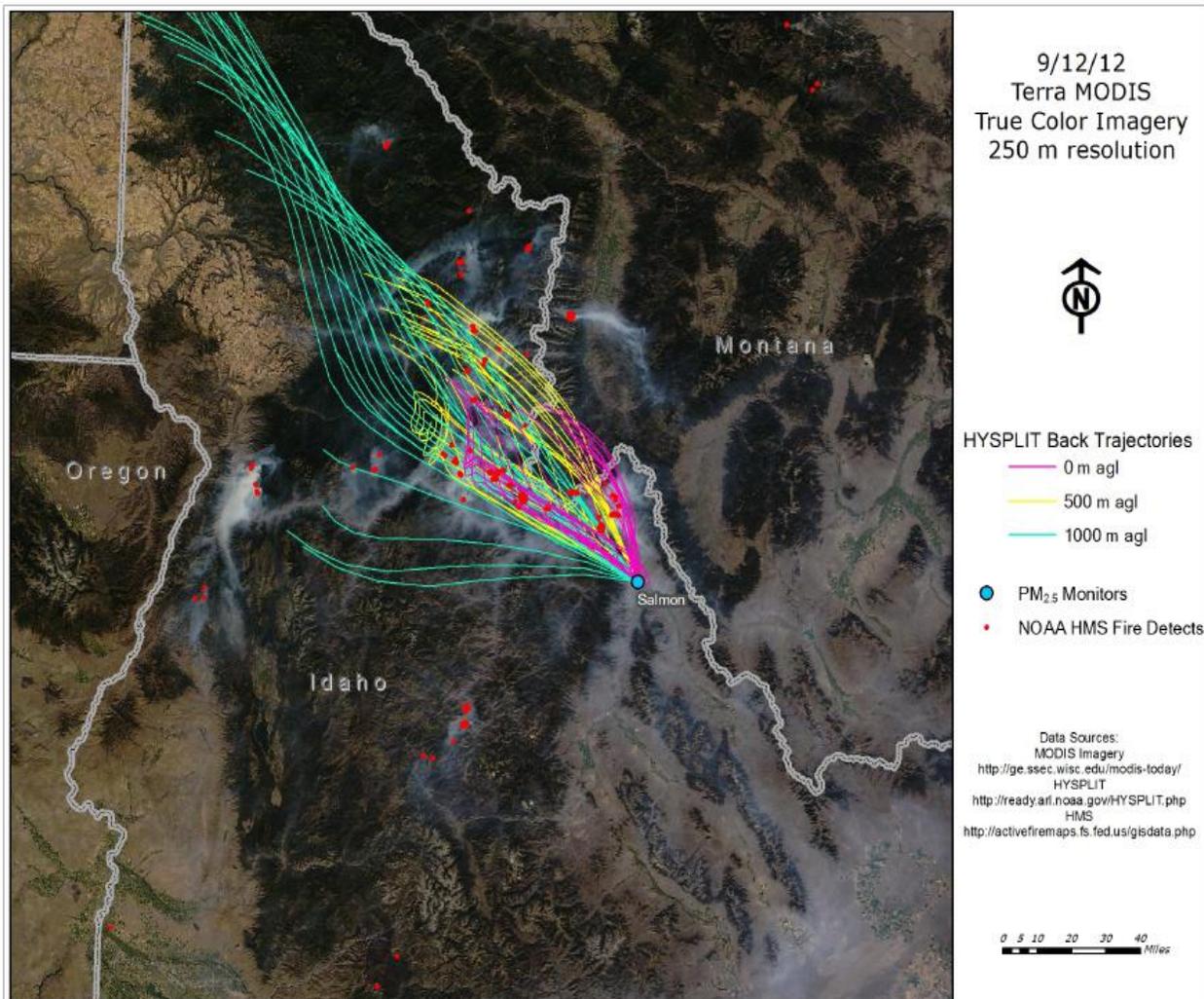
9/11/2012 Wind Speed and Wind Direction



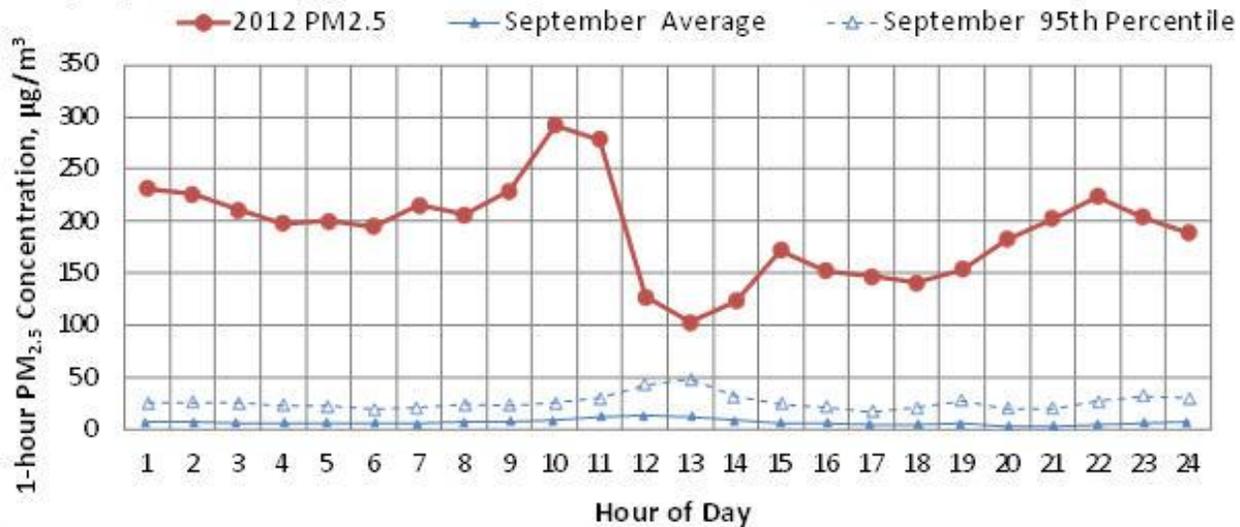
9/11/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



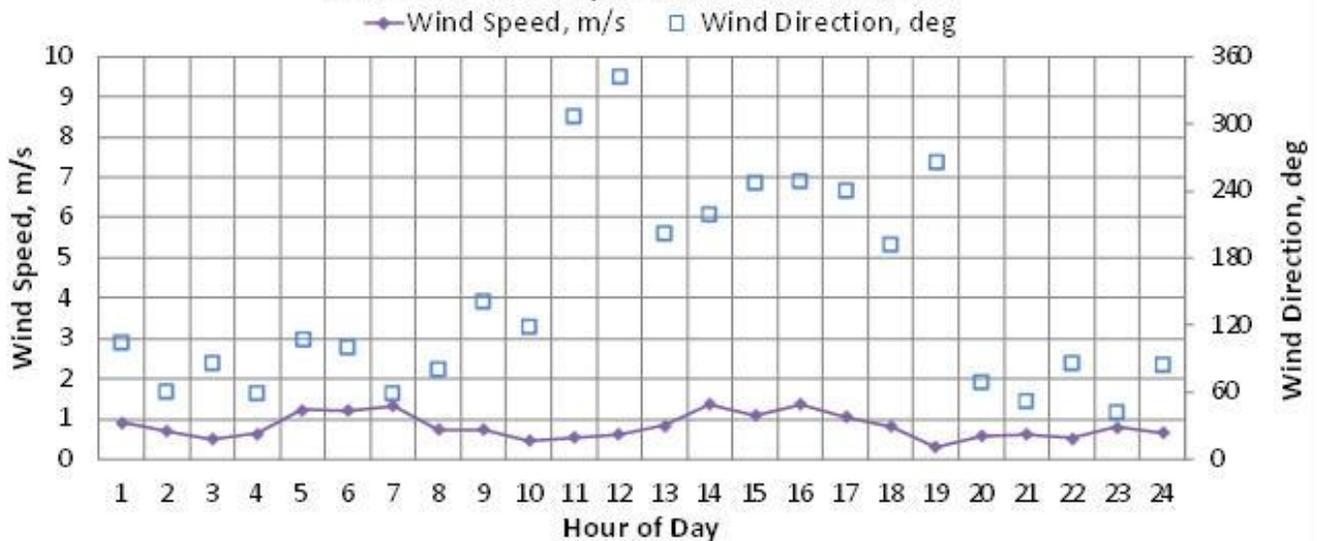
Summary of EER Evidence for Salmon Monitor Value, 194.4 $\mu\text{g}/\text{m}^3$ on 9-12-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Trough axis now located east of Idaho bringing northwest flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows smoke in Salmon and surrounding valleys. Back trajectories intersect smoke and/or fire detects from the Mustang, McGuire, and Powell SBW fires. Hourly trace shows typical pattern on days that drainage flow dominates, high in morning and night, with some clearing midday. Plume hit is evident at 1000.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 178 to 189 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



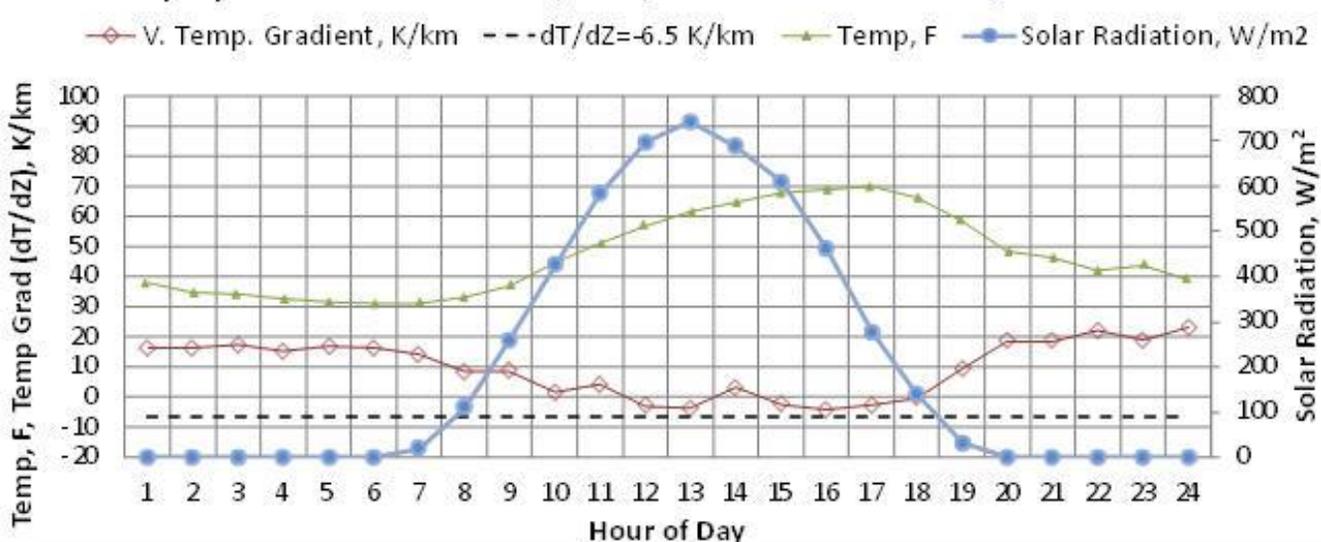
9/12/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



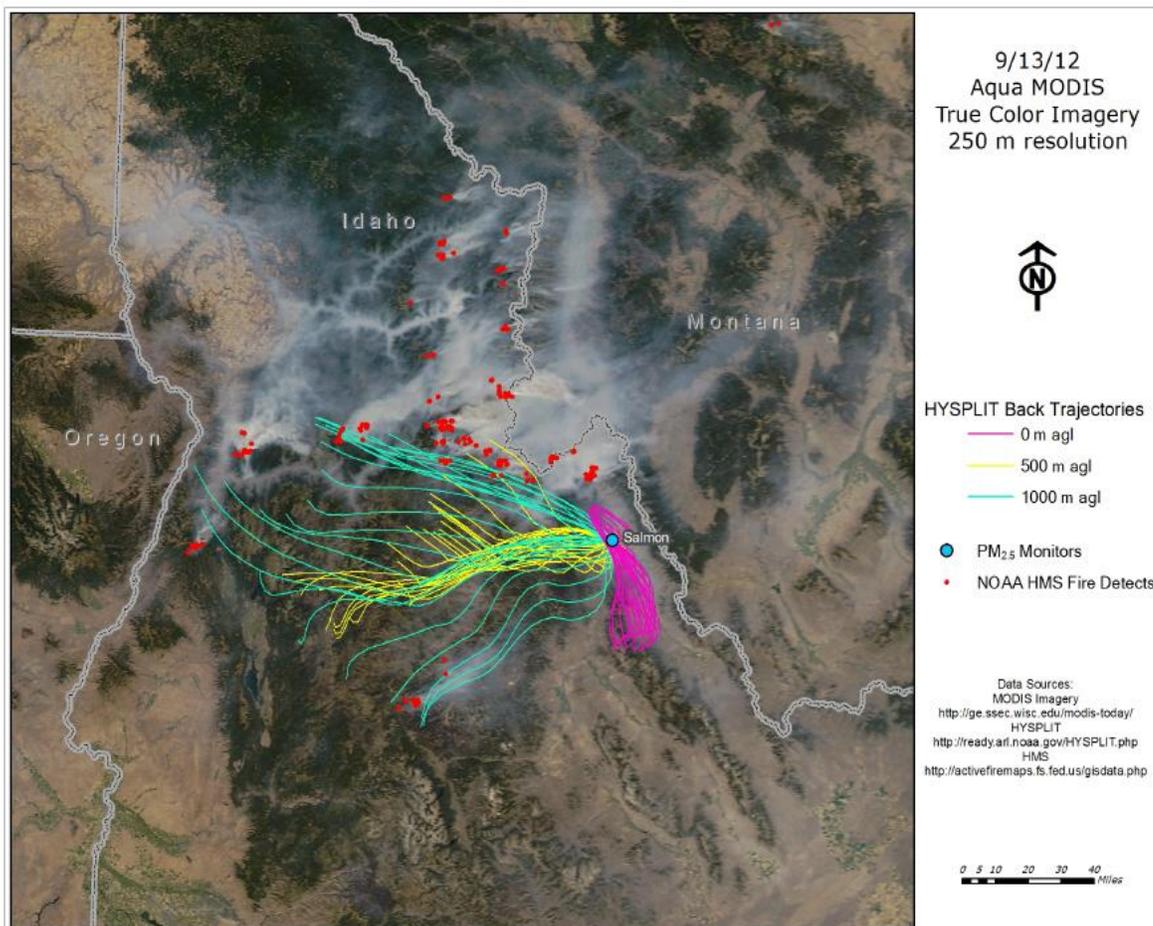
9/12/2012 Wind Speed and Wind Direction



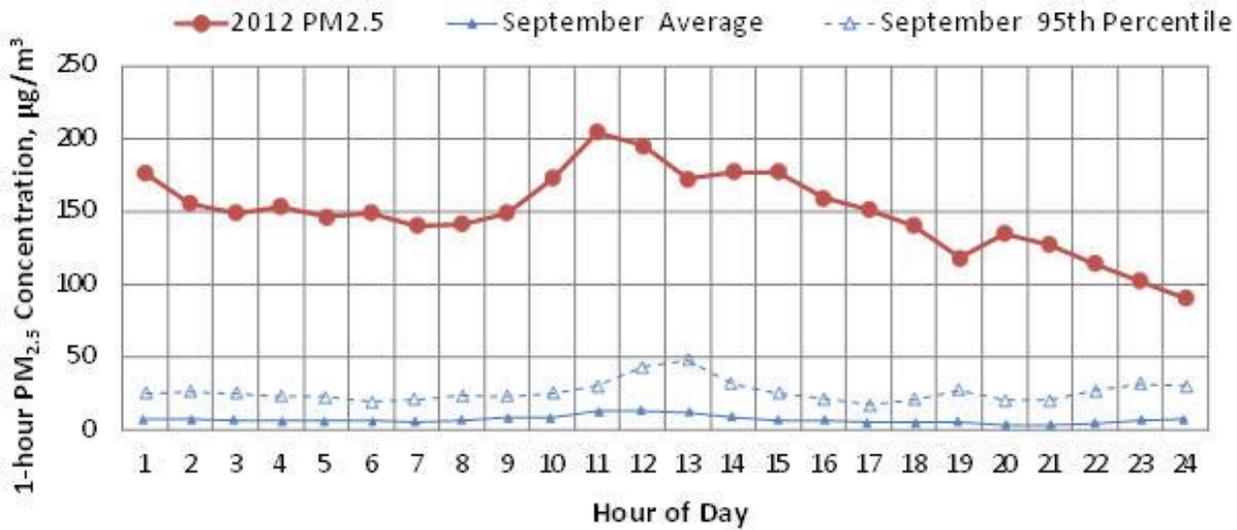
9/12/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



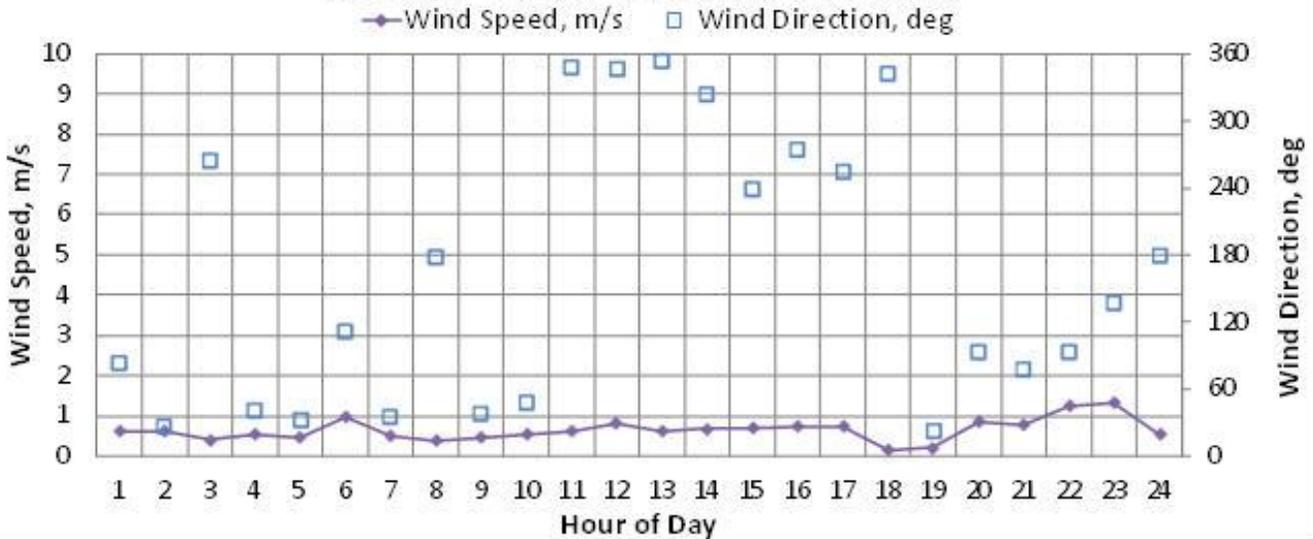
Summary of EER Evidence for Salmon Monitor Value, 153.7 $\mu\text{g}/\text{m}^3$ on 9-13-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3, 4 (See Sec. 4)
	Weather Conditions:	High pressure develops over NV and most of ID causing low wind speeds and allowing oropgrahically-driven dynamics to dominate.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image looks more like typical morning image. Inversion does not break and stagnant conditions trap smoke in valleys. Trajectories do not travel far in 24-hour period. Back trajectories intersect smoke and/or fire detects from the Halstead, Mustang, McGuire, and Wesley fires. Surface trajectory swings north and south in Salmon Valley. Hourly trace shows sustained high concentrations throughout the day, with little clearing.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 138 to 148 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



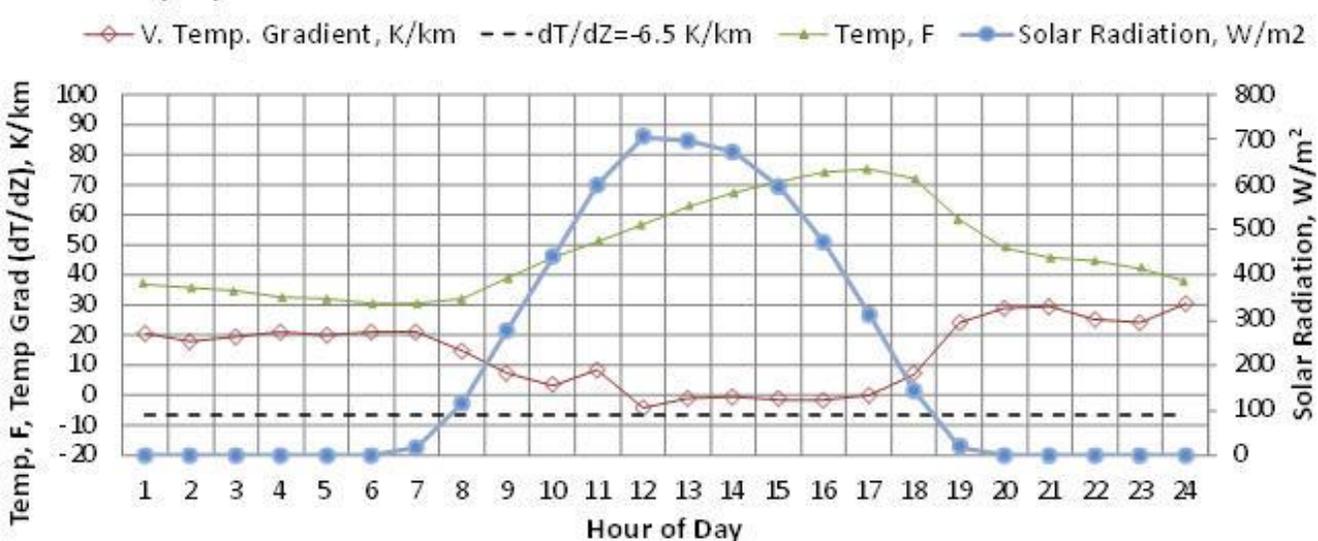
9/13/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



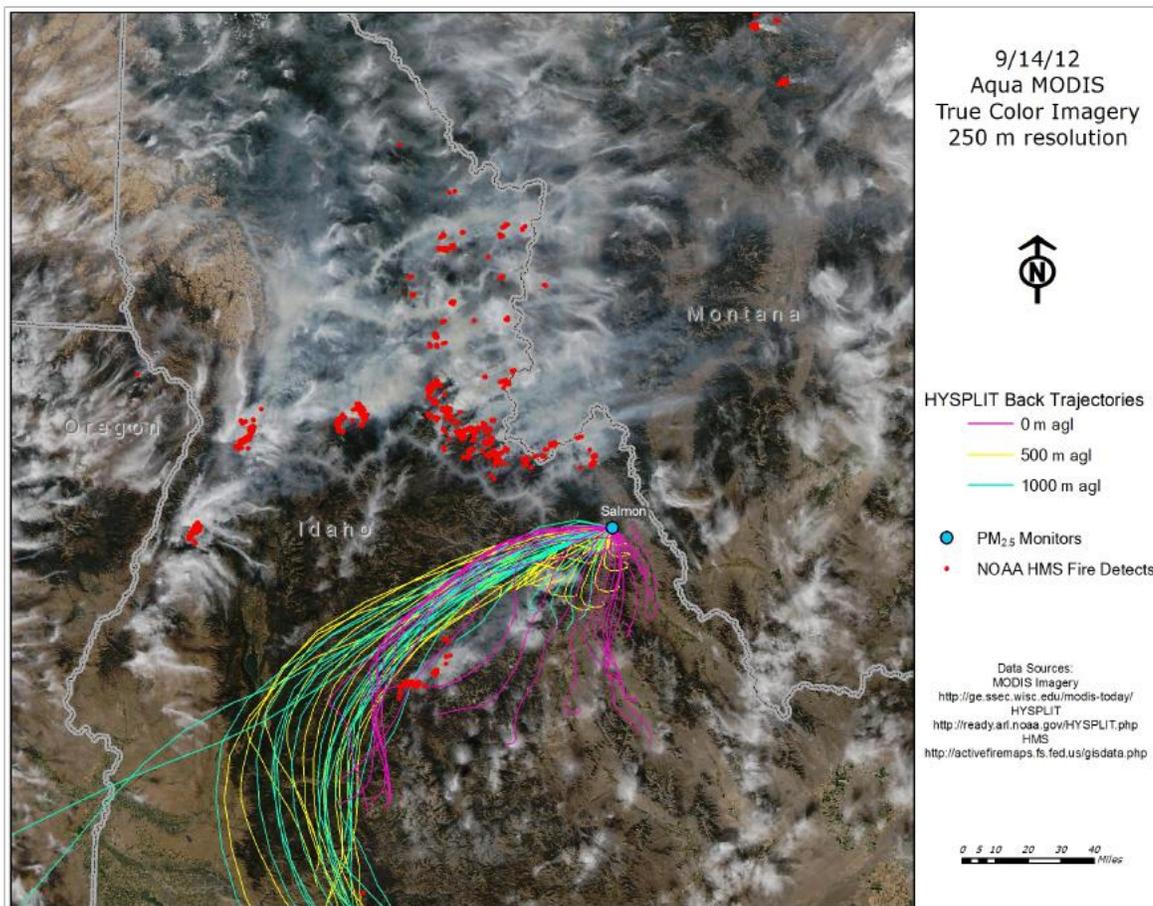
9/13/2012 Wind Speed and Wind Direction



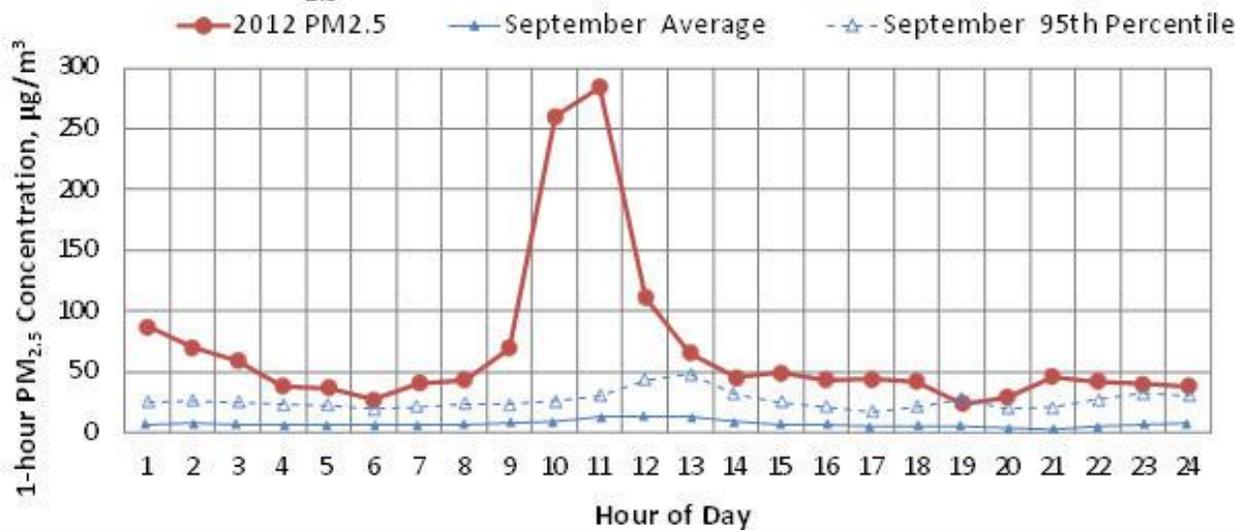
9/13/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



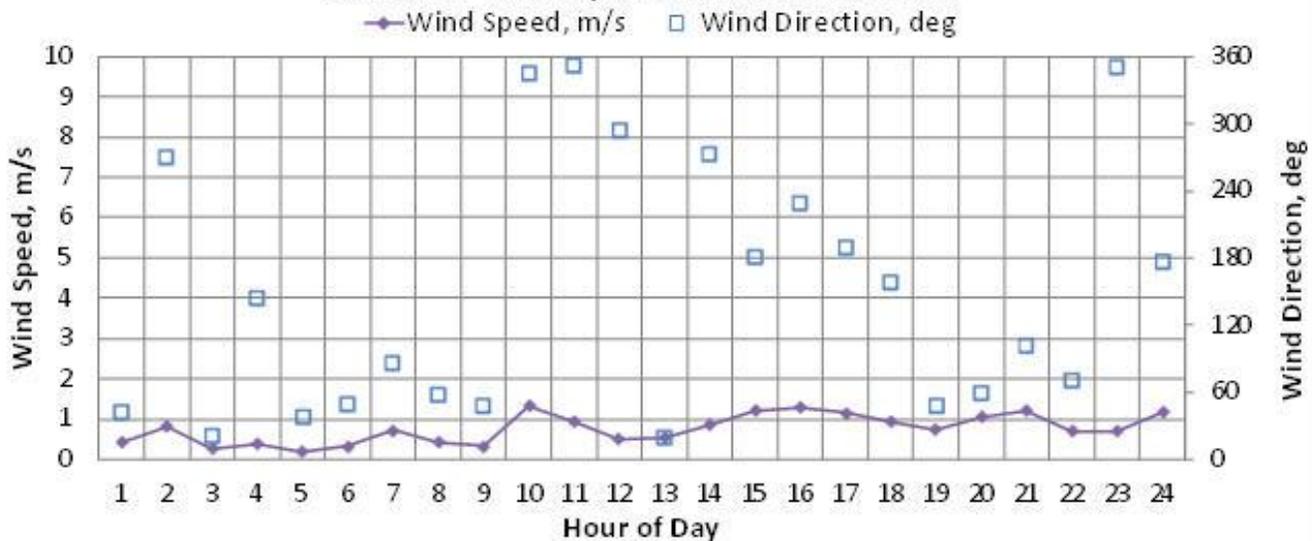
Summary of EER Evidence for Salmon Monitor Value, 70.2 $\mu\text{g}/\text{m}^3$ on 9-14-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 3, 4 (See Sec. 4)
	Weather Conditions:	High pressure extends to the southwest, causing transport flow to become south-southwest across Idaho.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows clouds obscuring smoke sunk in valleys. Back trajectories intersect smoke and/or fire detects from the Halstead fire. Hourly trace shows concentrations hovering around 50 $\mu\text{g}/\text{m}^3$ throughout the day, with north winds bringing a very large (>250 $\mu\text{g}/\text{m}^3$) plume impact at 1000 and 1100.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 54.3 to 64.4 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



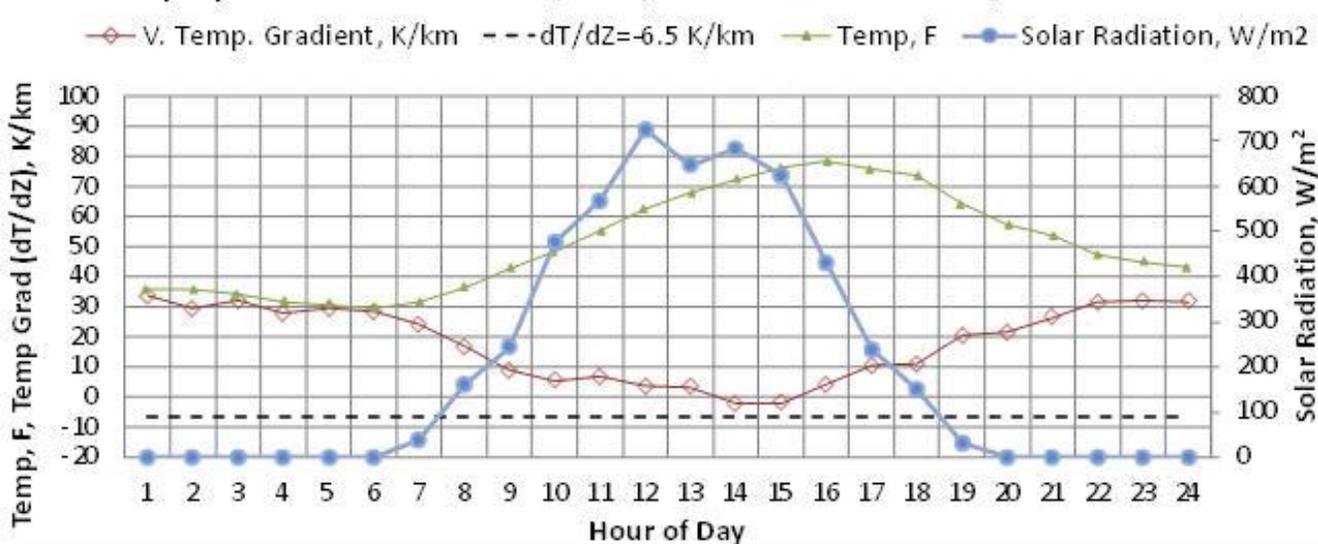
9/14/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



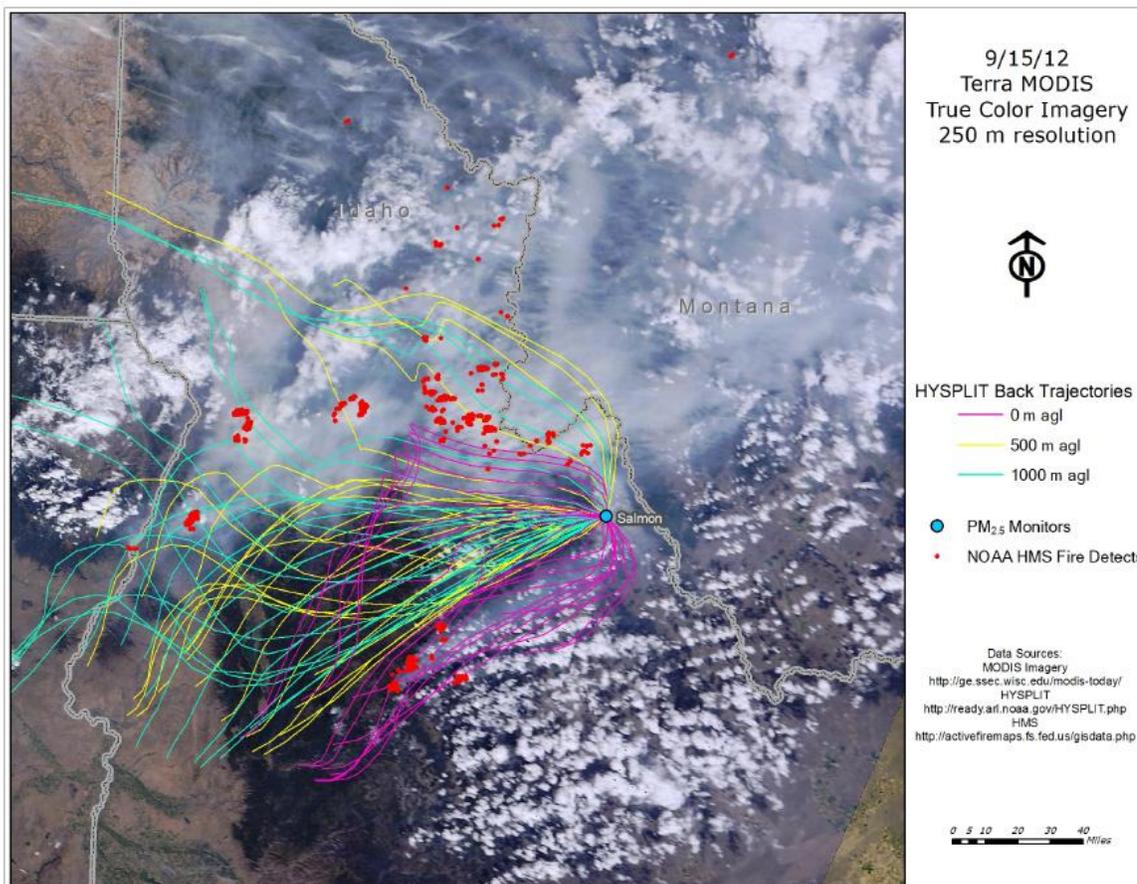
9/14/2012 Wind Speed and Wind Direction



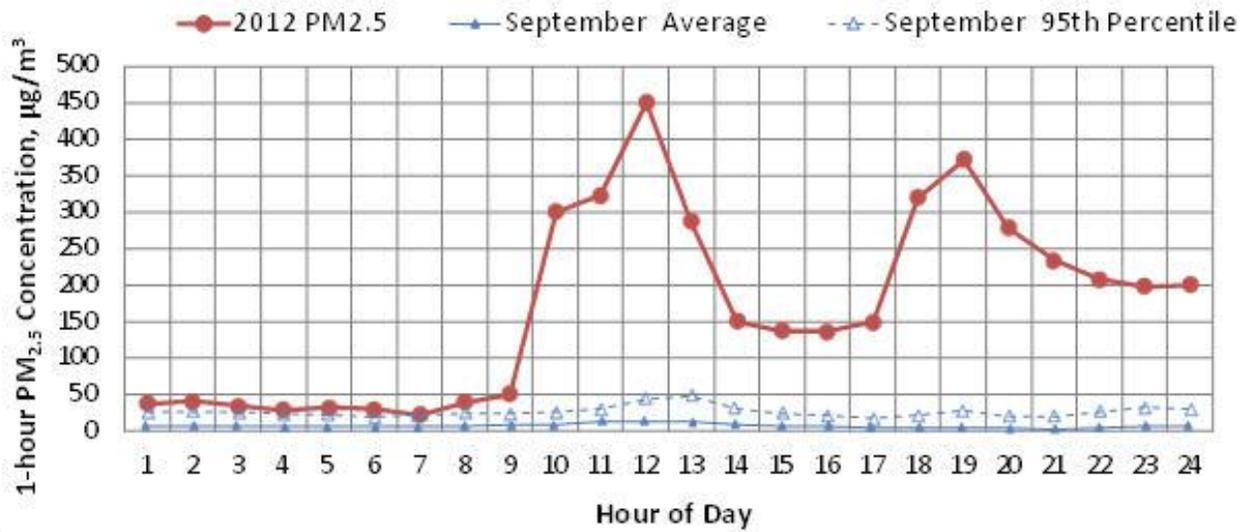
9/14/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



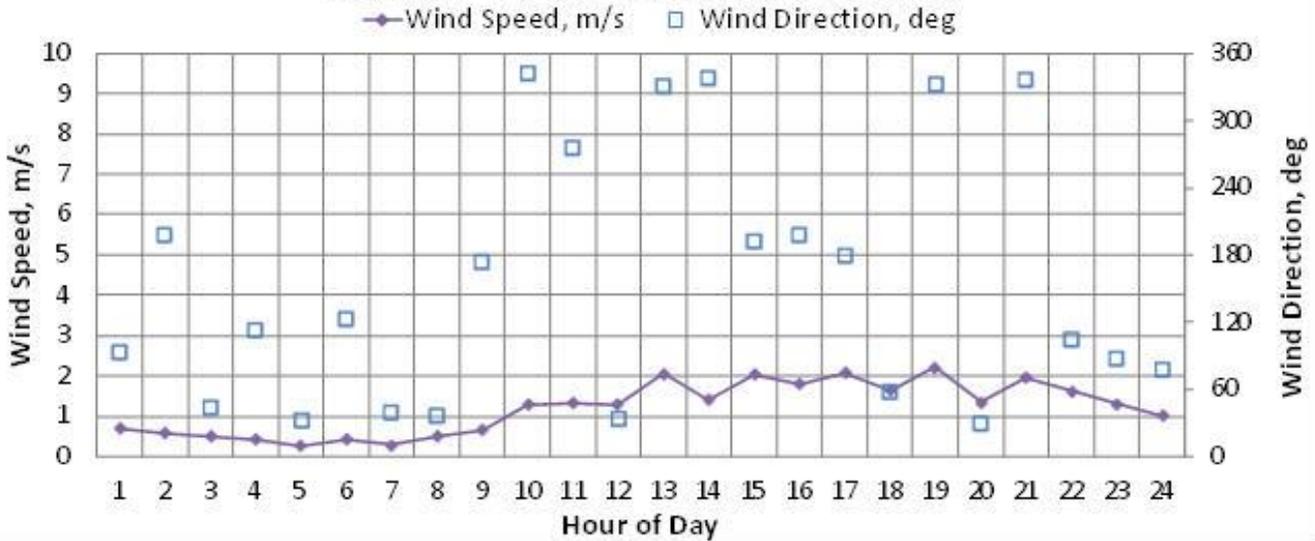
Summary of EER Evidence for Salmon Monitor Value, 162.1 $\mu\text{g}/\text{m}^3$ on 9-15-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3, 4 (See Sec. 4)
	Weather Conditions:	Weak embedded trough suppresses ridge and forces more westerly flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows thick, widespread smoke in Salmon and north-central Idaho obscuring land features. Back trajectories intersect smoke and/or fire detects from the Halstead, Mustang, McGuire, Sheep, Wesley, and Powell SBW fires. Hourly trace shows two massive plume impacts with NW to NE winds, exceeding 350 $\mu\text{g}/\text{m}^3$ followed by sustained concentrations above 200 $\mu\text{g}/\text{m}^3$ at night.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 146 to 156 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



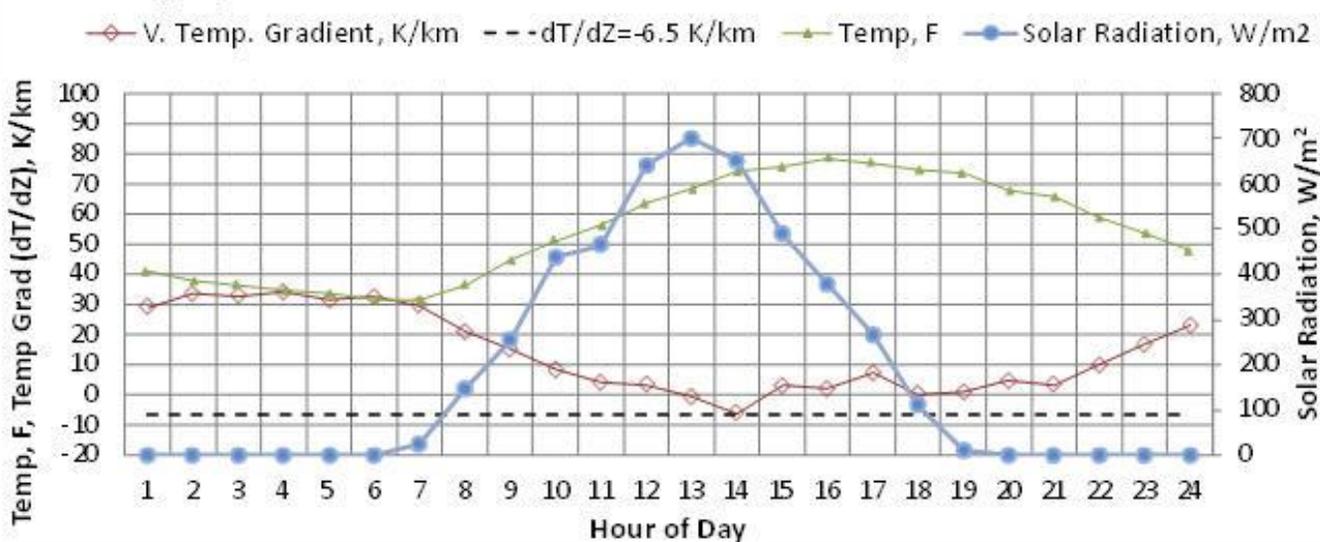
9/15/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



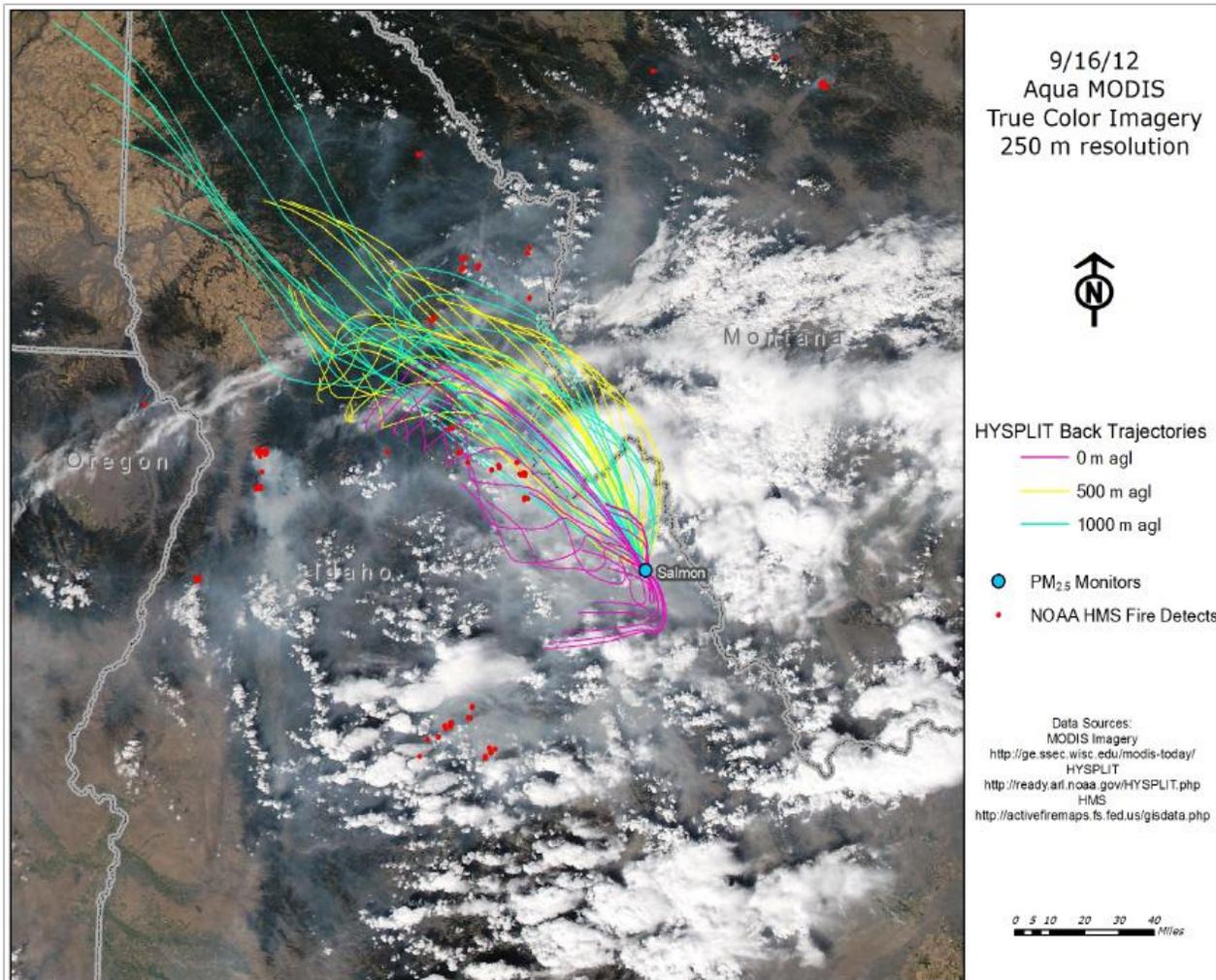
9/15/2012 Wind Speed and Wind Direction



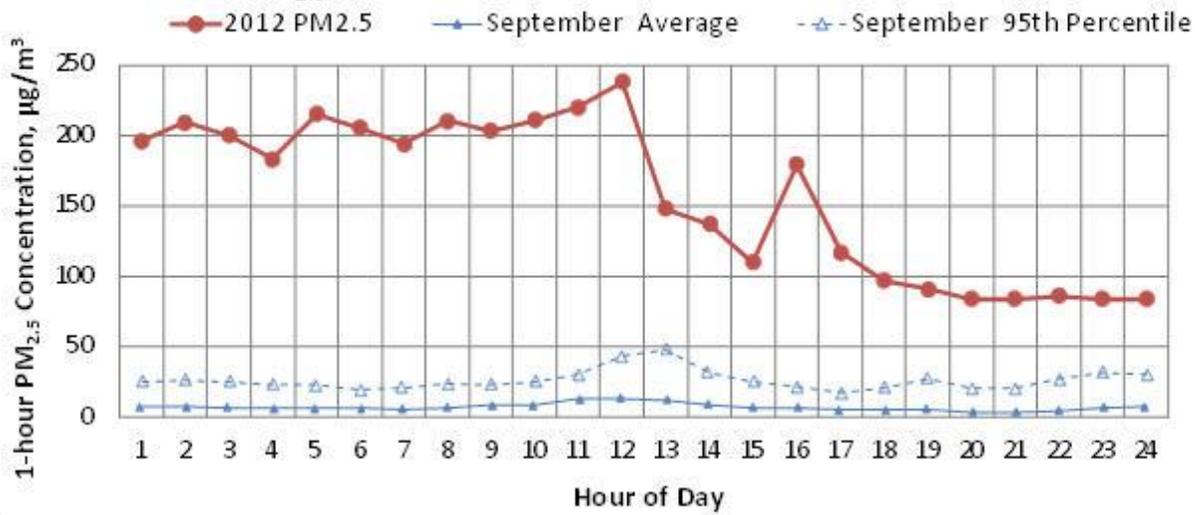
9/15/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



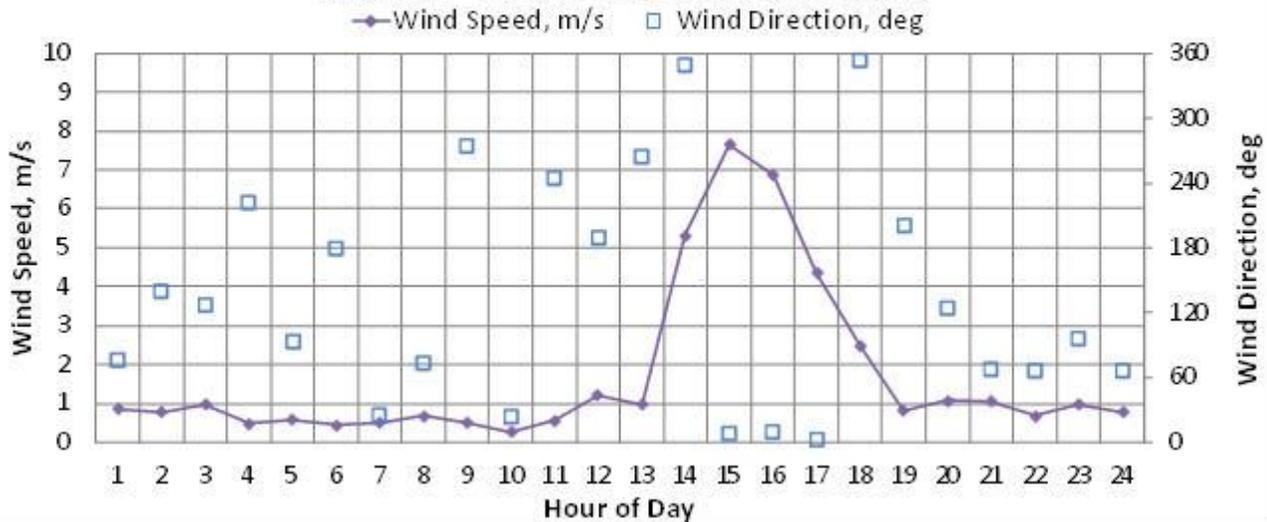
Summary of EER Evidence for Salmon Monitor Value, 162.5 $\mu\text{g}/\text{m}^3$ on 9-16-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, and potentially Scenarios 2 and 3 (See Sec. 4)
	Weather Conditions:	Embedded shortwave begins to retrograde allowing northwesterly flow into region.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows thick, widespread smoke overtopped by clouds. Back trajectories intersect smoke and/or fire detects from the Mustang, McGuire, and Powell SBW fires. Hourly trace shows very high concentrations $\sim 200 \mu\text{g}/\text{m}^3$ until noon, slight clearing, a spike at 1600, then concentrations remaining at $\sim 75 \mu\text{g}/\text{m}^3$ until end of day. Temperature inversion does not break all day in spite of windy conditions in the afternoon.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to $15.9 \mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 147 to $157 \mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



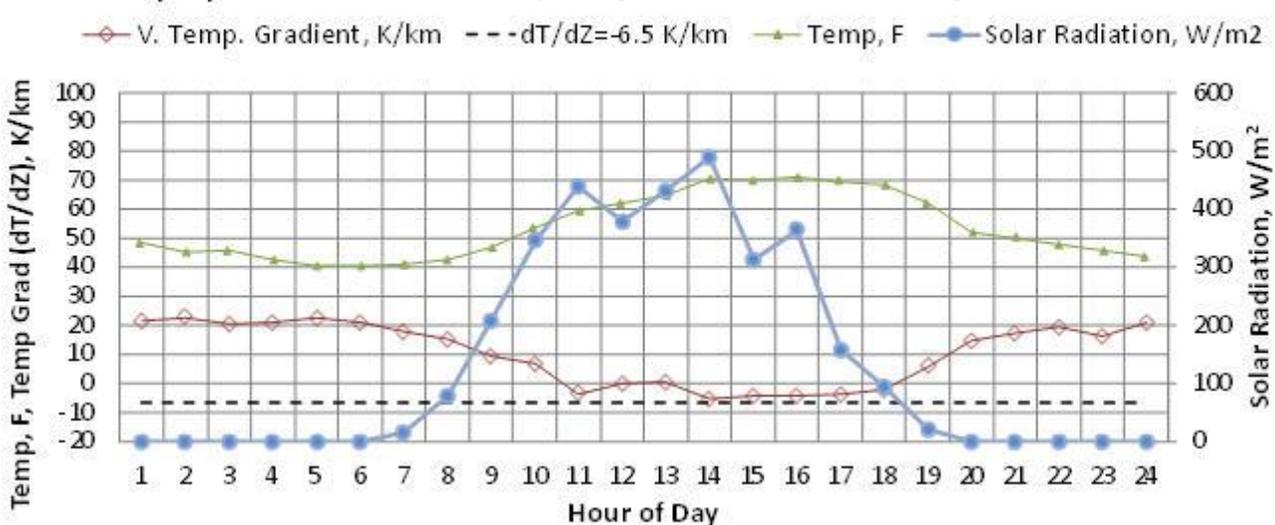
9/16/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



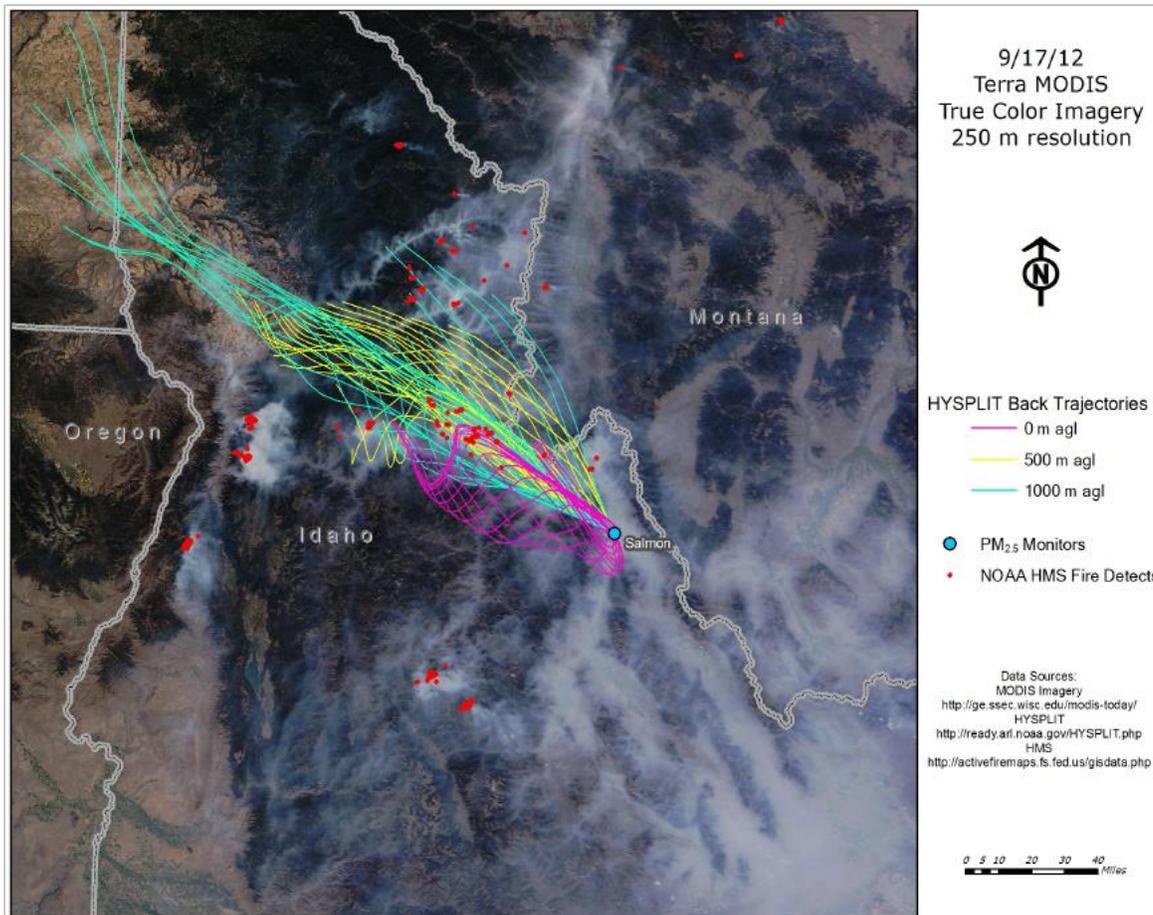
9/16/2012 Wind Speed and Wind Direction



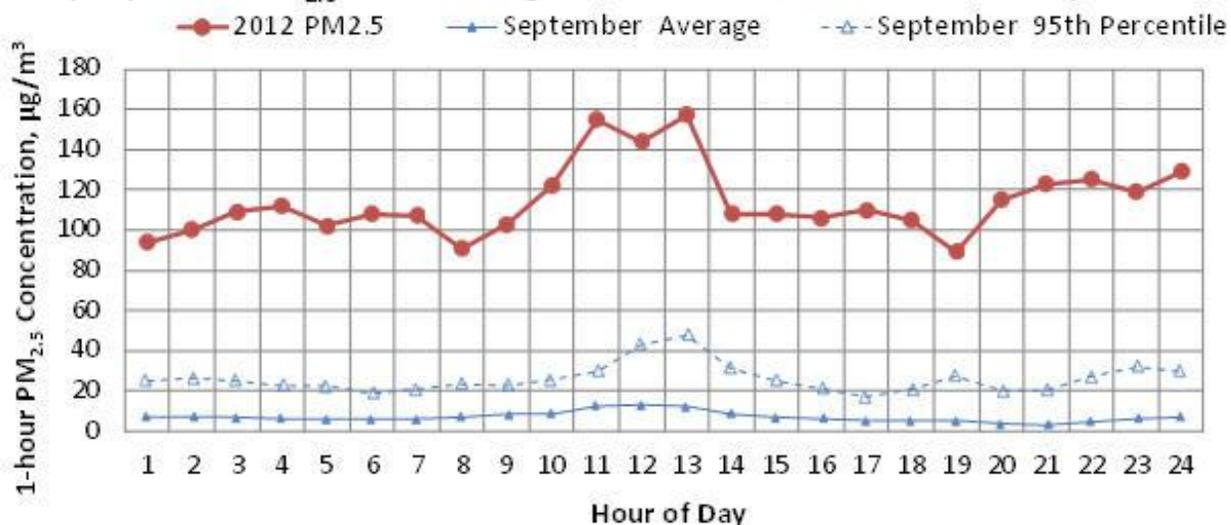
9/16/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



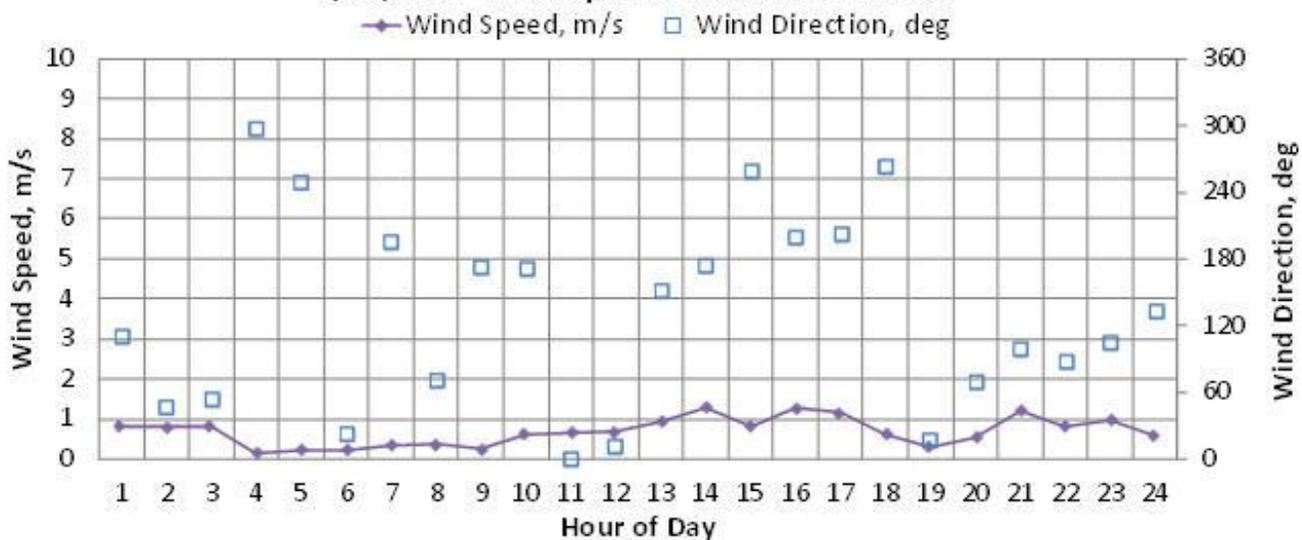
Summary of EER Evidence for Salmon Monitor Value, 112.3 $\mu\text{g}/\text{m}^3$ on 9-17-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3 (See Sec. 4)
	Weather Conditions:	Weak Rex block sets up along Pacific Coast causing light winds and north-northwesterly flow.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows Salmon and surrounding valleys choked with thick smoke. Back trajectories intersect smoke and/or fire detects from the Mustang, McGuire, and Powell SBW fires. Hourly trace shows sustained high concentrations with midday increases as the valley flow turns northerly. Temperature inversion did not break all day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 96.4 to 106 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



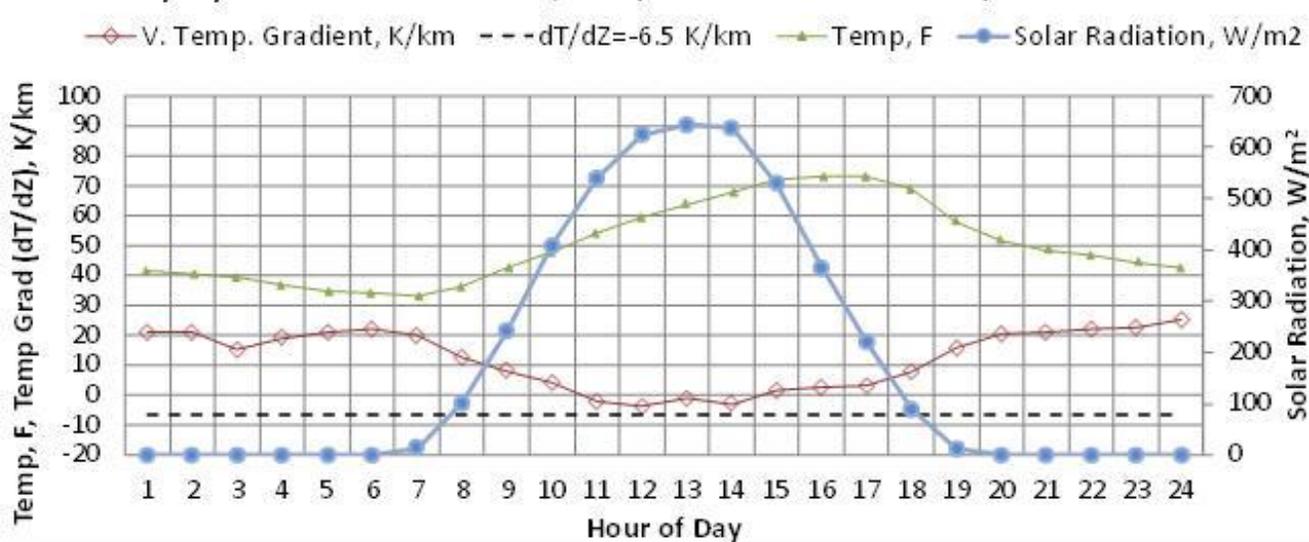
9/17/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



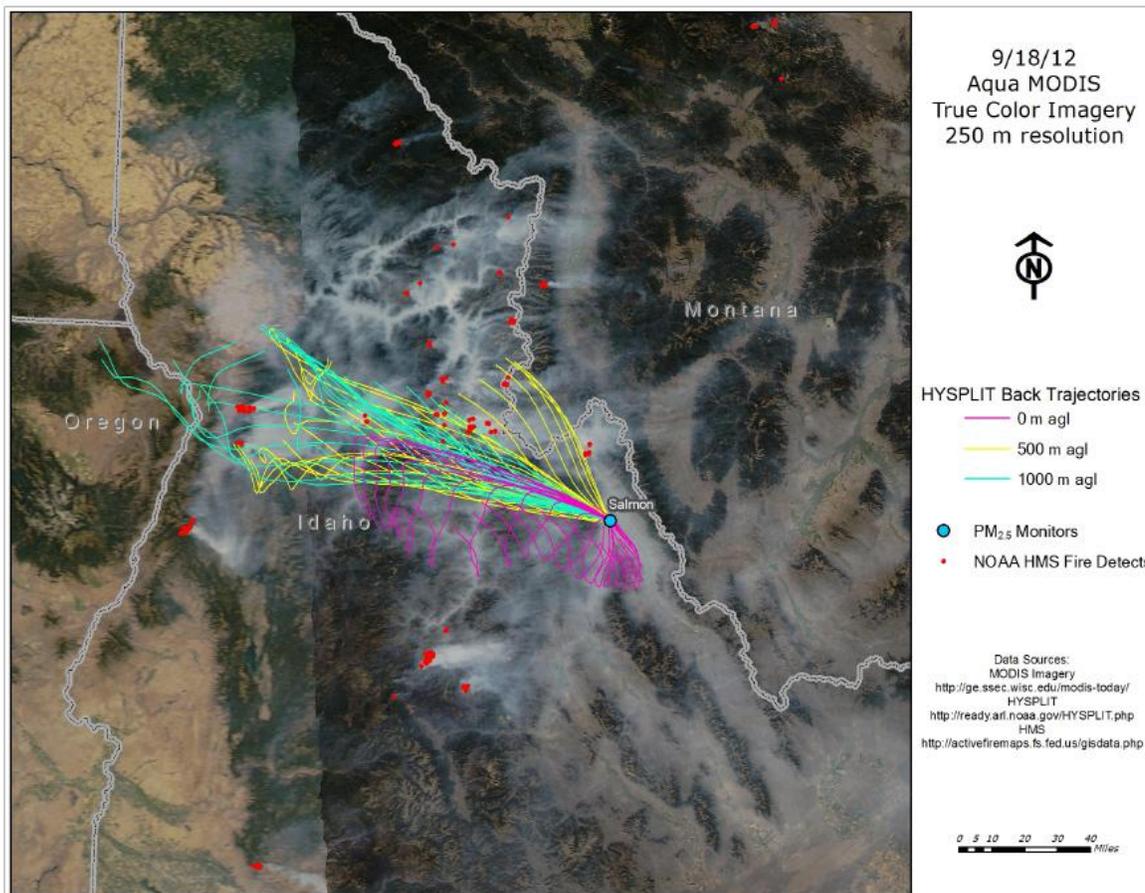
9/17/2012 Wind Speed and Wind Direction



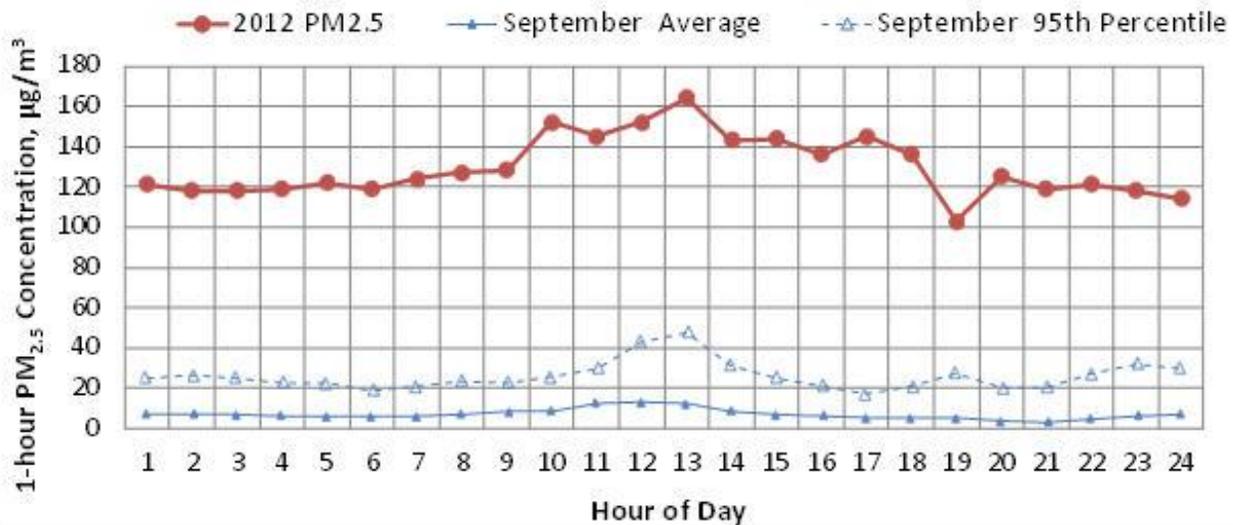
9/17/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



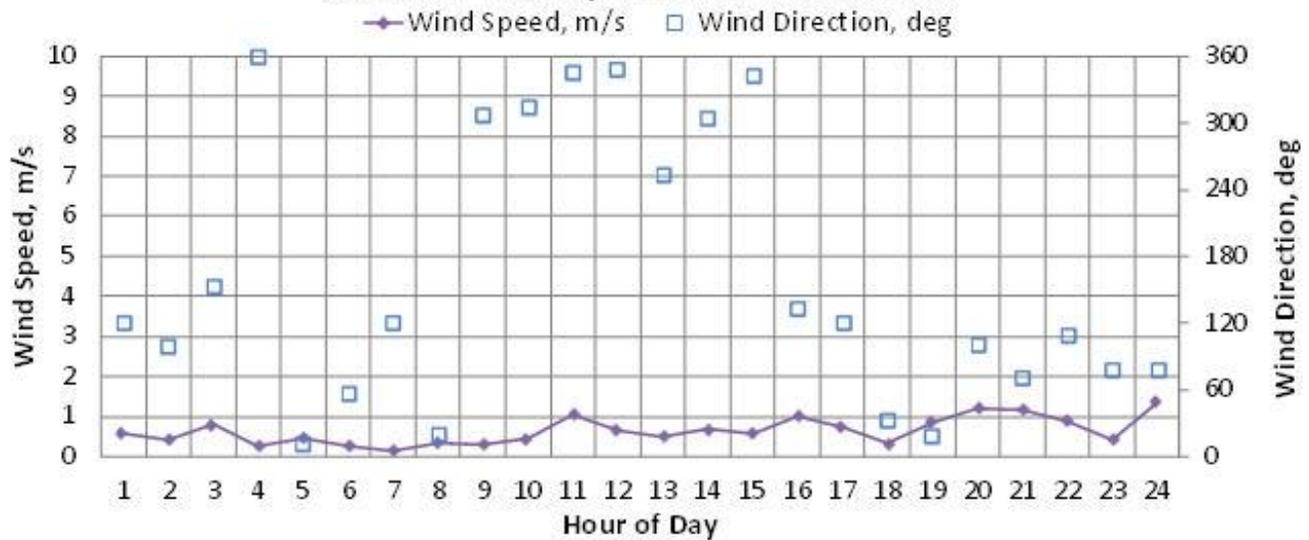
Summary of EER Evidence for Salmon Monitor Value, 130.3 $\mu\text{g}/\text{m}^3$ on 9-18-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3 (See Sec. 4)
	Weather Conditions:	Low pressure builds offshore and deteriorates Rex block allowing weak zonal flow to establish over Idaho.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows Salmon and surrounding valleys choked with thick smoke. Back trajectories intersect smoke and/or fire detects from the Mustang, McGuire, Sheep, and Powell SBW fires. Light winds and stable temperature inversion persists all day so hourly PM _{2.5} trace shows concentrations never drop below 100 $\mu\text{g}/\text{m}^3$ during the 24-hour period.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 114 to 124 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



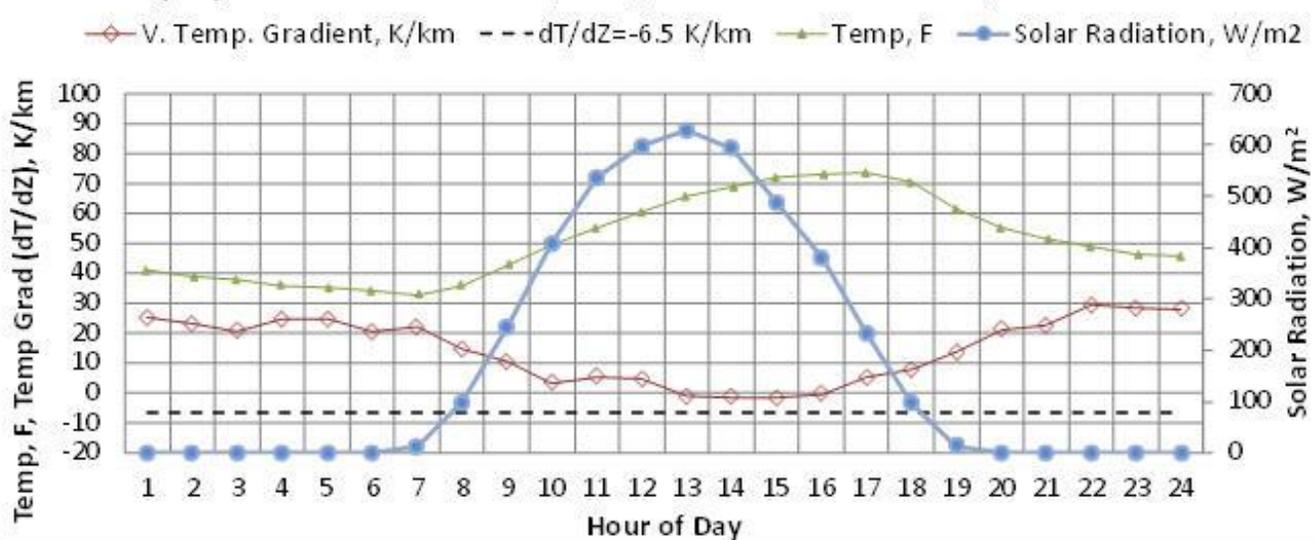
9/18/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



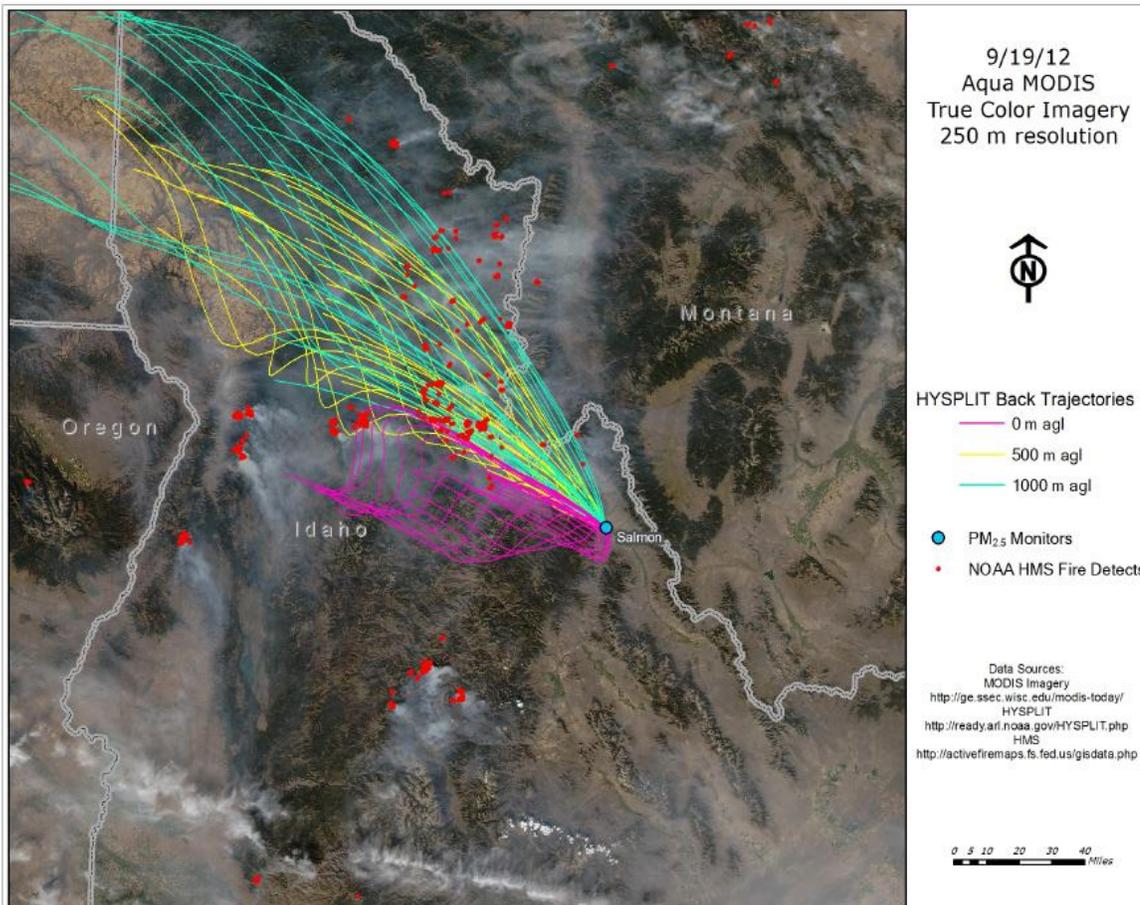
9/18/2012 Wind Speed and Wind Direction



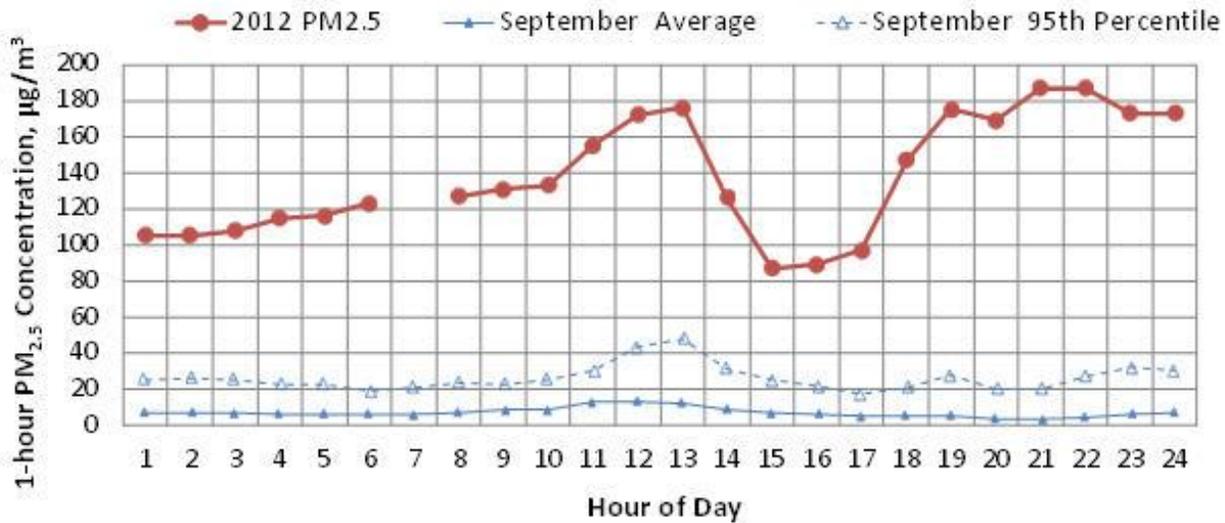
9/18/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



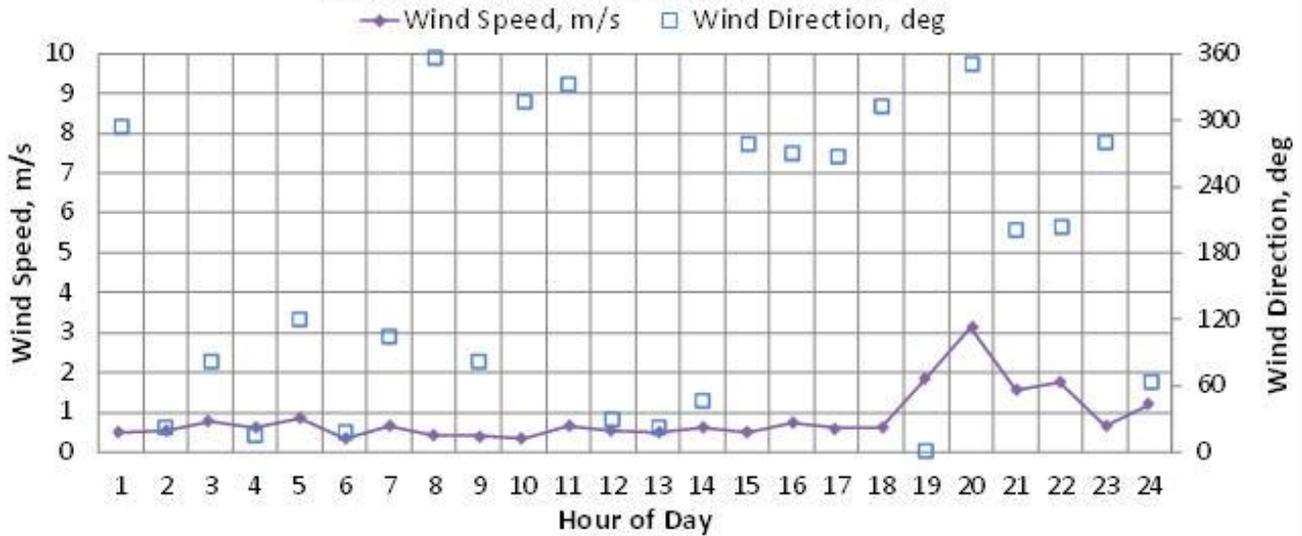
Summary of EER Evidence for Salmon Monitor Value, 135.5 $\mu\text{g}/\text{m}^3$ on 9-19-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Low pressure shifts further west off shore allowing high to slightly strengthen and steer winds from the northwest.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows visible smoke throughout Idaho. Back trajectories intersect smoke and/or fire detects from the Mustang, McGuire, and Powell SBW fires. Light winds and stable air/temperature inversion persists all day resulting in high morning values peaking at 1300 followed by some clearing with westerly winds to 80 $\mu\text{g}/\text{m}^3$. Smoke moves back into Salmon in the evening with up-valley winds reaching over 180 $\mu\text{g}/\text{m}^3$ where it persists through the evening.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 120 to 130 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



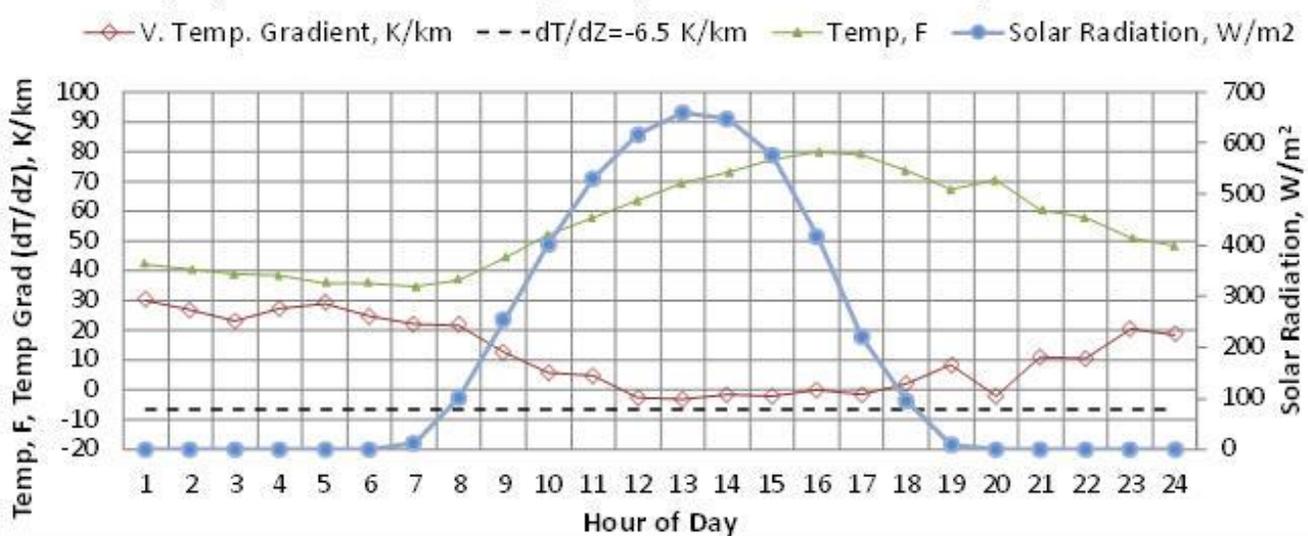
9/19/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



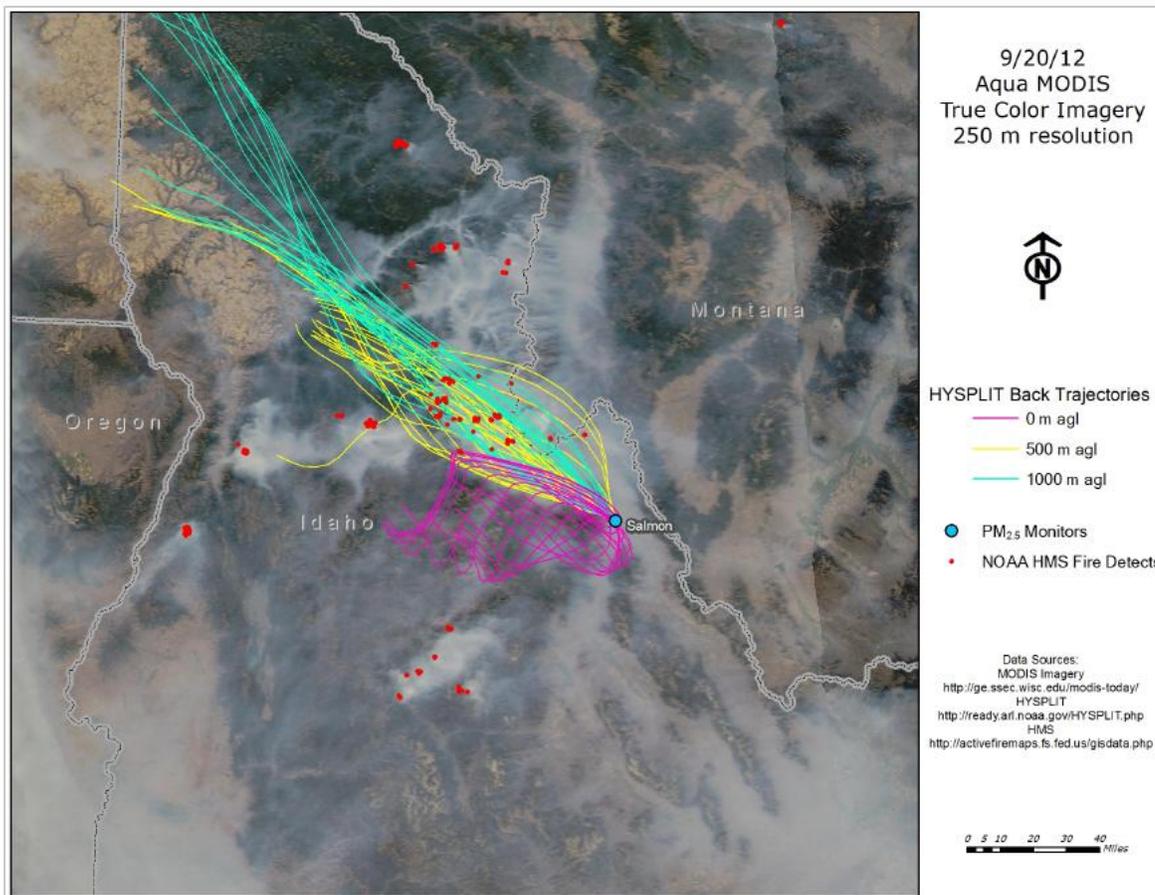
9/19/2012 Wind Speed and Wind Direction



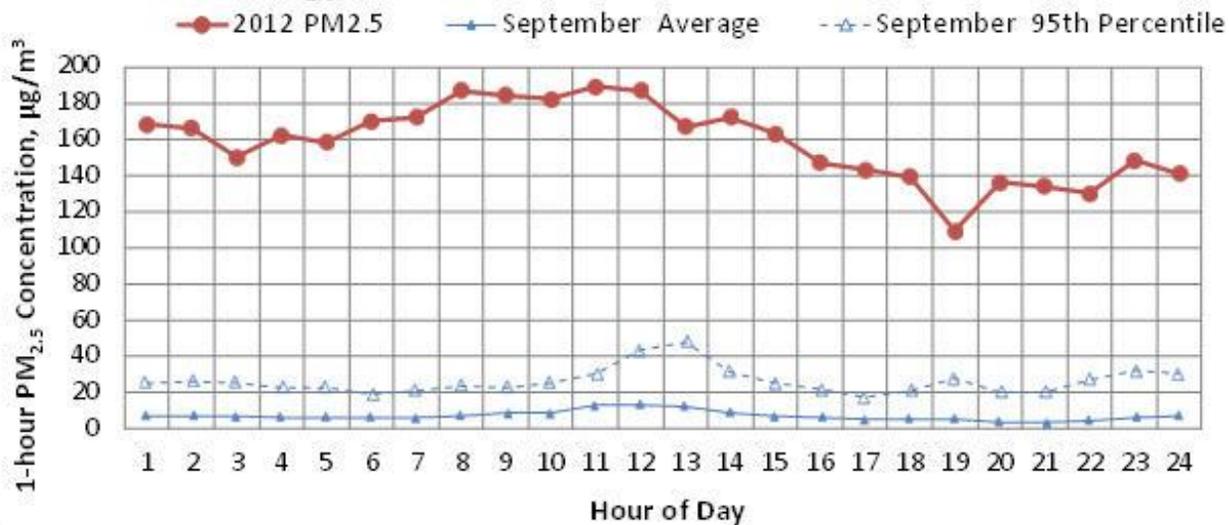
9/19/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



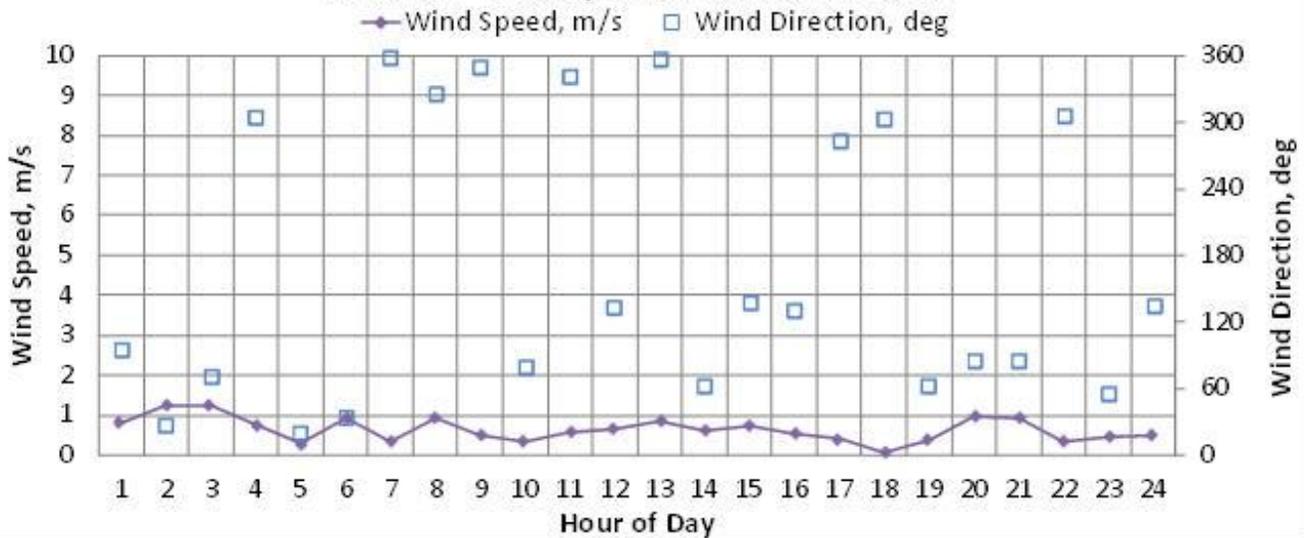
Summary of EER Evidence for Salmon Monitor Value, 159.8 $\mu\text{g}/\text{m}^3$ on 9-20-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3 (See Sec. 4)
	Weather Conditions:	Highly amplified ridge develops with axis running through Idaho limiting winds (500mb winds <5kts) and maintaining generally northwesterly flow.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows thick smoke throughout Idaho, filling valleys and concealing surface features. Back trajectories intersect smoke and/or fire detects from the Mustang and McGuire fires. Light winds and temperature inversion persists all day trapping smoke at levels between 100 to 190 $\mu\text{g}/\text{m}^3$ all day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 144 to 154 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



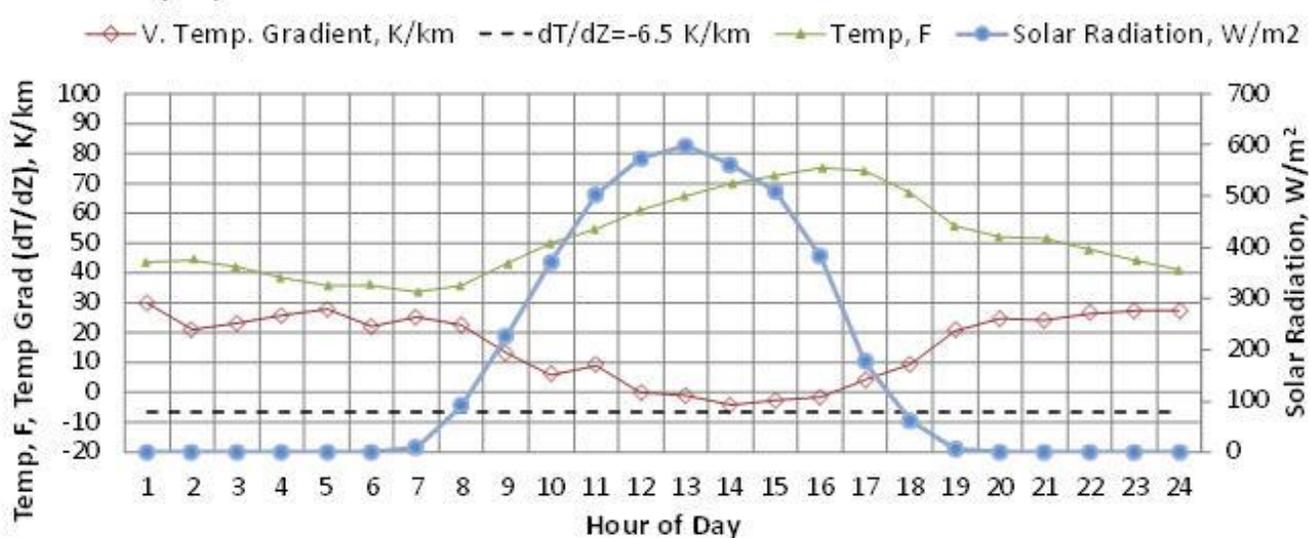
9/20/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



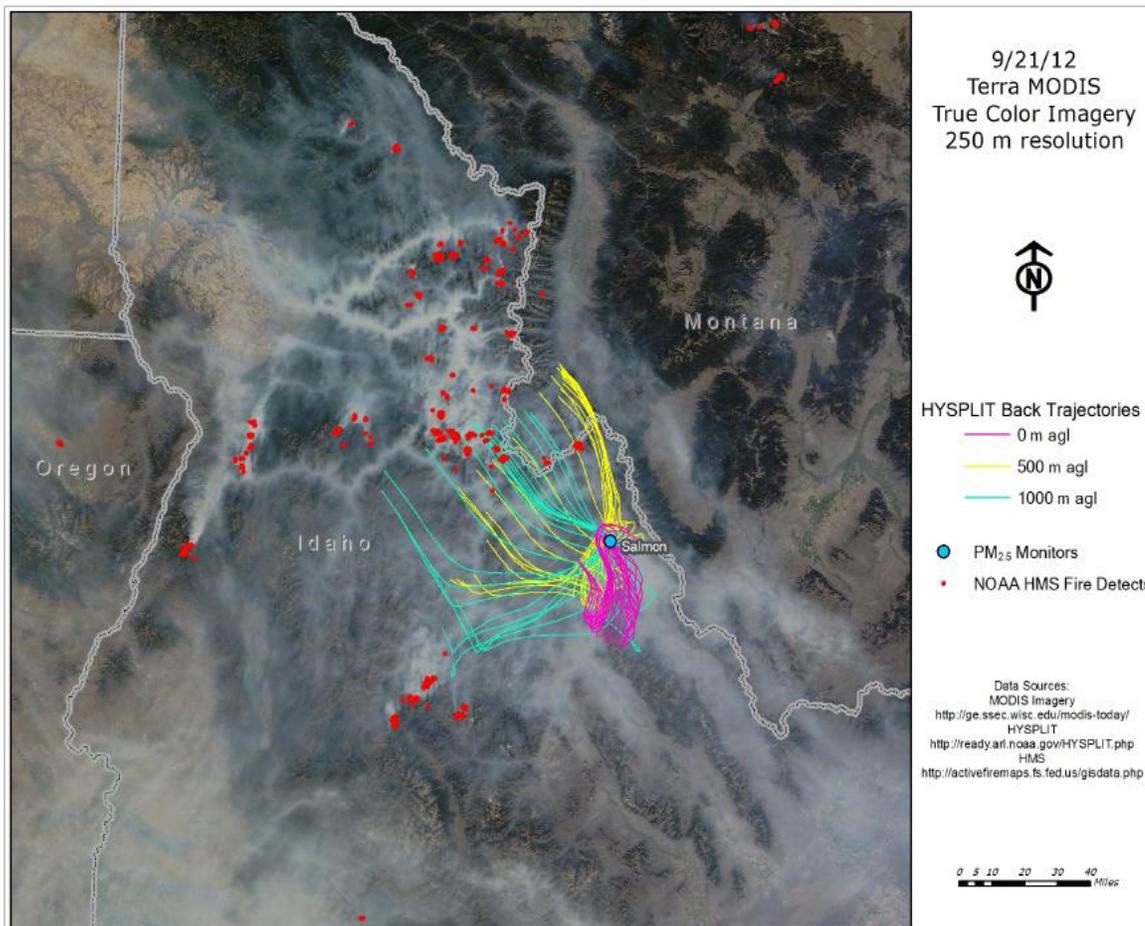
9/20/2012 Wind Speed and Wind Direction



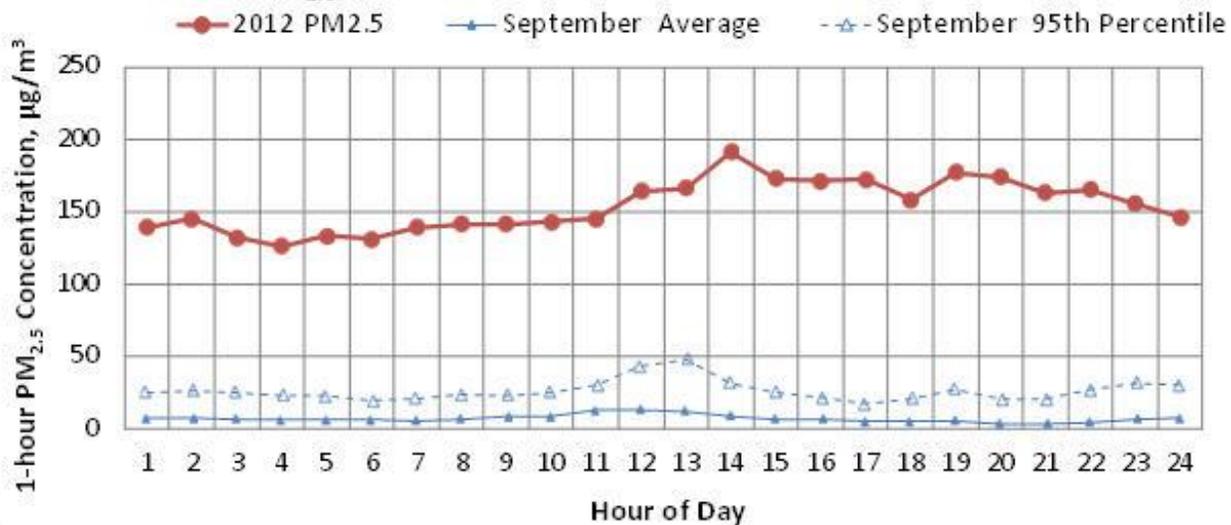
9/20/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



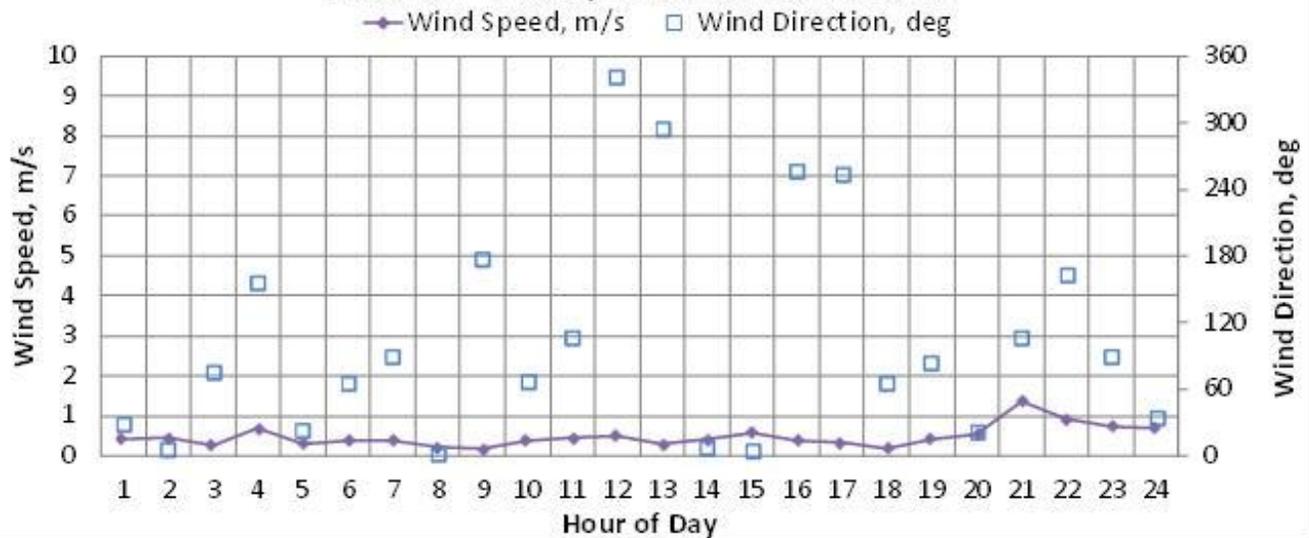
Summary of EER Evidence for Salmon Monitor Value, 153.5 $\mu\text{g}/\text{m}^3$ on 9-21-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3, 4 (See Sec. 4)
	Weather Conditions:	Ridge axis remains over Idaho with light upper level winds and stagnant conditions.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows all valleys completely full of smoke. The lack of air movement and general stagnation is demonstrated by the short distances the back trajectories travel during the 24-hour period. Back trajectories intersect smoke and/or fire detects from the Mustang and Halstead fires. Again, light winds and a persistent temperature inversion results in hourly $\text{PM}_{2.5}$ concentrations remaining between 100 and 200 $\mu\text{g}/\text{m}^3$ in Salmon all day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 138 to 148 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



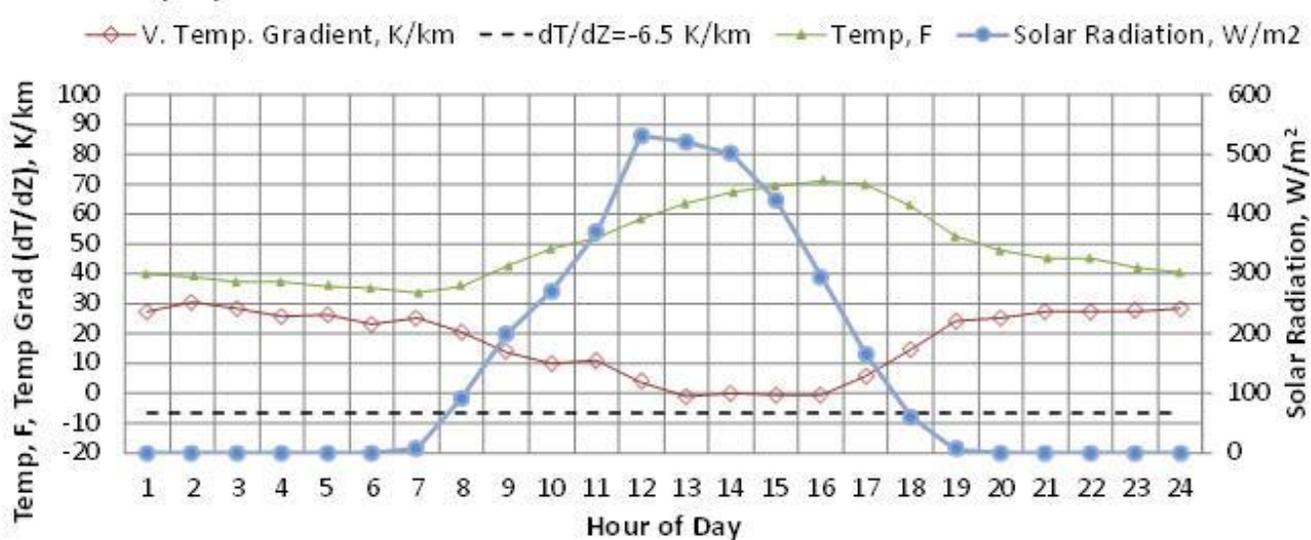
9/21/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



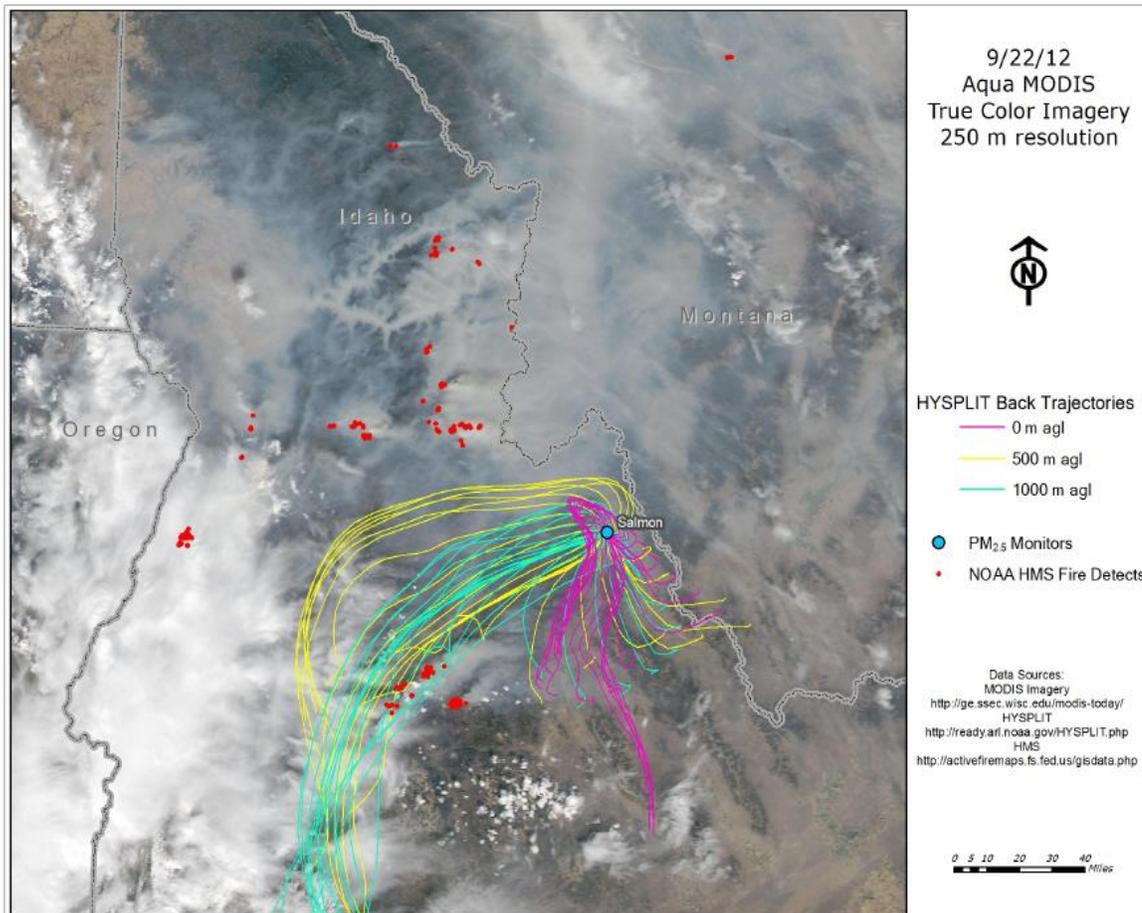
9/21/2012 Wind Speed and Wind Direction



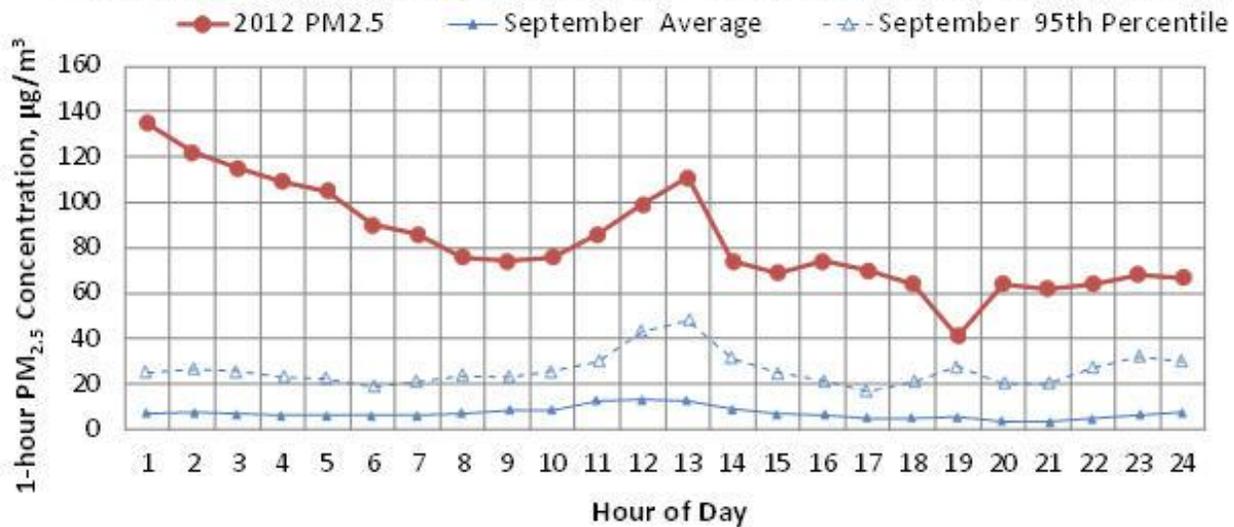
9/21/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



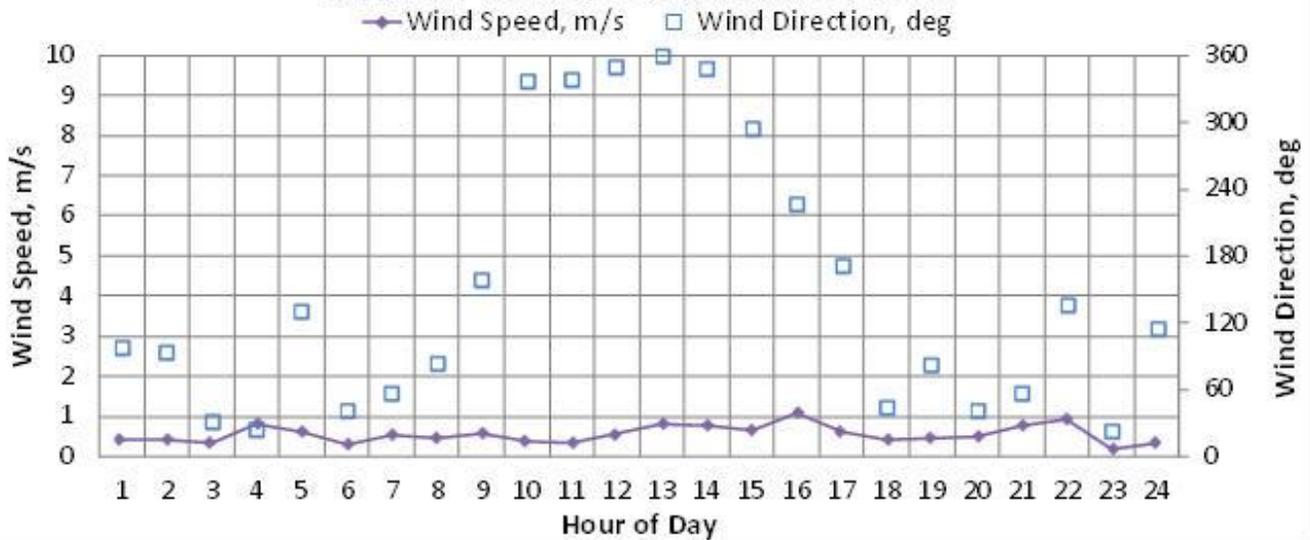
Summary of EER Evidence for Salmon Monitor Value, 86.6 $\mu\text{g}/\text{m}^3$ on 9-22-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 3, 4 (See Sec. 4)
	Weather Conditions:	Ridge axis shifts to the Continental Divide as low moves onshore over extreme western Washington allowing west-southwest flow to develop.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows thick smoke still persisting throughout the region. Back trajectories intersect smoke and/or fire detects from the Mustang and Halstead fires. Hourly trace shows high concentrations slowly trending down, with a spike at 1300 when winds swing around from the north. Light winds and a temperature inversion again persist in the valley throughout the day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 70.7 to 80.8 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



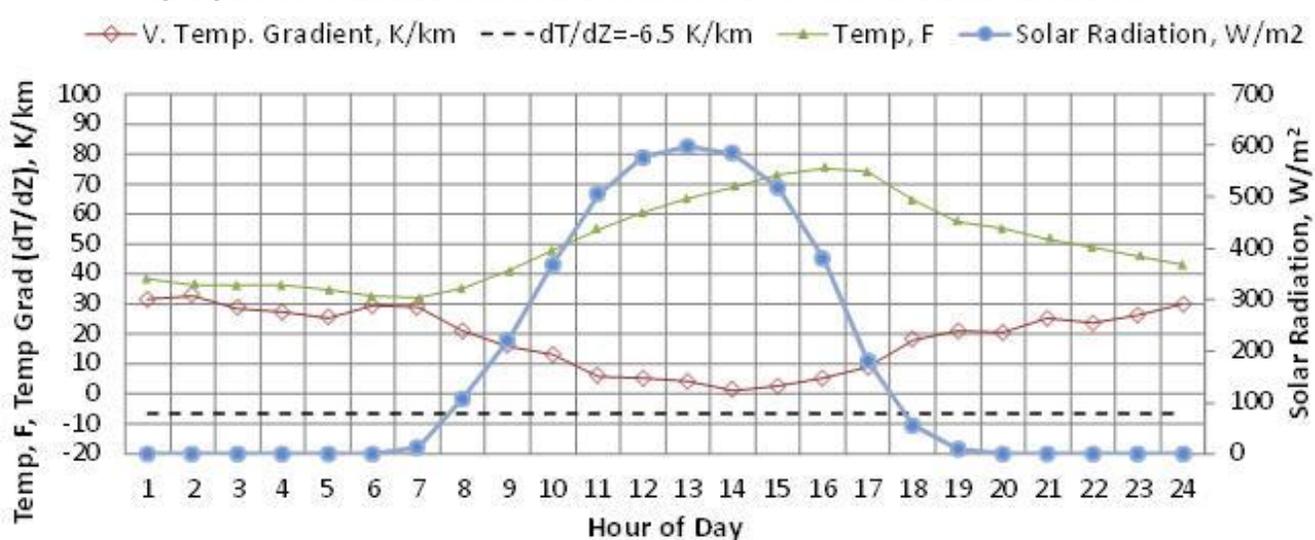
9/22/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



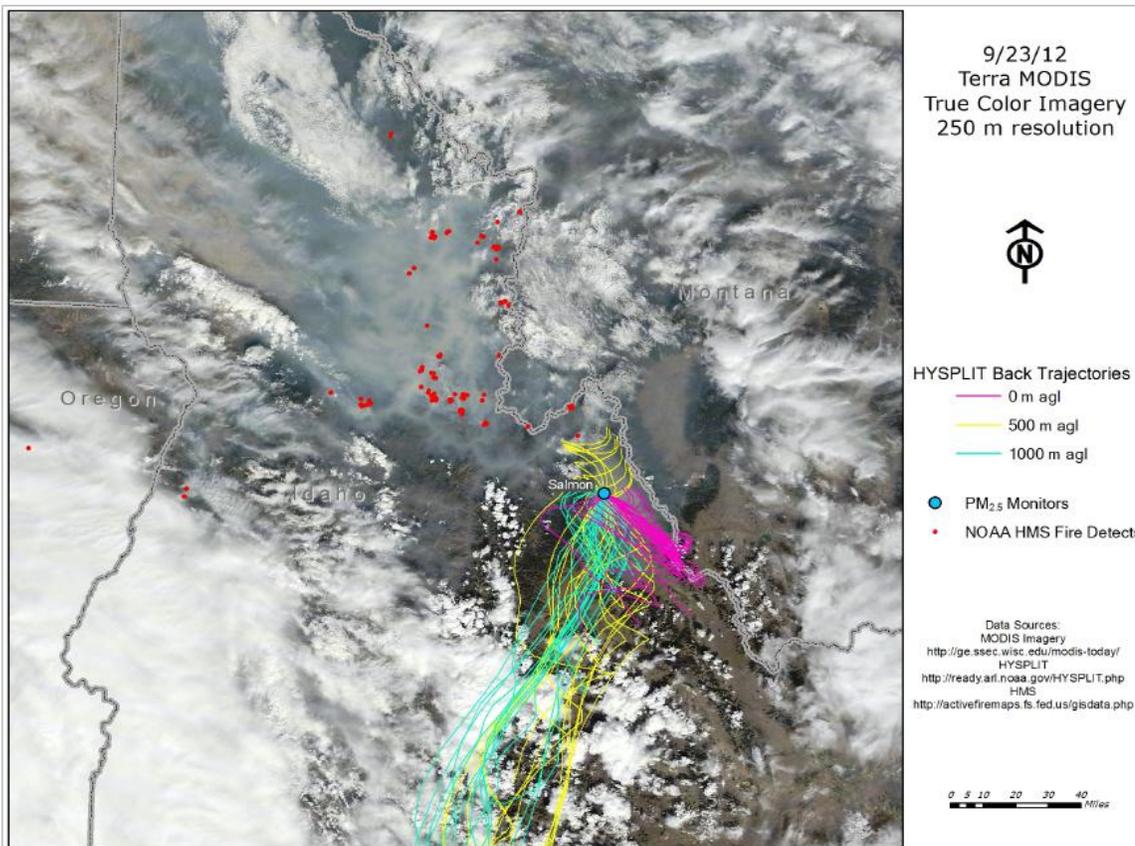
9/22/2012 Wind Speed and Wind Direction



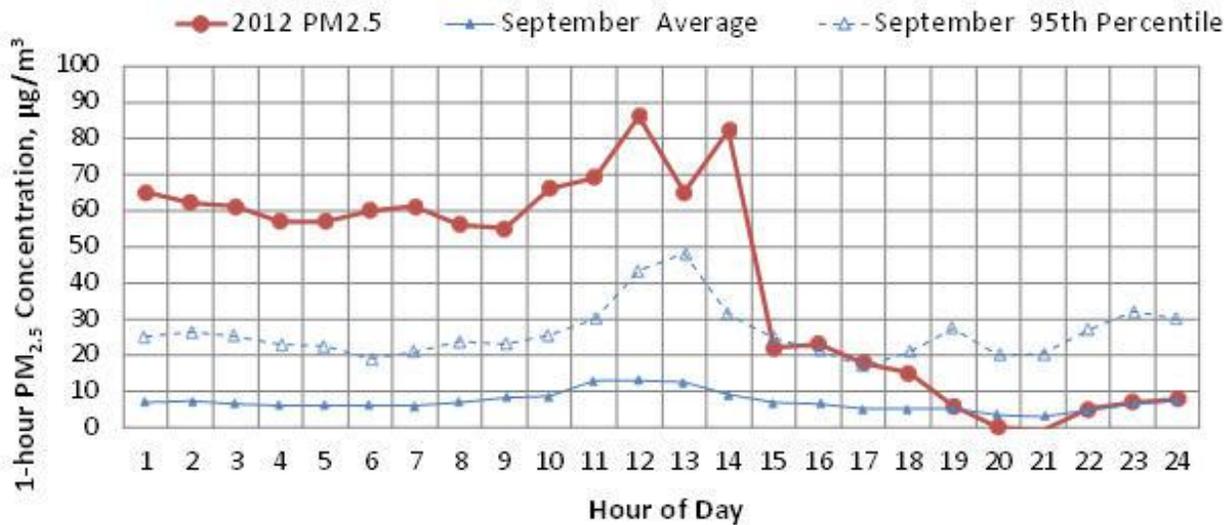
9/22/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



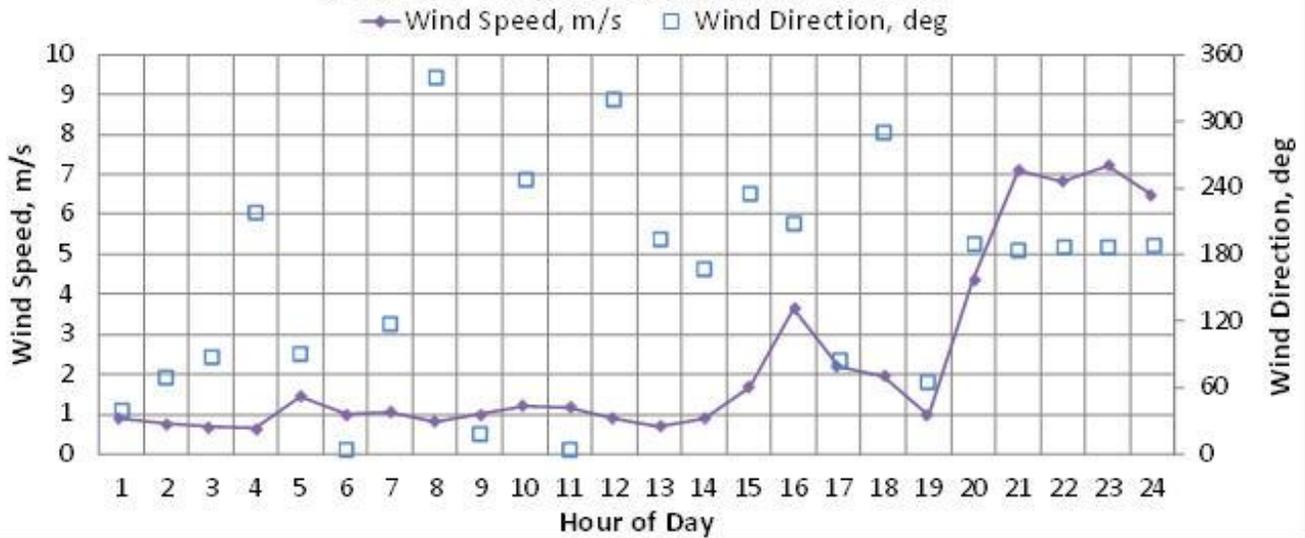
Summary of EER Evidence for Salmon Monitor Value, 44.3 $\mu\text{g}/\text{m}^3$ on 9-23-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Low drops south along WA/OR border bringing southwesterly winds into Idaho.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows thick smoke surrounding the Mustang and Powell fire detects and visible smoke in Salmon. Back trajectories intersect smoke and/or fire detects from the Mustang and Halstead fires. Hourly trace shows sustained high concentrations ~ 60 $\mu\text{g}/\text{m}^3$ in the morning, punctuated by two midday spikes over 80 $\mu\text{g}/\text{m}^3$. Winds from the south increase to 7 m/s in the evening, flushing out the smoky air and returning the $\text{PM}_{2.5}$ to normal levels after 1900.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 28.4 to 38.5 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



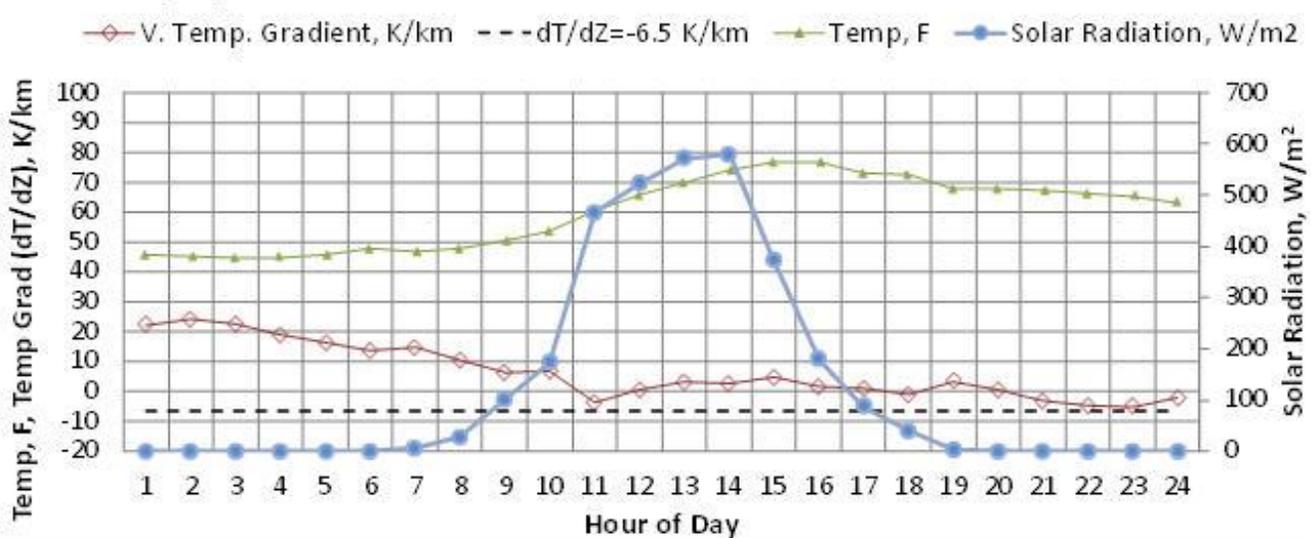
9/23/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



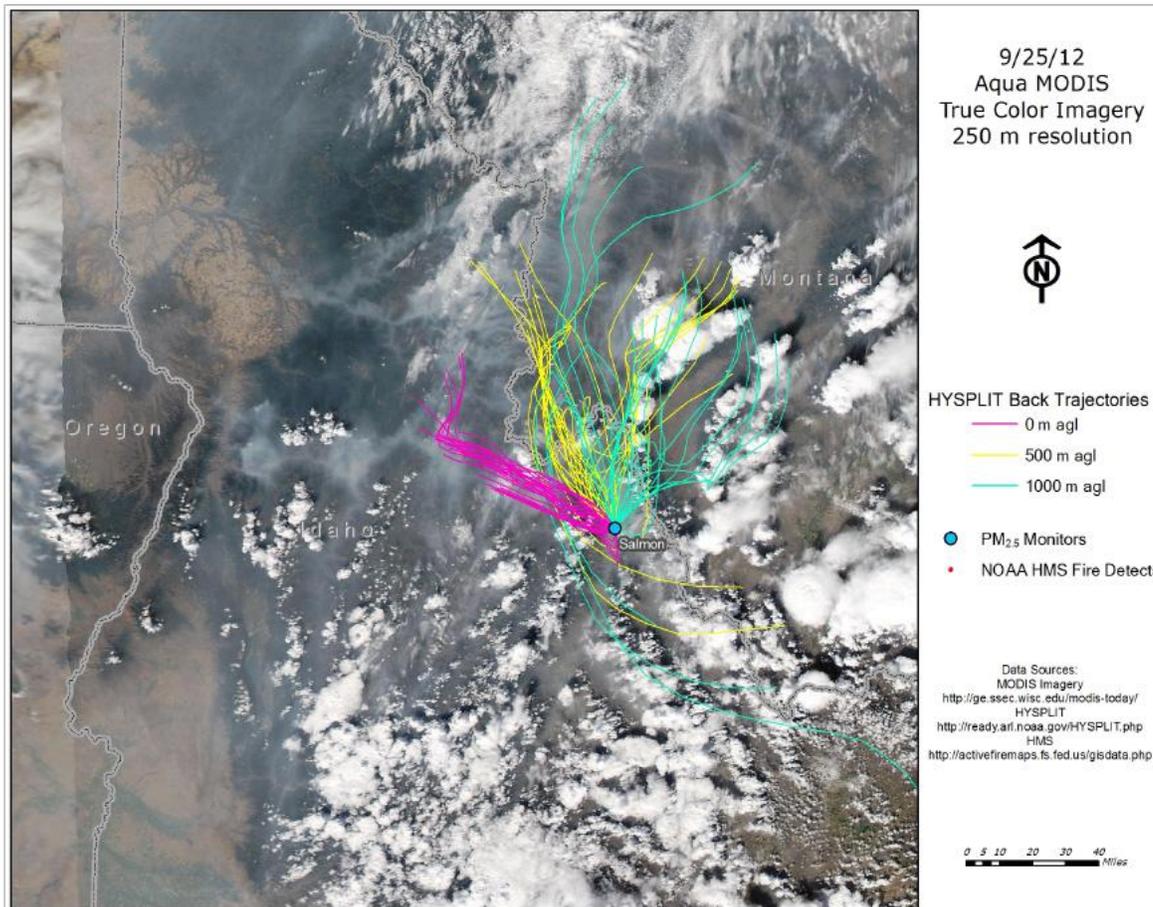
9/23/2012 Wind Speed and Wind Direction



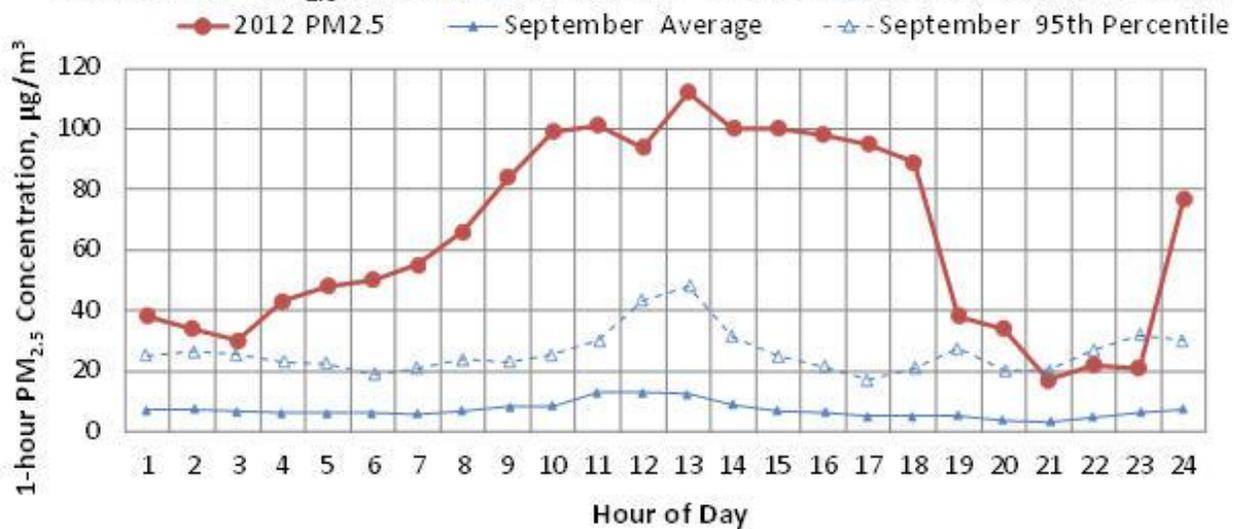
9/23/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



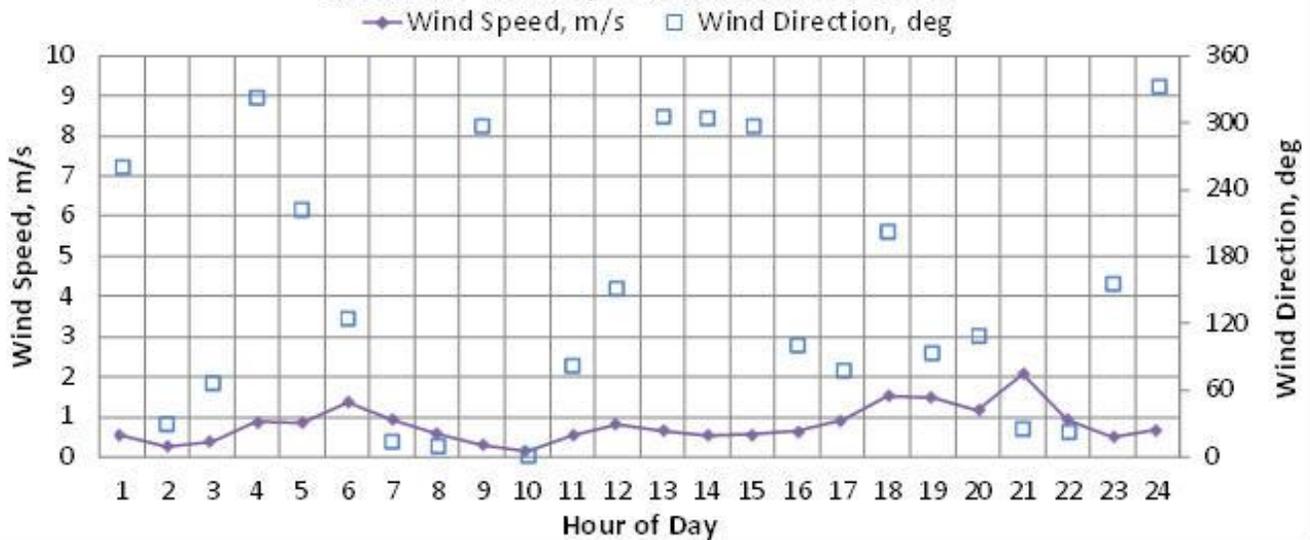
Summary of EER Evidence for Salmon Monitor Value, 62.7 $\mu\text{g}/\text{m}^3$ on 9-25-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Pattern shifts together along the Continental Divide and develops into generally northerly flow.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows thick smoke in Salmon and surrounding areas. Back trajectories intersect smoke and/or fire detects from the Mustang fire. Hourly trace shows high concentrations ~100 $\mu\text{g}/\text{m}^3$ during the day with very light northerly and northwest winds, followed by a drop as winds turn easterly. Winds return to northerly around midnight and concentrations spike to over 70 $\mu\text{g}/\text{m}^3$.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon PM _{2.5} was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 46.8 to 56.9 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



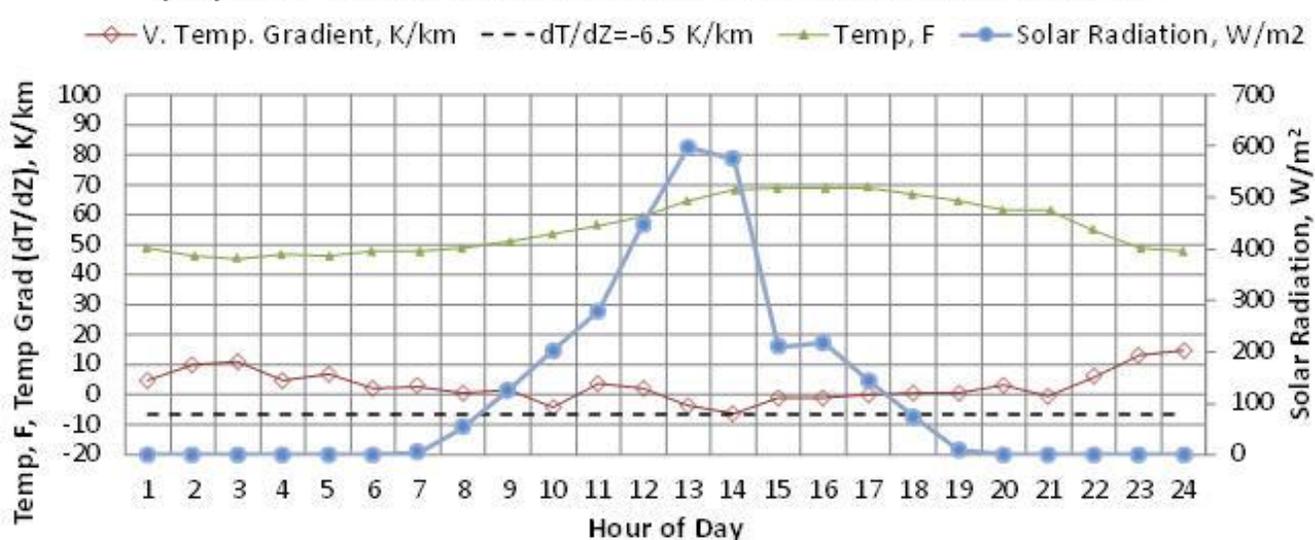
9/25/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



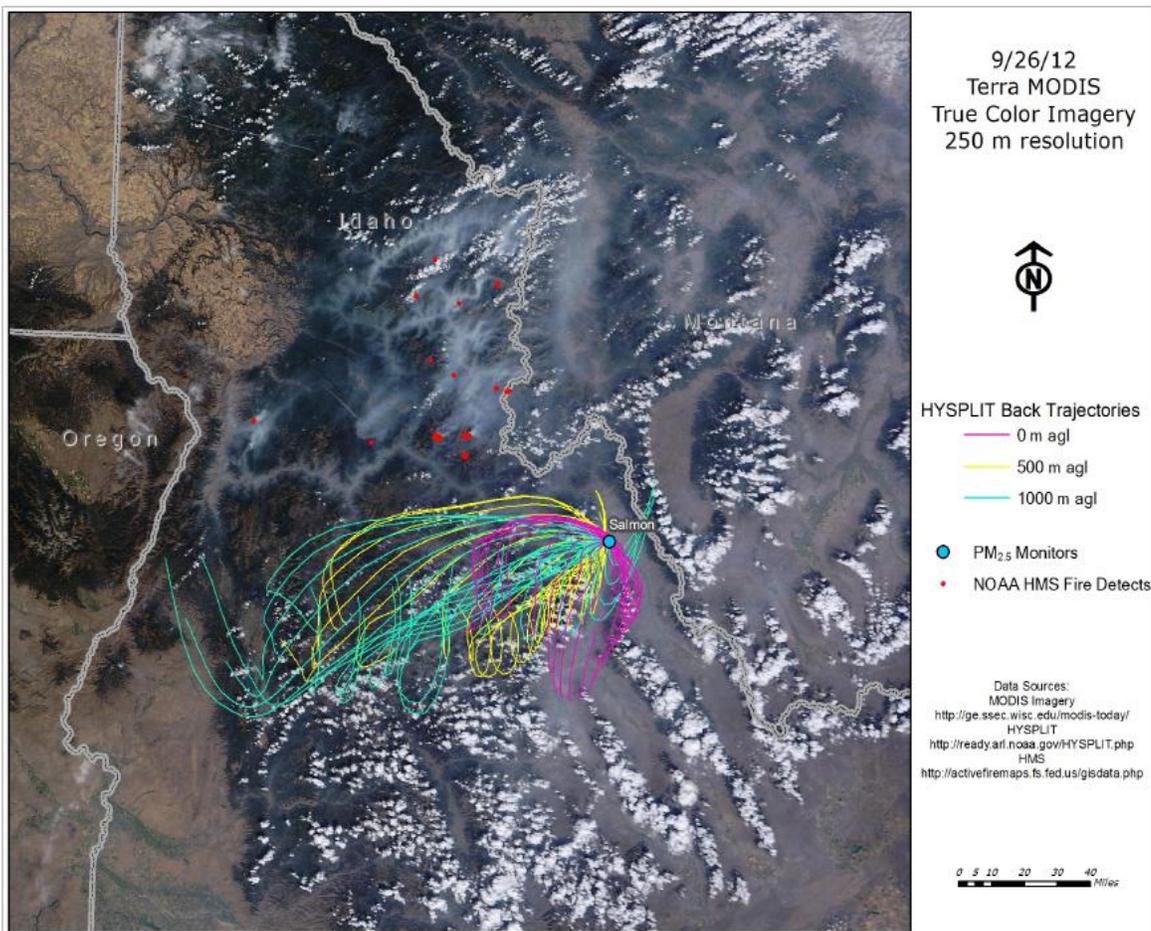
9/25/2012 Wind Speed and Wind Direction



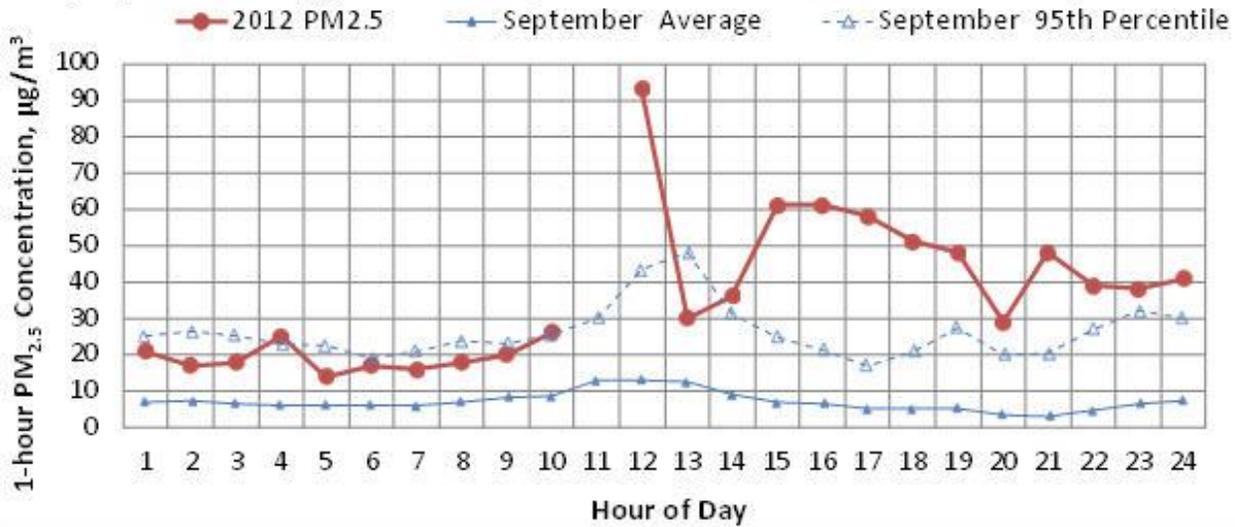
9/25/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



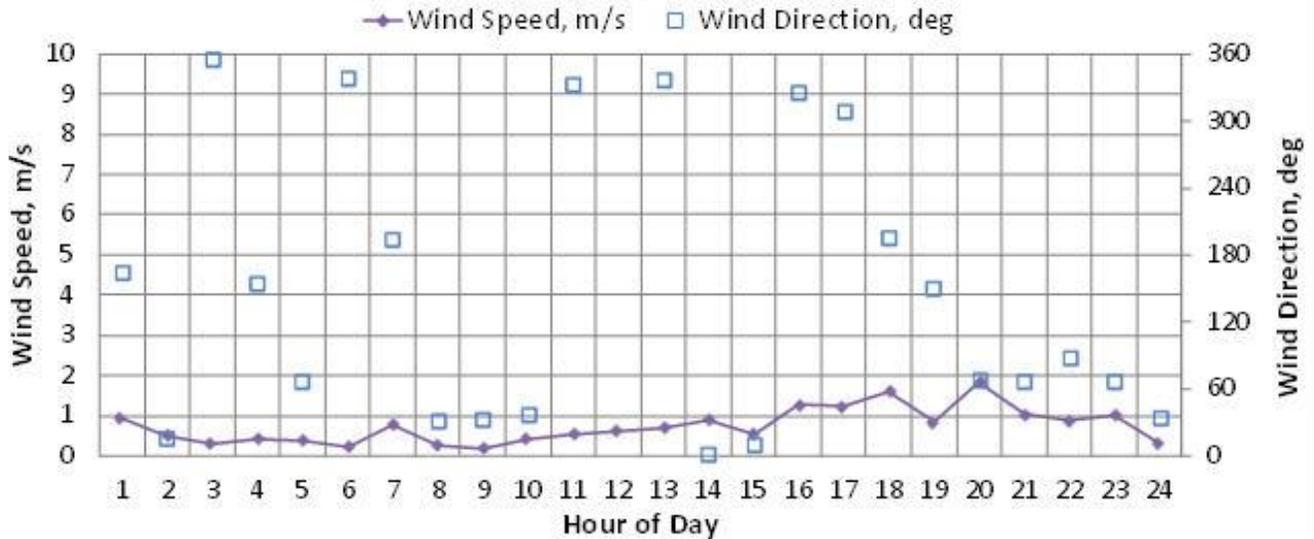
Summary of EER Evidence for Salmon Monitor Value, 37.4 $\mu\text{g}/\text{m}^3$ on 9-26-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; 98 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 4 (See Sec. 4)
	Weather Conditions:	Split flow develops over Idaho limiting transport speed while providing generally westerly flow.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows light smoke in Salmon and valleys to the south; thick smoke visible to the north. Back trajectories intersect smoke and/or fire detects from the Halstead fire. Hourly trace shows $\text{PM}_{2.5}$ levels between the average and 95 th percentile hourly values in the morning hours, followed by a one hour data loss and then a sharp rise to over 90 $\mu\text{g}/\text{m}^3$ at noon. Generally higher values from 30 to 60 $\mu\text{g}/\text{m}^3$ persist during the second half of the day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to 15.9 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 21.5 to 31.6 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



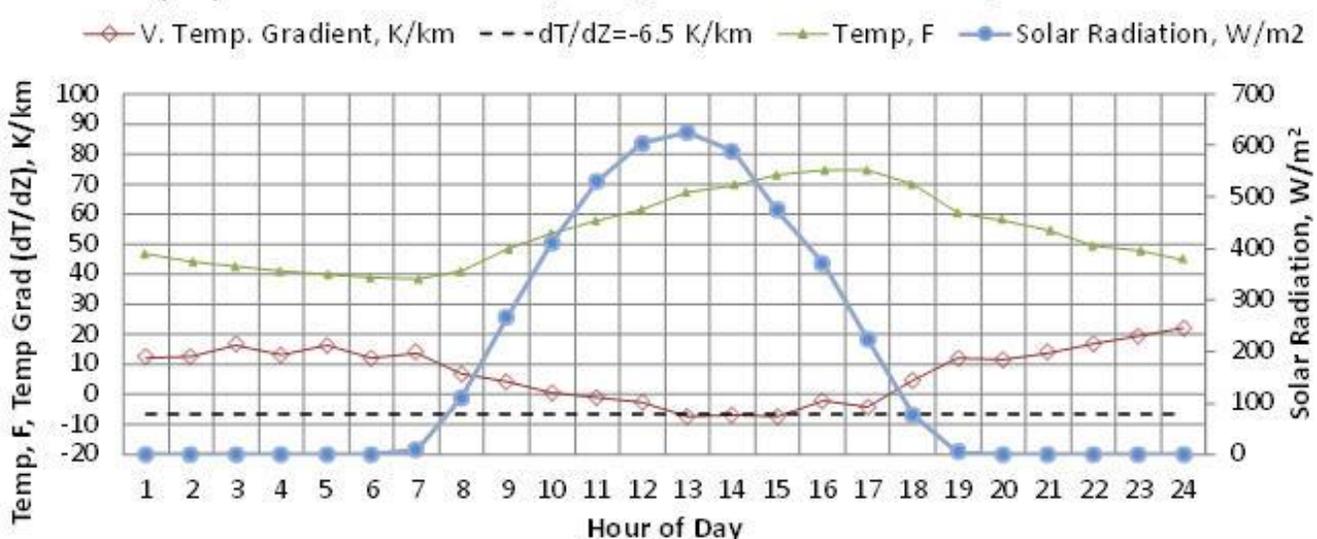
9/26/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



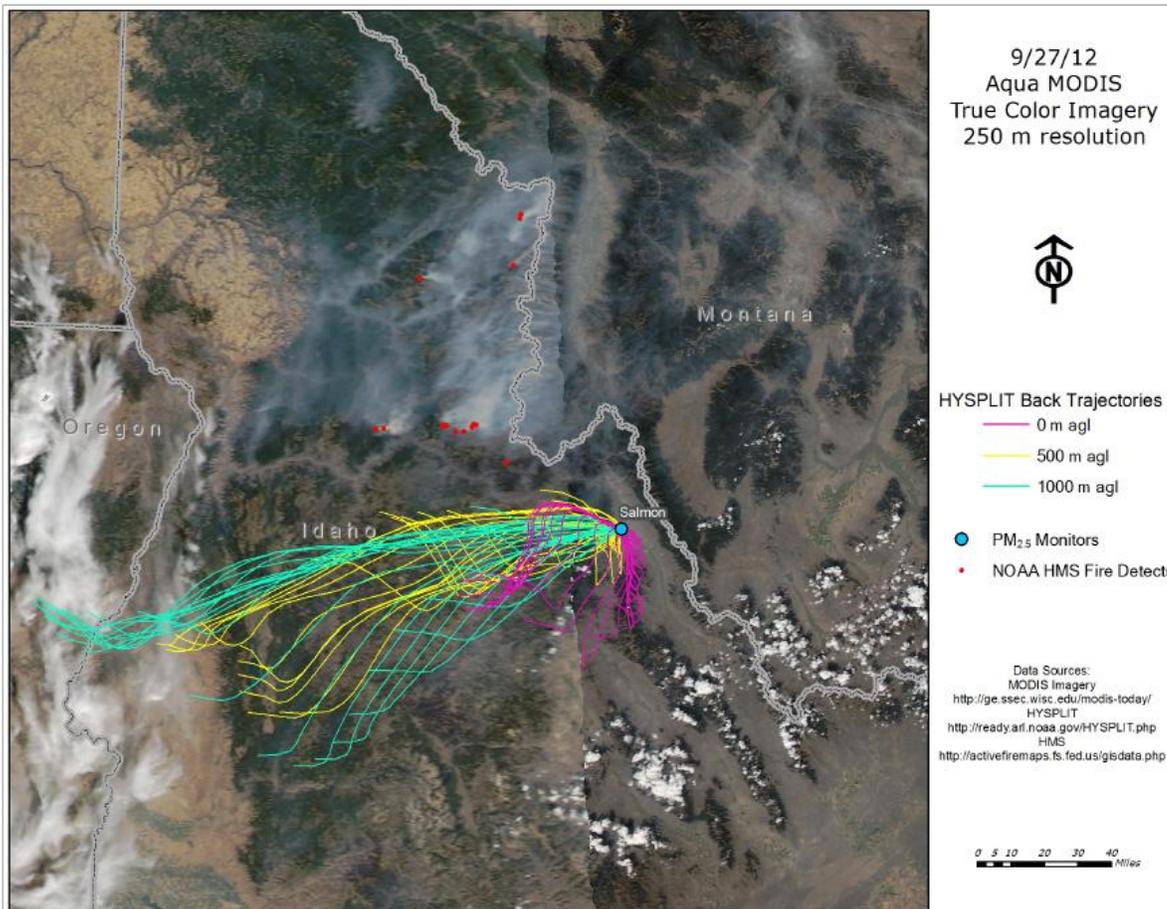
9/26/2012 Wind Speed and Wind Direction



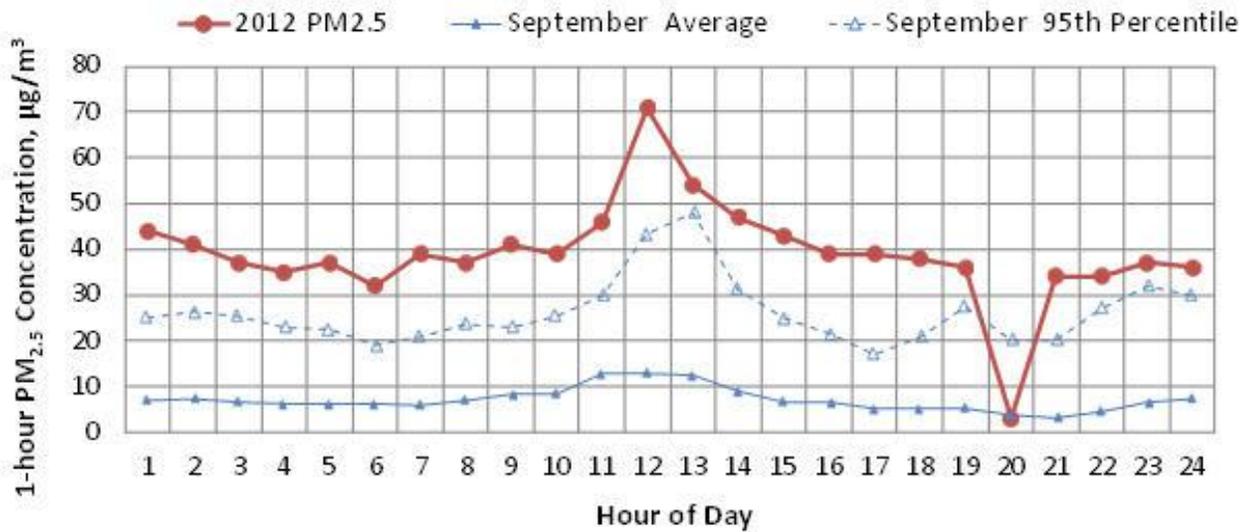
9/26/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



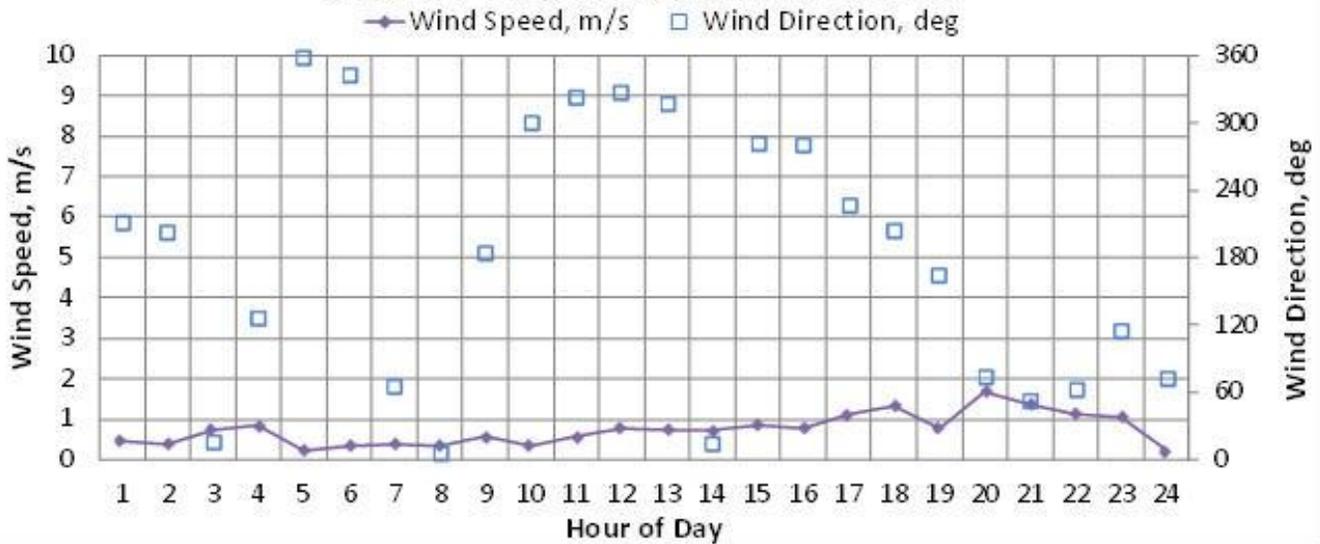
Summary of EER Evidence for Salmon Monitor Value, 39.3 $\mu\text{g}/\text{m}^3$ on 9-27-2012, AQS #16-059-0004 POC 3		
(No additional Monitor Values were recorded on this day)		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; 98 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2, 3, 4 (See Sec. 4)
	Weather Conditions:	Strong meridional steering component over Idaho limits wind speeds while local dynamics dominate Idaho air sheds.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows thick smoke surrounding Mustang, McGuire, and Powell SBW Complexes. Back trajectories intersect no visible smoke and/or fire detects. Hourly trace shows a concentration peak $\sim 70 \mu\text{g}/\text{m}^3$ at noon with light north to northwesterly winds bringing Mustang smoke up valley. Concentrations hover around $40 \mu\text{g}/\text{m}^3$ for most of the day, well above the hourly 95 th percentile level. Light winds and a mild temperature inversion persists all day helping to trap the smoke in the valley.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Too warm for RWC. See Sec 4.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was elevated from Aug thru Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 5.8 to $15.9 \mu\text{g}/\text{m}^3$ (Avg-to-95 th tile), thus, this event contributed 23.4 to $33.5 \mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



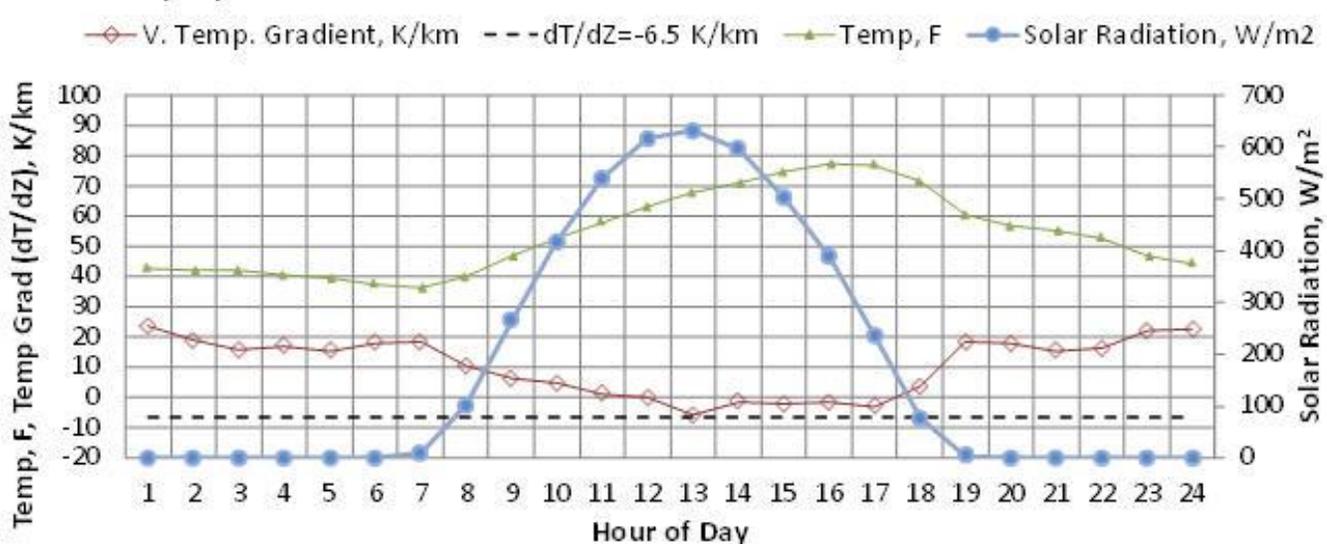
9/27/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



9/27/2012 Wind Speed and Wind Direction



9/27/2012 Solar Radiation, Temperature and Vert. Temp. Gradient



Appendix C: Pinehurst EER Daily Summaries

For each Pinehurst monitor value requested for Exceptional Events concurrence, Appendix C includes a summary of all EER elements along with a satellite/back trajectory map, PM_{2.5} and wind time series charts. The summary is a table which provides succinct information addressing all 7 EER criteria, or referencing other locations in this document where additional information may be found.

Appendix C: Pinehurst EER Information by Day

Information for This Appendix

This appendix contains day-by-day detailed information in support of the Exceptional Events request for each day requested, including the monitor values, AQS number and POC for each value on which DEQ is requesting concurrence. Explanations follow for the information contained in this appendix.

Summary of EER Evidence Tables

These tables contain concise, yet complete information supporting each EER element for each day in which EER concurrence is requested, along with reference to the main report section containing more complete explanations of the transport scenarios involved, alternative hypotheses and other EER elements.

Hysplit Back-trajectories / MODIS Satellite Images

Daily satellite images are overlaid with HYSPLIT back trajectories and HMS fire detects. Terra (morning) or Aqua (afternoon) RGB True Color images show a snapshot of the smoke at the time of the satellite pass. HYSPLIT back trajectories were run for the 24-hour period ending at 23:59 on each day. New trajectories start hourly and have starting positions at the source of 0 m agl, 500 m agl, and 1000 m agl. HMS fire detects are all those identified by the MODIS satellites during the 24-hour period.

Time Series Charts for each “Date” Requested

Twenty-four hour time series charts are provided to depict the temporal pattern of hourly PM_{2.5} concentration and meteorological parameters associated with each day. In addition, typical PM_{2.5} concentrations during the same month in previous years when wildfires were not impacting Pinehurst are characterized for comparison.

Top chart: “Date” PM_{2.5} with Average and 95th Percentile for Month (2009-2011)

2012 PM_{2.5} – The orange circles and line indicate the hourly PM_{2.5} concentration for each hour for each day affected by wildfires in 2012.

August/September/October Average. The blue line with filled blue triangle markers represents the average for the month for the three years prior to 2012. So each value represents 90 or 93 values averaged together. The October average only represents the days prior to October 15, to better represent the wildfire period.

August/September/October 95th percentile. The open blue triangles and dotted line represent the 95th percentile value for the identified month from the 2009 – 2011 data set. The 95th percentile is used to represent the upper limit of the normal historical fluctuations for each hour, based on EPA guidance for the 24-hour normal range between “average” and 95th percentile. Hourly values above this line indicate an “exceptional” hourly value that is beyond normal for that hour and month.

Middle Chart: “Date” Wind Speed and Wind Direction.

Wind Speed - The purple diamonds and solid line represent the wind speed in meters per second (m/s) recorded at the DEQ met station in Pinehurst. The wind sensor is at 10 meters above ground level.

Wind Direction, deg – The blue open squares represent the wind direction for the hour, at the DEQ met station.

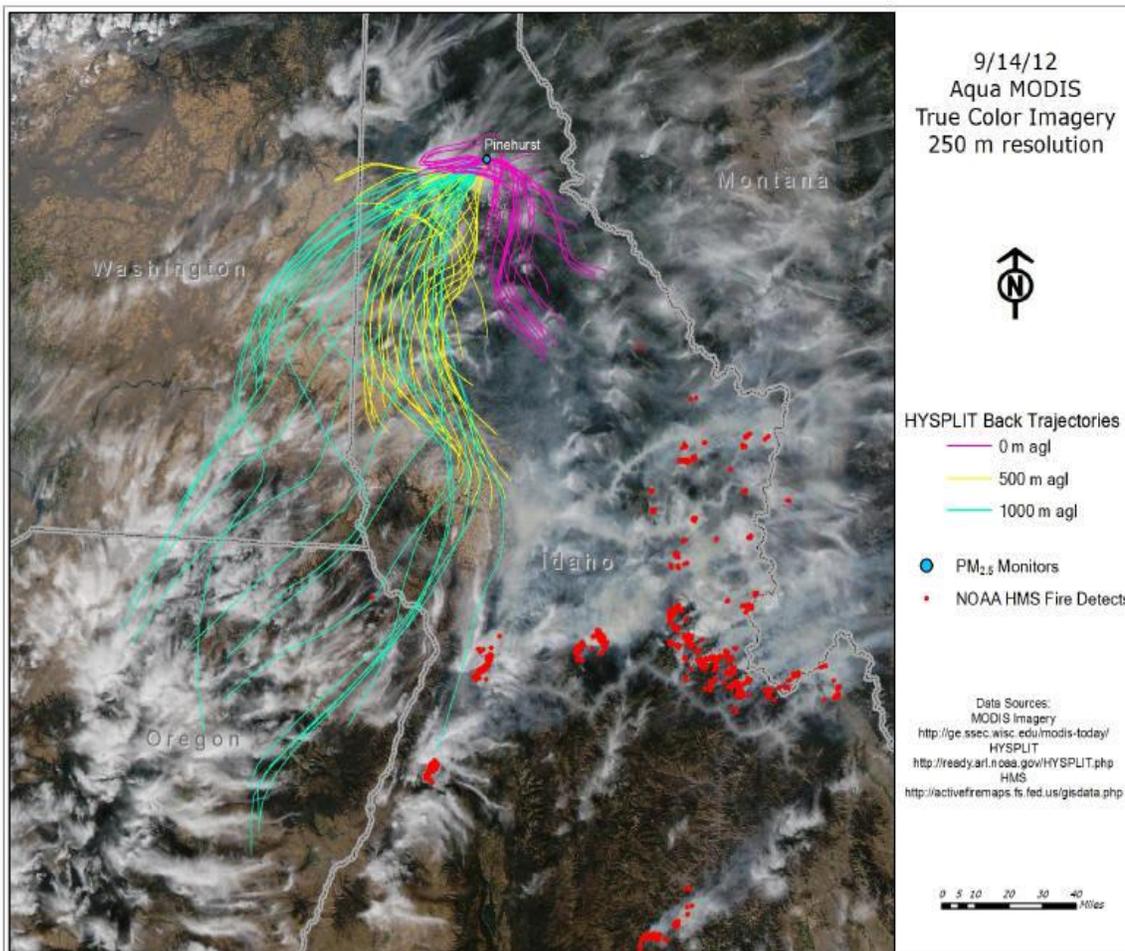
Bottom Chart: “Date” *Solar Radiation and Temperature*

Temp. F – The green triangles and green line represent the temperature at 2 meters above ground as measured at the DEQ met station. It is included to indicate when the temperature dips below 40 degrees F, the point at which residential wood combustion is beginning to be used.

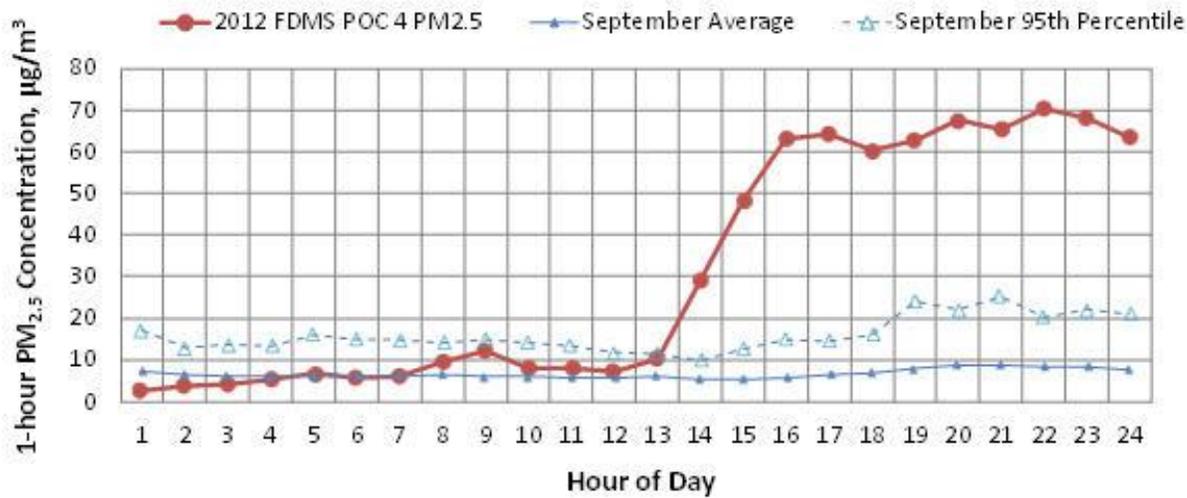
Solar Radiation, W/m² – the larger blue filled circles represent the solar radiation, in Watts per square meter (W/m²) measured at the DEQ met station. The solar intensity and cycle indicates when solar driven up-valley flows may be expected and when gravity driven down-slope and down-valley flows may be prevalent before sunrise and after sunset.

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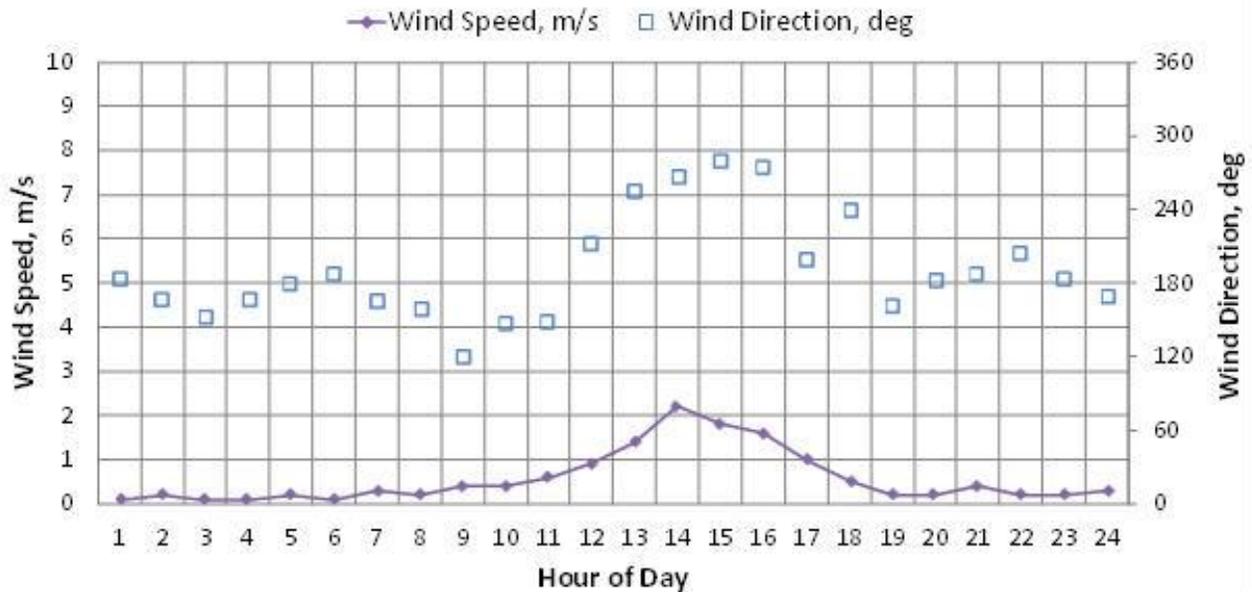
Summary of EER Evidence for Pinehurst Monitor Value, 31.3 $\mu\text{g}/\text{m}^3$ on 9-14-2012, AQS #16-079-0017 POC 4		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec.2)
HF	Percentile Rankings:	>99 th percentile seasonally; >95 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	High pressure over Great Basin extends north of Salmon River limits wind speeds. Resulting flat ridge axis over central MT provides S/SW flow over northern ID.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Afternoon satellite image shows dense smoke sunk in drainages in central Idaho overlaid by light cloud cover. Back trajectories intersect smoke and/or fire detects from the Sheep, Wesley (ID), and Cache Creek (OR) fires. Trajectories may also pick up smoke from the Mustang Complex that has drained west down the Clearwater River. Hourly trace shows concentrations rising rapidly in the afternoon and then remaining above 60 $\mu\text{g}/\text{m}^3$.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Evening temp > 50F so RWC is likely limited. See Sec. 4, Appendix D & E.
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was higher in region from Aug – Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 7 to 15 $\mu\text{g}/\text{m}^3$ (Avg-to-95 th %tile), thus, this event contributed 16 to 24 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS “but for” this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



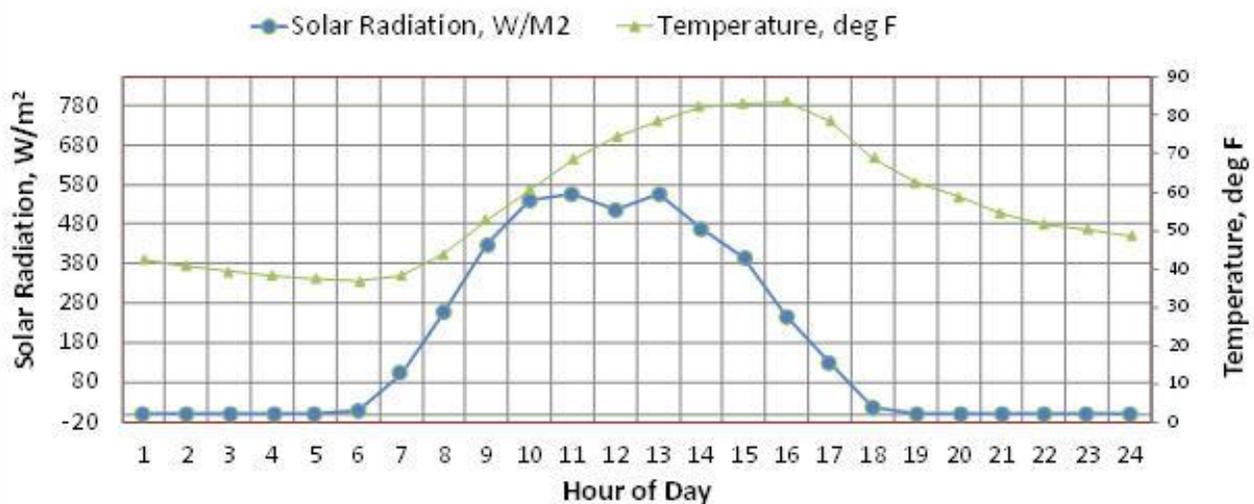
9/14/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



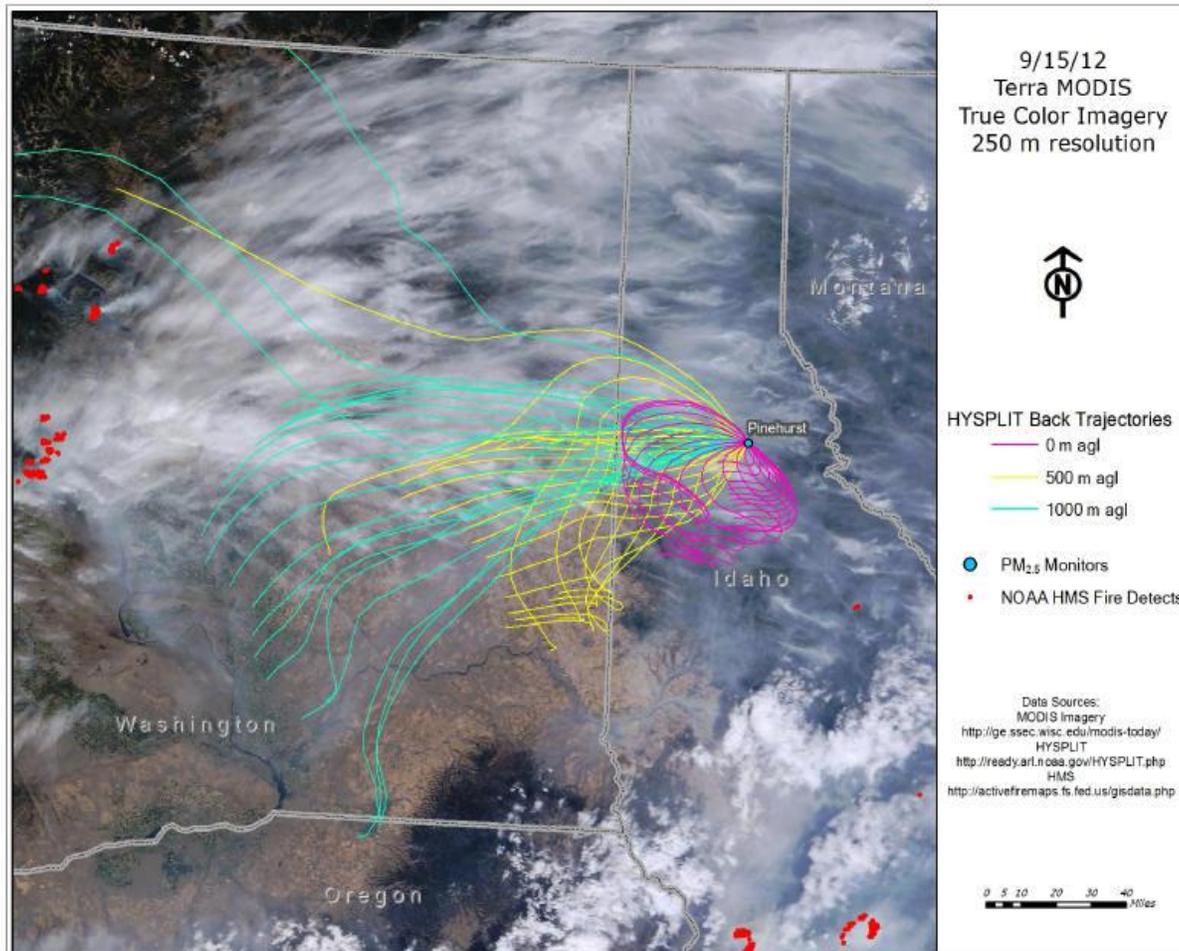
9/14/2012 Pinehurst Wind Speed and Wind Direction



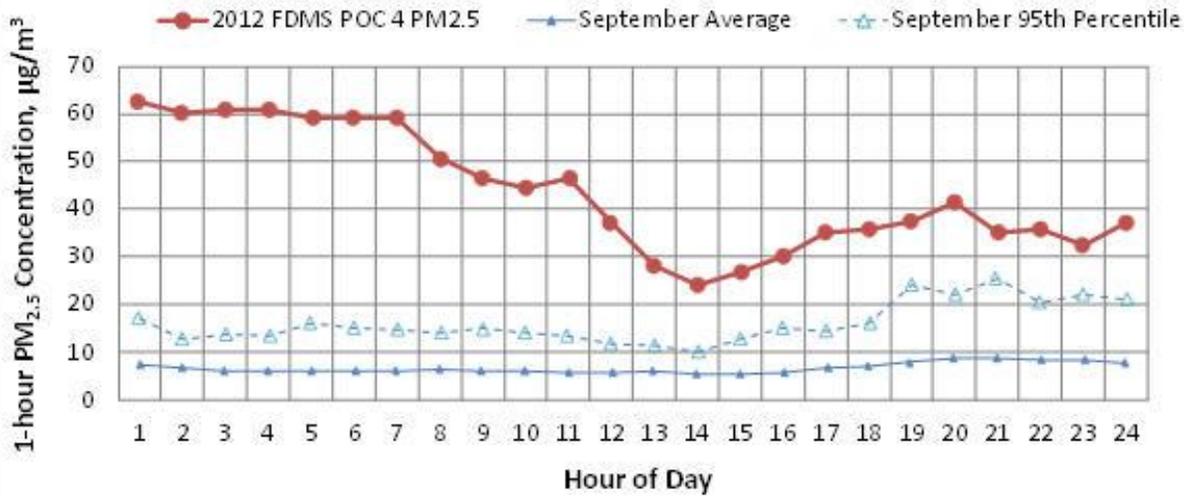
9/14/2012 Pinehurst Solar Radiation and Temperature



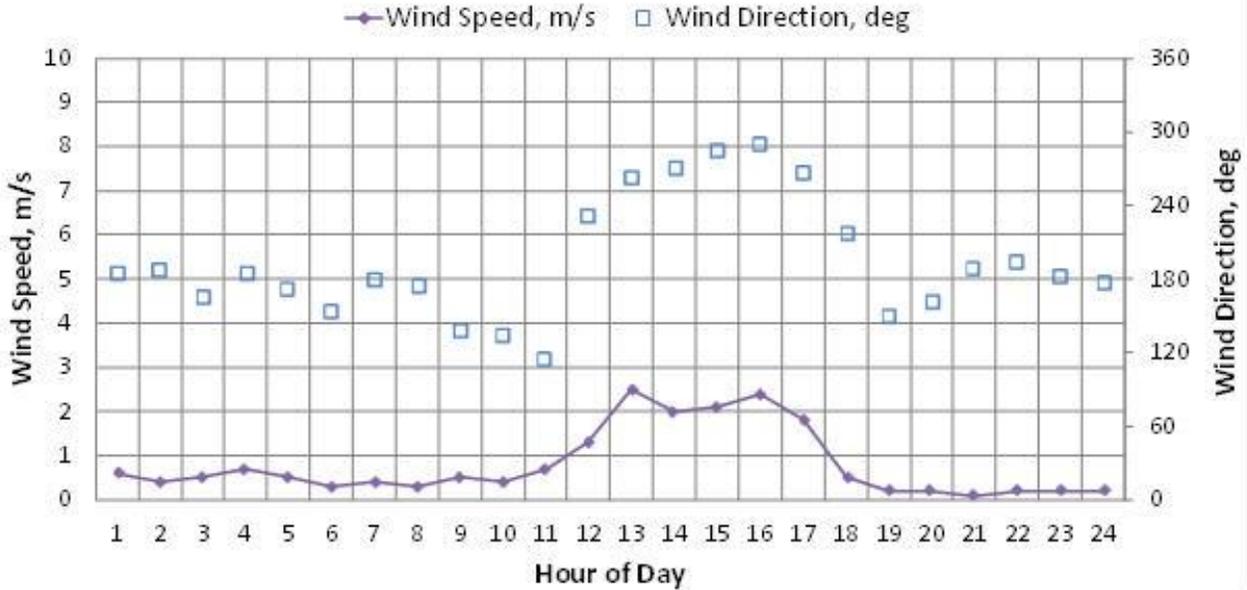
Summary of EER Evidence for Pinehurst Monitor Value, 43.6 $\mu\text{g}/\text{m}^3$ on 9-15-2012, AQS #16-079-0017 POC 4		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1, 2 (See Sec. 4)
	Weather Conditions:	Minor embedded shortwave trough located along the Pacific Coast provides zonal flow from WA into north Idaho.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows smoke covering the region and some clouds. Back trajectories intersect smoke and/or fire detects from the Yakima, Wenatchee, and Okanagan Complexes in WA. Surface trajectory recirculates local smoky air. Hourly trace shows high morning concentrations with some clearing in the afternoon. However, values do not drop below 20 $\mu\text{g}/\text{m}^3$ all day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Evening temp ~50F so RWC is likely limited. See Sec. 4, Appendix D & E.
	Speciation:	IMPROVE data show carbon PM _{2.5} was higher in region from Aug – Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 7 to 15 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus this event contributed 28.6 to 36.6 $\mu\text{g}/\text{m}^3$ and we conclude that there would not have been concentrations above the Annual or 24-hour NAAQS “but for” this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



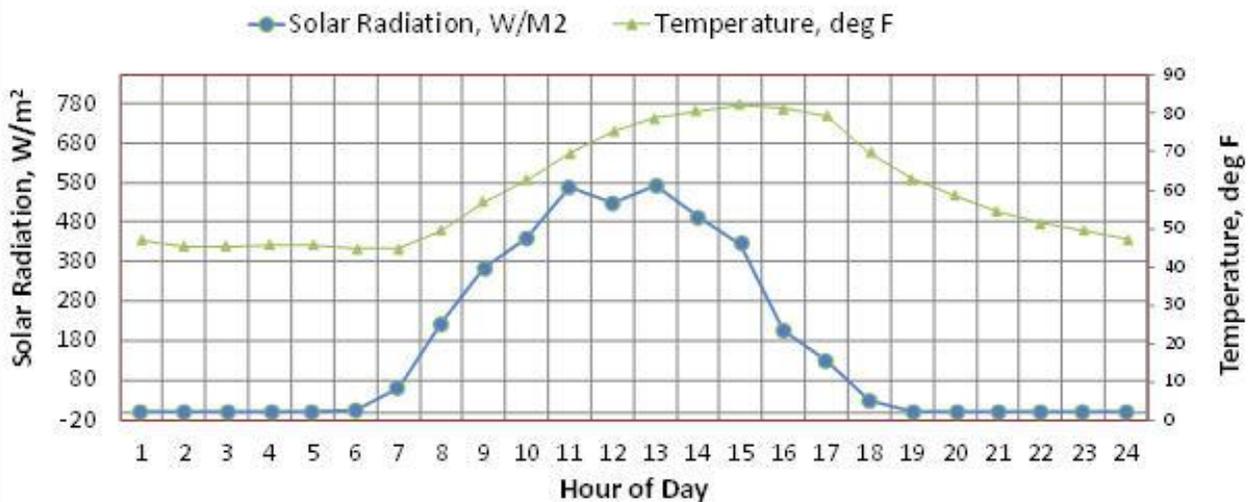
9/15/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



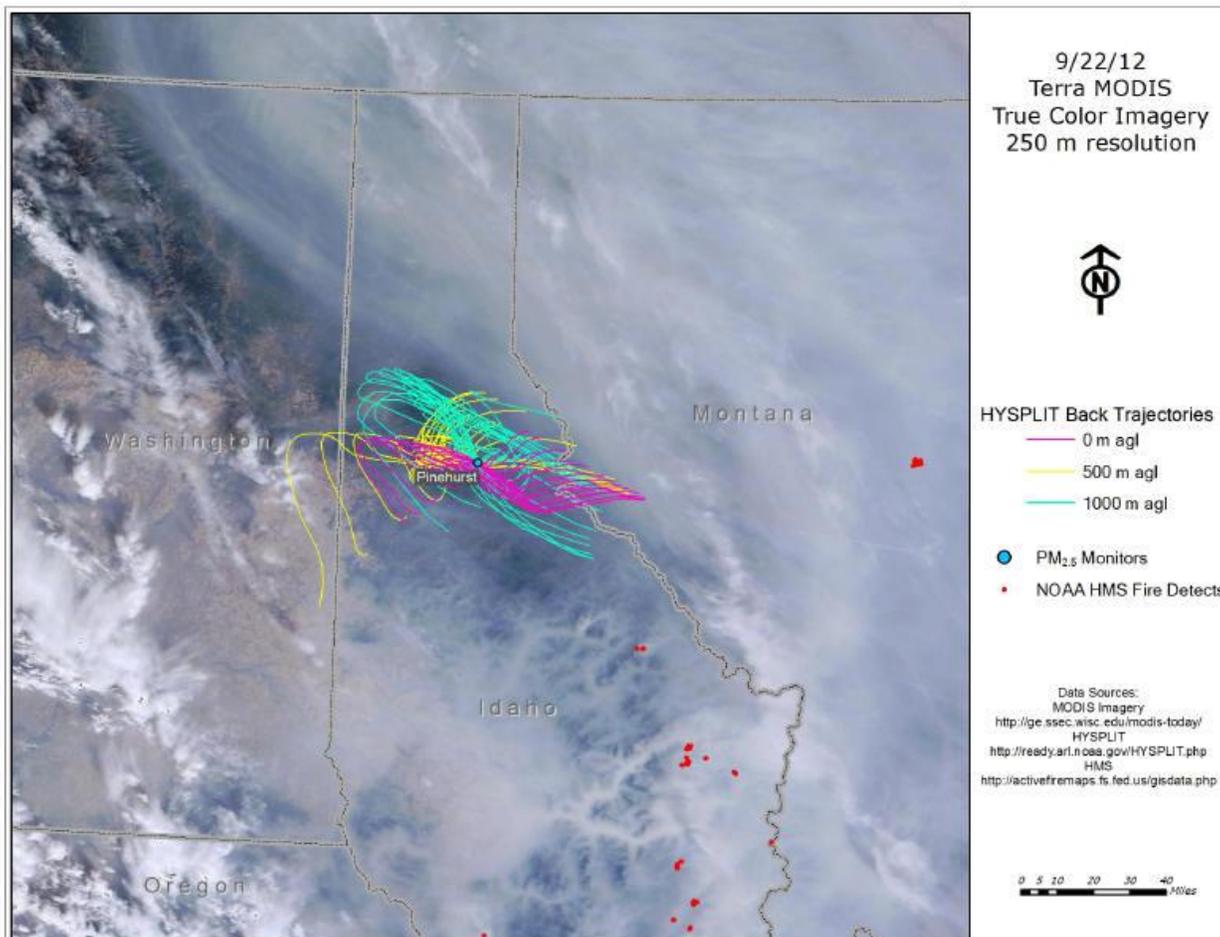
9/15/2012 Pinehurst Wind Speed and Wind Direction



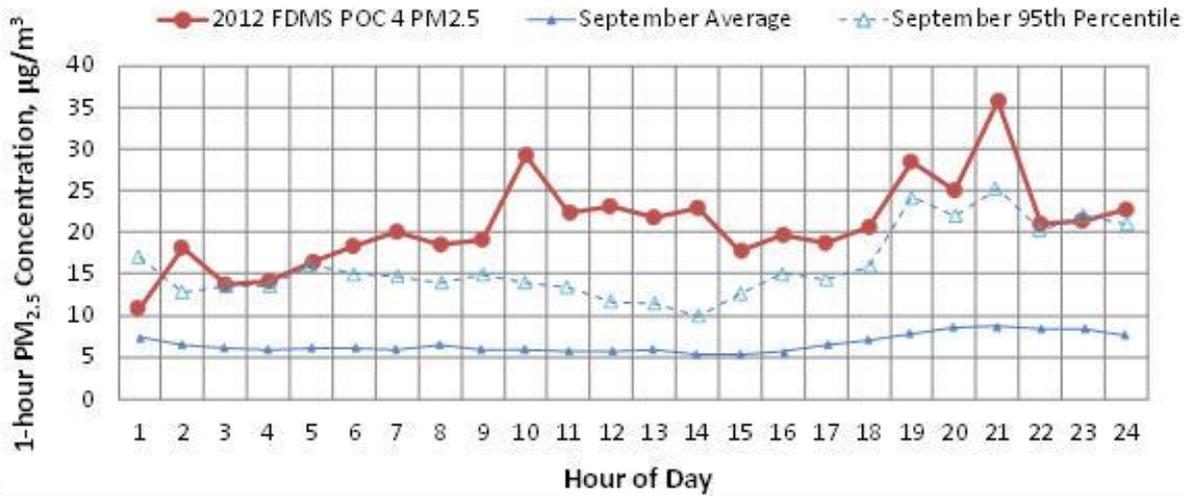
9/15/2012 Pinehurst Solar Radiation and Temperature



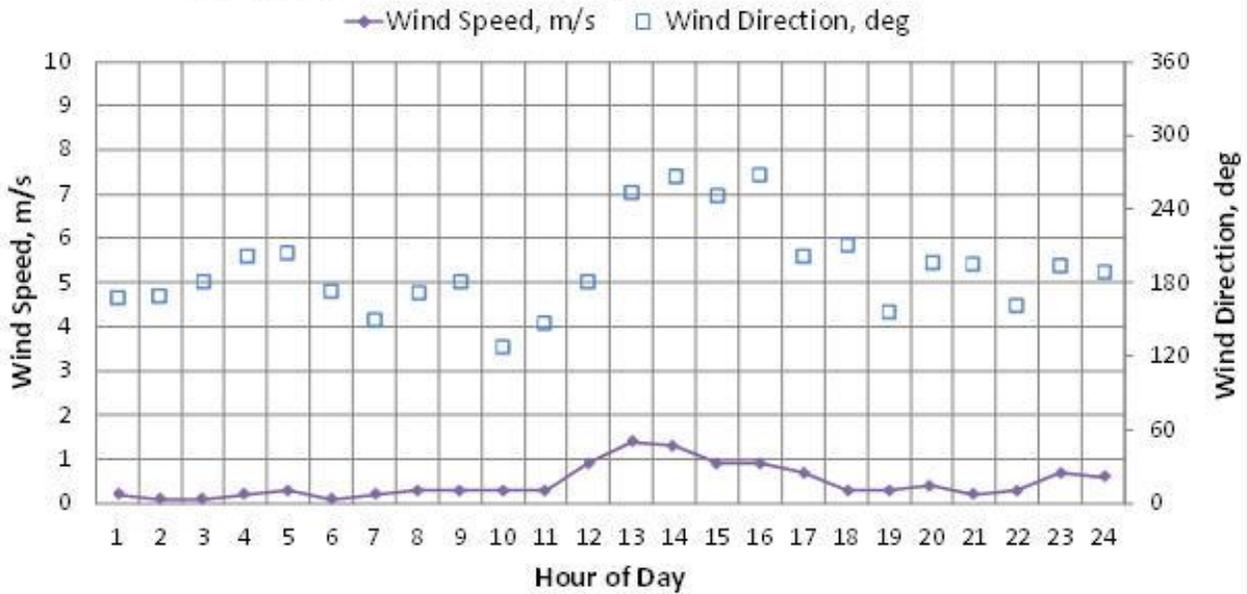
Summary of EER Evidence for Pinehurst Monitor Value, 20.8 $\mu\text{g}/\text{m}^3$ on 9-22-2012, AQS #16-079-0017 POC 4		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; 93 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 2 (See Sec. 4)
	Weather Conditions:	Ridge axis shifts over the Rockies and provides weak pressure gradient and low wind speeds while terrain-driven winds are primary driver.
	Transport Conditions and $\text{PM}_{2.5}$ /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows dense smoke hiding surface features across the field of view. Back trajectories recirculate local smoke and cover little ground during the 24-hour period, suggesting stagnant conditions. Hourly trace exhibits a slowly rising trend. Wind speeds are extremely low.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Evening temp >50F so RWC is likely limited. See Sec. 4, Appendix D & E
	Speciation:	IMPROVE data show carbon $\text{PM}_{2.5}$ was higher in region from Aug – Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 7 to 15 $\mu\text{g}/\text{m}^3$ (Avg-to-95%tile), thus, this event contributed 5.8 to 13.8 $\mu\text{g}/\text{m}^3$ and we conclude that there may not have been concentrations above the Annual or 24-hour NAAQS “but for” this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



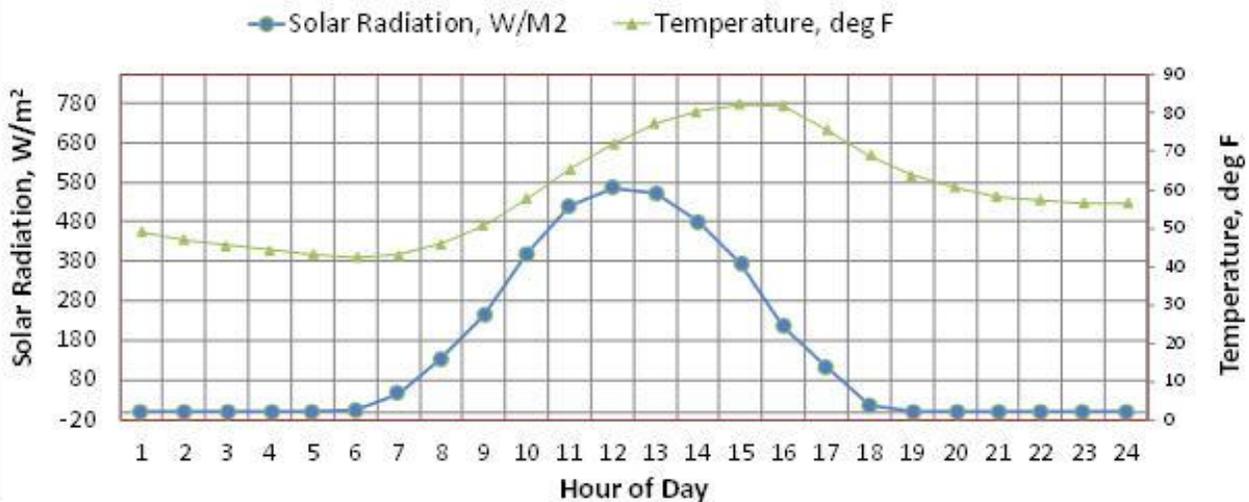
9/22/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



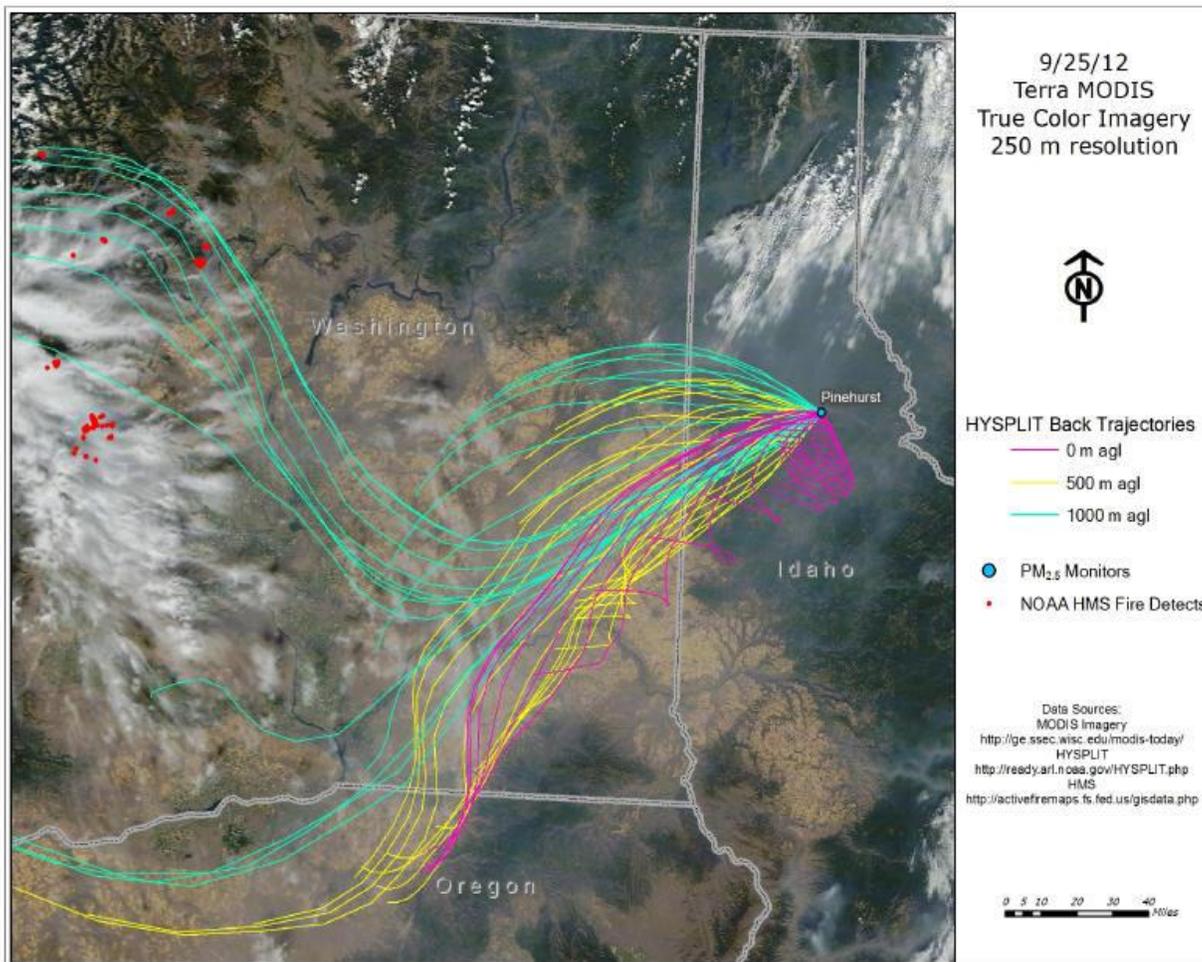
9/22/2012 Pinehurst Wind Speed and Wind Direction



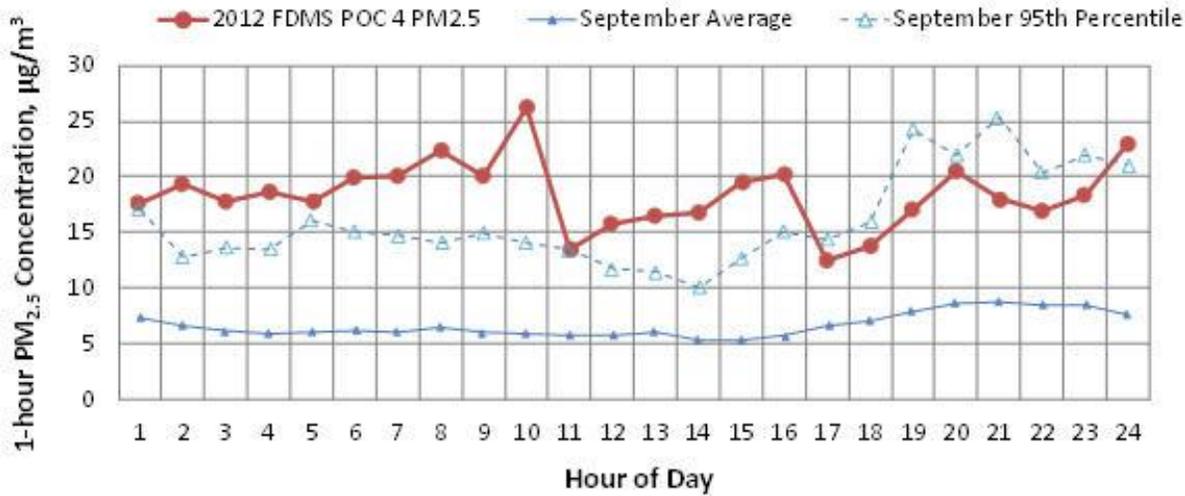
9/22/2012 Pinehurst Solar Radiation and Temperature



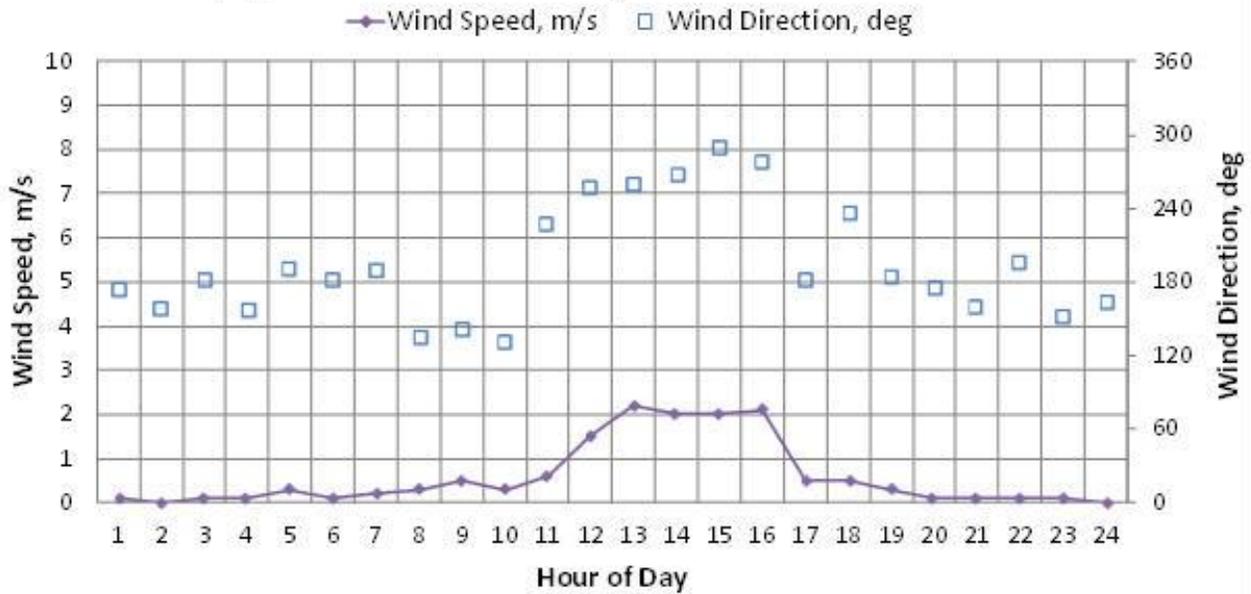
Summary of EER Evidence for Pinehurst Monitor Value, 18.4 µg/m ³ on 9-25-2012, AQS #16-079-0017 POC 4		
Criterion	Supporting Information	Evidence for this Day
nRCP	Source/Controllability:	Source is wildfires which are not reasonably controllable or preventable (See Sec..2)
HF	Percentile Rankings:	>99 th percentile seasonally; >99 th percentile annually (vs 2008-2011). (See Sec. 3)
CCR	Conceptual Model:	Scenario 1 (See Sec. 4)
	Weather Conditions:	Embedded shortwave trough behind upper level ridge accounts for SW flow with weak winds due to decaying rex block located over MT/WY/UT.
	Transport Conditions and PM _{2.5} /wind information: (See satellite image w/ back-trajectories and time series).	Morning satellite image shows light smoke across the region. Back trajectories intersect smoke and/or fire detects from the Cascade Creek, Table Mountain, Goat, Okanagan, and Wenatchee (WA) fires. Hourly trace is variable, mostly staying above 15 µg/m ³ all day.
	Alternative Hypotheses:	Stage 1 Forecast and Caution prohibits all open burning. Evening temp >45F so RWC is likely limited. See Sec. 4, Appendix D & E.
	Speciation:	IMPROVE data show carbon PM _{2.5} was higher in region from Aug - Sept (Sec 1.6)
AAQ	See discussion, Sec 5.	Affects Air Quality (AAQ) criterion is satisfied by HF and CCR demonstration.
NE/HAURL	See discussion, Sec 6.	Natural event-lightning caused wildfires. Per (EPA 2013) guidance, if nRCP and CCR criteria are satisfied, the AAQ criteria is also met.
NEBF	See discussion, Sec. 7 for explanation of NEBF	Normal Fluctuations above the average are 7 to 15 µg/m ³ (Avg-to-95%tile), thus, this event contributed 3.4 to 11.4 µg/m ³ and we conclude that there may not have been concentrations above the Annual or 24-hour NAAQS "but for" this contribution.
Mitigation:	See Sec 8 and Appendix D	Stage 1 Forecast and Caution in effect, advised residents of protective actions.



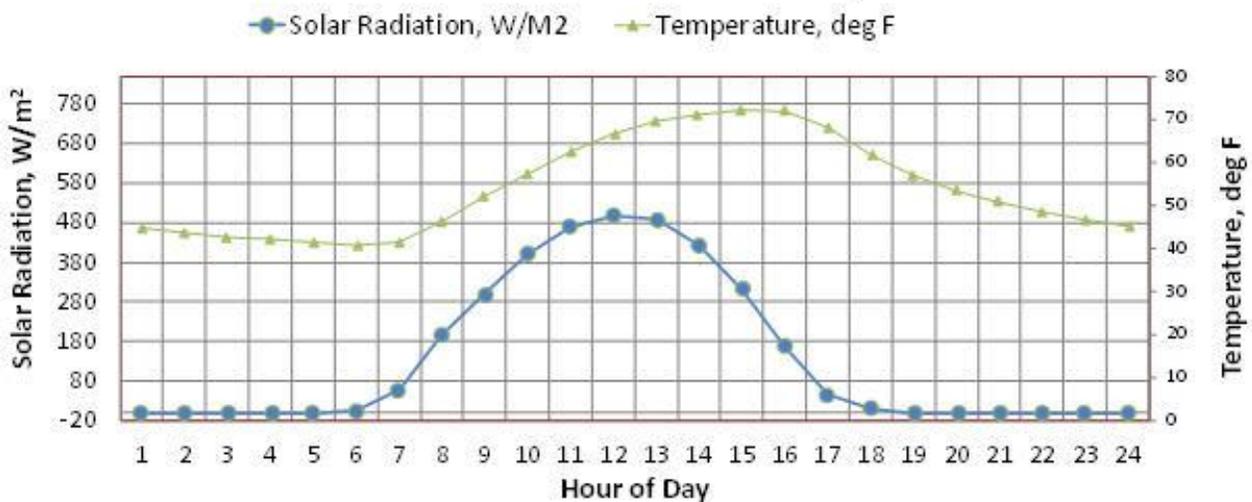
9/25/2012 PM_{2.5} with Average and 95th Percentile for Month (2009-2011)



9/25/2012 Pinehurst Wind Speed and Wind Direction



9/25/2012 Pinehurst Solar Radiation and Temperature



Appendix D: Alternative Sources

1. Crop Residue Burning Burn Decision Summaries
2. Prescribed Fires from September 1–October 12 in Idaho
3. Prescribed Fires from September 1–October 12 in Montana

Appendix D

D-1 Crop Residue Burning – Burn Decision Summaries for the 2012 Period of Wildfire Impacts

Source: Idaho DEQ at <http://www.deq.idaho.gov/air-quality/burning/crop-residue-burning.aspx>

Note, Crop Residue burns were not requested or approved for Shoshone County or Lemhi During this period, so those counties are excluded from the following Burn Decision Summary Tables, originally published in the 2012 Crop Residue Burning Annual Report (see link above)

D-2 Prescribed fire database entries from the Montana/Idaho Airshed database for Idaho, August 1 through October 12.

Source: Montana/Idaho Airshed Group; Airshed Management System at <http://www.smokemu.org>

Most prescribed fire burns occur after the beginning of October. None occurred in August and only two in Idaho occurred in late September, as shown in the tables.

D-3 Prescribed fire database entries from the Montana/Idaho Airshed database for Western Montana, August 1 through October 12.

Source: Montana/Idaho Airshed Group; Airshed Management System at <http://www.smokemu.org>

Most prescribed fire burns occur after the beginning of October. None occurred in August and only two in Idaho occurred in late September, as shown in the tables.

D-1 Crop Residue Burning – Burn Decision Summaries for the 2012 Period of Wildfire Impacts

Crop Residue Burning Program: 2012 Annual Report

Table A6. August burn decisions—southern Idaho.

		Burn Decisions by Smoke Management Area -Southern Idaho						
		Southwest	Southern	Northern	Southeast	Eastern	Weiser and	Blaine and
		Idaho	Magic Valley	Magic Valley	Idaho	Idaho	Lower Payette	Camas
Date							Valleys	Counties
August 1, 2012		Burn	NR	NR	Burn	NR	NR	NR
August 2, 2012		Burn	NR	Red Flag	Red Flag	NR	NR	NR
August 3, 2012		NR	Burn	Burn	NR	NR	NR	NR
August 4, 2012	Weekend							
August 5, 2012	Weekend							
August 6, 2012		Dust Storm/Ozone	Ozone	NR	NR	NR	NR	NR
August 7, 2012		Smoke/Ozone	Smoke/Ozone	NR	NR	NR	Smoke/Ozone	NR
August 8, 2012		Red Flag	Red Flag	Red Flag	NR	Red Flag	Red Flag	NR
August 9, 2012		Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	NR
August 10, 2012		Red Flag	Red Flag	Red Flag	Red Flag	Red Flag	Red Flag	Red Flag
August 11, 2012	Weekend							
August 12, 2012	Weekend							
August 13, 2012		Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone
August 14, 2012		Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	NR
August 15, 2012		Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	NR
August 16, 2012		Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	NR
August 17, 2012		Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	Smoke/Ozone	NR
August 18, 2012	Weekend							
August 19, 2012	Weekend							
August 20, 2012		Smoke	Smoke	Smoke	Smoke	Smoke	Smoke	NR
August 21, 2012		Smoke	Smoke	Smoke	Smoke	Smoke	Smoke	NR
August 22, 2012		Smoke	Smoke	Smoke	Smoke	Smoke	Smoke	NR
August 23, 2012		Smoke	Smoke	Smoke	Smoke	Smoke	Smoke	NR
August 24, 2012		Red Flag	Red flag	Red flag	Red flag	Red flag	Red flag	NR
August 25, 2012	Weekend							
August 26, 2012	Weekend							
August 27, 2012		Smoke	Burn	Burn	Burn	Burn	Smoke	NR
August 28, 2012		Smoke	Burn	Burn	Burn	Burn	Smoke	NR
August 29, 2012		Smoke	NR	Red Flag	Red Flag	Red Flag	NR	NR
August 30, 2012		Smoke	Smoke	Smoke	Burn	Smoke	NR	NR
August 31, 2012		Smoke	Red Flag	Red Flag	Red Flag	Red Flag	Red Flag	NR

Note: NR = no requests to burn or a fire-safety burn ban was in place that prohibited crop residue burning
 Ozone = ambient ozone concentrations were above, or were forecasted to be above, allowable limits^o
 Red Flag = the National Weather Service issued a red-flag warning for high fire risk
 Smoke/Ozone = both wildfire smoke and ambient ozone concentrations led to a no-burn decision
 Smoke = wildfire smoke led to a no-burn decision

Crop Residue Burning Program: 2012 Annual Report

Table A7. September burn decisions—southern Idaho.

		Burn Decisions by Smoke Management Area - Southern Idaho						
		Southwest	Southern	Northern	Southeast	Eastern	Weiser and	Blaine and
Date		Idaho	Magic Valley	Magic Valley	Idaho	Idaho	Lower Payette	Camas
							Valleys	Counties
September 1, 2012	Weekend							
September 2, 2012	Weekend							
September 3, 2012	Holiday							
September 4, 2012		Burn	Burn	Burn	Burn	Burn	NR	NR
September 5, 2012		Burn	Burn	Burn	Burn	Burn	NR	NR
September 6, 2012		NR	Burn	Burn	Burn	Burn	NR	NR
September 7, 2012		NR	Burn	NR	Burn	Burn	NR	NR
September 8, 2012	Weekend							
September 9, 2012	Weekend							
September 10, 2012		Red Flag	Red Flag	Red Flag	Red Flag	Red Flag	NR	NR
September 11, 2012		Burn	Burn	Burn	Wind	Burn	Burn	NR
September 12, 2012		Burn	Burn	Burn	Burn	Burn	NR	NR
September 13, 2012		Smoke	Burn	Burn	Burn	Smoke	NR	NR
September 14, 2012		Smoke	Burn	Burn	Burn	Burn	NR	NR
September 15, 2012	Weekend							
September 16, 2012	Weekend							
September 17, 2012		Smoke	Smoke	NR	Smoke	Smoke	NR	NR
September 18, 2012		Smoke	Smoke	NR	Smoke	Smoke	NR	NR
September 19, 2012		Smoke	Smoke	NR	Smoke	Smoke	NR	NR
September 20, 2012		Smoke	Smoke	NR	Smoke	Smoke	NR	NR
September 21, 2012		Smoke	Smoke	NR	Smoke	Smoke	NR	NR
September 22, 2012	Weekend							
September 23, 2012	Weekend							
September 24, 2012		Burn	NR	NR	NR	Burn	NR	NR
September 25, 2012		Burn	Burn	NR	Burn	Burn	NR	NR
September 26, 2012		Smoke	Smoke	Burn	Burn	Burn	NR	NR
September 27, 2012		Smoke	Smoke	NR	Burn	Burn	NR	NR
September 28, 2012		Smoke	Smoke	Burn	NR	Burn	NR	NR
September 29, 2012	Weekend							
September 30, 2012	Weekend							

Note: NR = no requests to burn or a fire-safety burn ban was in place that prohibited crop residue burning
 Ozone = ambient ozone concentrations were above, or were forecasted to be above, allowable limits^a
 Red Flag = the National Weather Service issued a red-flag warning for high fire risk
 Wind = wind velocity was too high for good smoke dispersion but red-flag criteria were not met
 Smoke/Ozone = both wildfire smoke and ambient ozone concentrations led to a no-burn decision
 Smoke = wildfire smoke led to a no-burn decision

Crop Residue Burning Program: 2012 Annual Report

Table A8. October burn decisions—southern Idaho.

		Burn Decisions by Smoke Management Area - Southern Idaho						
		Southwest	Southern	Northern	Southeast	Eastern	Weiser and	Blaine and
		Idaho	Magic Valley	Magic Valley	Idaho	Idaho	Lower Payette	Camas
Date		Idaho	Magic Valley	Magic Valley	Idaho	Idaho	Valleys	Counties
October 1, 2012		Burn	Burn	NR	Burn	Burn	NR	NR
October 2, 2012		Burn	Wind	Red Flag	NR	Red Flag	NR	Wind
October 3, 2012		NR	Wind	Wind	NR	Burn	NR	Wind
October 4, 2012		Burn	Burn	Burn	NR	Burn	NR	NR
October 5, 2012		NR	Burn	NR	Burn	Burn	NR	Burn
October 6, 2012	Weekend							
October 7, 2012	Weekend							
October 8, 2012	Holiday							
October 9, 2012		NR	Burn	NR	Burn	Burn	NR	Burn
October 10, 2012		NR	Burn	NR	NR	Burn	NR	Burn
October 11, 2012		NR	Burn	NR	Burn	Burn	NR	Burn
October 12, 2012		NR	Burn	NR	Burn	Burn	NR	Burn
October 13, 2012	Weekend							
October 14, 2012	Weekend							
October 15, 2012		Moisture	Wind	NR	NR	Wind	Moisture	NR
October 16, 2012		Moisture	Moisture	NR	Moisture	Moisture	Moisture	NR
October 17, 2012		Moisture	Moisture	NR	Moisture	Moisture	Moisture	NR
October 18, 2012		NR	Burn	Burn	Burn	Burn	Moisture	NR
October 19, 2012		Burn	Burn	Burn	Burn	Burn	Moisture	NR
October 20, 2012	Weekend							
October 21, 2012	Weekend							
October 22, 2012		NR	Burn	NR	Burn	NR	NR	Burn
October 23, 2012		NR	Moisture	Moisture	Moisture	Moisture	Moisture	Moisture
October 24, 2012		NR	Moisture	Moisture	Moisture	Moisture	Moisture	Moisture
October 25, 2012		NR	Moisture	Moisture	Moisture	Moisture	Moisture	Moisture
October 26, 2012		NR	Burn	Moisture	Moisture	Moisture	NR	Moisture
October 27, 2012	Weekend							
October 28, 2012	Weekend							
October 29, 2012		NR	Burn	Burn	Moisture	Moisture	NR	Moisture
October 30, 2012		NR	Burn	Moisture	Burn	Moisture	NR	Moisture
October 31, 2012		Burn	Burn	NR	Burn	Moisture	NR	Burn

Note: NR = no requests to burn or a fire-safety burn ban was in place that prohibited crop residue burning
 Ozone = ambient ozone concentrations were above, or were forecasted to be above, allowable limits¹⁰
 Red Flag = the National Weather Service issued a red-flag warning for high fire risk
 Wind = wind velocity was too high for good smoke dispersion but red-flag criteria were not met
 Smoke/Ozone = both wildfire smoke and ambient ozone concentrations led to a no-burn decision
 Smoke = wildfire smoke led to a no-burn decision
 Moisture = fuel or soil moisture levels were too high for good smoke dispersion

Crop Residue Burning Program: 2012 Annual Report

Table A2. August burn decisions—northern Idaho.

		Burn Decisions by Smoke Management Area -Northern Idaho						
		Boundary	Kootenai	Central	Clearwater	Idaho	Latah	Nez Perce
		SMA (County)	SMA (County)	SMA	County	County	County	County
Date								
August 1, 2012		NR	NR	Burn	NR	NR	Burn	Burn
August 2, 2012		NR	NR	NR	NR	NR	NR	NR
August 3, 2012		NR	NR	NR	NR	NR	NR	NR
August 4, 2012	Weekend							
August 5, 2012	Weekend							
August 6, 2012		Red Flag	Red Flag	Red Flag	Red Flag	Red Flag	Red Flag	Red Flag
August 7, 2012		NR	NR	Burn	NR	Burn	Burn	NR
August 8, 2012		NR	NR	Burn	NR	NR	Burn	NR
August 9, 2012		NR	NR	Poor Ventilation	NR	NR	Poor Ventilation	NR
August 10, 2012		NR	NR	Burn	NR	NR	Burn	NR
August 11, 2012	Weekend							
August 12, 2012	Weekend							
August 13, 2012		NR	Poor Ventilation	NR	NR	NR	NR	NR
August 14, 2012		NR	Poor Ventilation	NR	NR	NR	NR	NR
August 15, 2012		NR	Wind	NR	NR	NR	NR	NR
August 16, 2012		Burn	Poor Ventilation	NR	NR	NR	NR	NR
August 17, 2012		Poor Ventilation	Poor Ventilation	NR	NR	NR	NR	NR
August 18, 2012	Weekend							
August 19, 2012	Weekend							
August 20, 2012		Burn	Poor Ventilation	NR	NR	NR	NR	NR
August 21, 2012		Red Flag	Red Flag	Red Flag	NR	Red Flag	Red Flag	NR
August 22, 2012		Moisture	Moisture	NR	NR	Burn	NR	NR
August 23, 2012		Wind	Wind	NR	NR	NR	NR	NR
August 24, 2012		Wind	Wind	NR	NR	NR	NR	NR
August 25, 2012	Weekend							
August 26, 2012	Weekend							
August 27, 2012		Smoke	Smoke	Poor Ventilation	NR	Poor Ventilation	Poor Ventilation	Poor Ventilation
August 28, 2012		Burn	Burn	Smoke	NR	Smoke	Smoke	Smoke
August 29, 2012		Poor Ventilation	Smoke	Burn	NR	Burn	Burn	Burn
August 30, 2012		Poor Ventilation	Smoke	Poor Ventilation	NR	Poor Ventilation	Poor Ventilation	Poor Ventilation
August 31, 2012		Poor Ventilation	Poor Ventilation	Smoke	NR	Smoke	Poor Ventilation	Burn

Note: NR = no requests to burn or a fire-safety burn ban was in place that prohibited crop residue burning
 Ozone = ambient ozone concentrations were above, or were forecasted to be above, allowable limits"
 Red Flag = the National Weather Service issued a red-flag warning for high fire risk
 Smoke/Ozone = both wildfire smoke and ambient ozone concentrations led to a no-burn decision
 Smoke = wildfire smoke led to a no-burn decision

Crop Residue Burning Program: 2012 Annual Report

Table A3. September burn decisions—northern Idaho.

		Burn Decisions by Smoke Management Area - Northern Idaho						
Date		Boundary SMA (County)	Kootenai SMA (County)	Central SMA	Clearwater County	Idaho County	Latah County	Nez Perce County
September 1, 2012	Weekend							
September 2, 2012	Weekend							
September 3, 2012	Holiday							
September 4, 2012		Burn	Wind	Burn	NR	Burn	Burn	Burn
September 5, 2012		Burn	Burn	Burn	Burn	Burn	Poor Ventilation	Burn
September 6, 2012		Burn	Poor Ventilation	Burn	Burn	Burn	Burn	NR
September 7, 2012		Wind	Poor Ventilation	Burn	Poor Ventilation	Burn	Poor Ventilation	Poor Ventilation
September 8, 2012	Weekend							
September 9, 2012	Weekend							
September 10, 2012		Red Flag	Red Flag	Red Flag	Red Flag	Red Flag	Red Flag	Red Flag
September 11, 2012		Burn	Poor Ventilation	Burn	NR	Burn	Burn	Burn
September 12, 2012		Burn	Poor Ventilation	Smoke	Poor Ventilation	Smoke	Poor Ventilation	Poor Ventilation
September 13, 2012		Burn	Poor Ventilation	Smoke	Poor Ventilation	Smoke	Poor Ventilation	Poor Ventilation
September 14, 2012		Burn	Poor Ventilation	Smoke	Smoke	Smoke	Smoke	Smoke
September 15, 2012	Weekend							
September 16, 2012	Weekend							
September 17, 2012		Poor Ventilation	Poor Ventilation	Smoke	Smoke	Smoke	Smoke	Smoke
September 18, 2012		Burn	Poor Ventilation	Smoke	Smoke	Smoke	Poor Ventilation	Poor Ventilation
September 19, 2012		Poor Ventilation	Poor Ventilation	Smoke	Smoke	Smoke	Smoke	Smoke
September 20, 2012		Poor Ventilation	Poor Ventilation	Smoke	Smoke	Smoke	Smoke	Smoke
September 21, 2012		Poor Ventilation	Poor Ventilation	Smoke	Smoke	Smoke	Smoke	Smoke
September 22, 2012	Weekend							
September 23, 2012	Weekend							
September 24, 2012		Smoke	Smoke	Smoke	Smoke	Smoke	Smoke	Smoke
September 25, 2012		Smoke	Smoke	Smoke	Smoke	Smoke	Smoke	Smoke
September 26, 2012		Smoke	Smoke	Smoke	Smoke	Smoke	Smoke	Smoke
September 27, 2012		Smoke	Smoke	Smoke	Smoke	Smoke	Smoke	Smoke
September 28, 2012		Smoke	Smoke	Smoke	Smoke	Smoke	Smoke	Smoke
September 29, 2012	Weekend							
September 30, 2012	Weekend							

Note: NR = no requests to burn or a fire-safety burn ban was in place that prohibited crop residue burning
 Ozone = ambient ozone concentrations were above, or were forecasted to be above, allowable limits¹
 Red Flag = the National Weather Service issued a red-flag warning for high fire risk
 Wind = wind velocity was too high for good smoke dispersion but red-flag criteria were not met
 Smoke/Ozone = both wildfire smoke and ambient ozone concentrations led to a no-burn decision
 Smoke = wildfire smoke led to a no-burn decision

Crop Residue Burning Program: 2012 Annual Report

Table A4. October burn decisions—northern Idaho.

		Burn Decisions by Smoke Management Area -Northern Idaho						
Date		Boundary SMA (County)	Kootenai SMA (County)	Central SMA	Clearwater County	Idaho County	Latah County	Nez Perce County
October 1, 2012		Burn	Poor Ventilation	Poor Ventilation	Poor Ventilation	Poor Ventilation	Poor Ventilation	Poor Ventilation
October 2, 2012		Red Flag	Red Flag	Burn	Burn	Burn	Burn	Burn
October 3, 2012		Burn	Poor Ventilation	Burn	Burn	Burn	Burn	Burn
October 4, 2012		Burn	Poor Ventilation	Smoke	Smoke	Smoke	Smoke	Burn
October 5, 2012		Burn	Poor Ventilation	Smoke	Smoke	Smoke	Smoke	Burn
October 6, 2012	Weekend							
October 7, 2012	Weekend							
October 8, 2012	Holiday							
October 9, 2012		Poor Ventilation	Poor Ventilation	Smoke	Smoke	Smoke	Smoke	Smoke
October 10, 2012		Burn	Burn	Smoke	Smoke	Smoke	Smoke	Smoke
October 11, 2012		Poor Ventilation	Wind	Smoke	Smoke	Smoke	Smoke	Smoke
October 12, 2012		Burn	Burn	Smoke	Smoke	Smoke	Smoke	Smoke
October 13, 2012	Weekend							
October 14, 2012	Weekend							
October 15, 2012		Moisture	NR	Moisture	Moisture	Moisture	Moisture	Moisture
October 16, 2012		NR	NR	Moisture	Moisture	Moisture	Moisture	Moisture
October 17, 2012		NR	NR	Burn	Burn	Burn	Burn	Burn
October 18, 2012		NR	NR	Burn	Burn	Burn	Burn	Smoke
October 19, 2012		NR	NR	Moisture	NR	NR	Moisture	Moisture
October 20, 2012	Weekend							
October 21, 2012	Weekend							
October 22, 2012		NR	NR	Burn	NR	NR	Burn	Burn
October 23, 2012		NR	NR	Moisture	NR	NR	Moisture	Moisture
October 24, 2012		NR	NR	Moisture	NR	NR	Moisture	Moisture
October 25, 2012		NR	NR	Moisture	NR	NR	Moisture	Moisture
October 26, 2012		NR	NR	Moisture	NR	NR	Moisture	Moisture
October 27, 2012	Weekend							
October 28, 2012	Weekend							
October 29, 2012		NR	NR	Moisture	NR	NR	Moisture	Moisture
October 30, 2012		NR	NR	Moisture	NR	NR	Moisture	Moisture
October 31, 2012		NR	NR	Burn	NR	NR	Burn	Burn

Note: NR = no requests to burn or a fire-safety burn ban was in place that prohibited crop residue burning
 Ozone = ambient ozone concentrations were above, or were forecasted to be above, allowable limits
 Red Flag = the National Weather Service issued a red-flag warning for high fire risk
 Wind = wind velocity was too high for good smoke dispersion but red-flag criteria were not met
 Smoke/Ozone = both wildfire smoke and ambient ozone concentrations led to a no-burn decision
 Smoke = wildfire smoke led to a no-burn decision
 Moisture = fuel or soil moisture levels were too high for good smoke dispersion

D-2 Prescribed fire database entries from the Montana/Idaho Airshed database for Idaho, August 1 through October 12.

No burns occurred prior to 9/26/12.

Date	Burn Type	Burned Acres	Latitude	Longitude
9/26/2012	Broadcast	80	42.64400101	-114.9120026
9/26/2012	Broadcast	120	42.59780121	-115.0220032
10/4/2012	Broadcast	200	43.25	-111.4209976
10/5/2012	Broadcast	400	43.25	-111.4209976
10/11/2012	Broadcast	10	47.86759949	-116.9680023
10/11/2012	Broadcast	46	47.86759949	-116.9680023
10/12/2012	Broadcast	80	42.64400101	-114.9120026

D-3 Prescribed fire database entries from the Montana/Idaho Airshed database for Western Montana, August 1 through October 12.

No burns prior to Oct 10.

Date	Burn Type	Burned Acres	Latitude	Longitude
10/10/2012	Understory	15	48.66699982	-115.3799973
10/12/2012	Understory	10	48.66699982	-115.3799973

Appendix E: Mitigation—Stage 1 Forecast and Cautions, Daily Monitor Summary and Press Releases

1. Stage 1 Forecast and Caution – Days in effect for Lemhi and Shoshone counties
2. Stage 1 Forecast and Caution notification – example
3. DEQ daily wildfire update report—example
4. Department of Environmental Quality press releases
5. Idaho Department of Health and Welfare press releases

Appendix E-1 Dates of Stage 1 Forecast and Caution was in effect, with example Stage 1 notices.

Table 14 Dates during 2012 Wildfire period when Stage 1 Forecast and Caution was in effect, imposing a ban on all forms of open burning. Example Stage 1 Forecast and Caution alerts follow the table.

Date	Stage 1 Forecast and Caution, Lemhi County	Stage 1 Forecast and Caution, Shoshone County	Date	Stage 1 Forecast and Caution, Lemhi County	Stage 1 Forecast and Caution, Shoshone County
7/30/2012			9/1/2012	In Effect	
7/31/2012			9/2/2012	In Effect	
8/5/2012			9/3/2012	In Effect	
8/6/2012			9/4/2012	In Effect	
8/7/2012			9/5/2012	In Effect	
8/8/2012			9/6/2012	In Effect	
8/9/2012			9/7/2012	In Effect	
8/10/2012			9/8/2012	In Effect	
8/11/2012			9/9/2012	In Effect	
8/12/2012			9/10/2012	In Effect	
8/13/2012	In Effect		9/11/2012	In Effect	
8/14/2012	In Effect		9/12/2012	In Effect	
8/15/2012	In Effect		9/13/2012	In Effect	
8/16/2012	In Effect		9/14/2012	In Effect	In Effect
8/17/2012	In Effect		9/15/2012	In Effect	In Effect
8/18/2012	In Effect		9/16/2012	In Effect	In Effect
8/19/2012	In Effect		9/17/2012	In Effect	
8/20/2012	In Effect		9/18/2012	In Effect	
8/21/2012	In Effect		9/19/2012	In Effect	
8/22/2012	In Effect		9/20/2012	In Effect	In Effect
8/23/2012	In Effect		9/21/2012	In Effect	In Effect
8/24/2012	In Effect		9/22/2012	In Effect	In Effect
8/25/2012	In Effect		9/23/2012	In Effect	In Effect
8/26/2012	In Effect		9/24/2012	In Effect	In Effect
8/27/2012	In Effect		9/25/2012	In Effect	In Effect
8/28/2012	In Effect		9/26/2012	In Effect	In Effect
8/29/2012	In Effect		9/27/2012	In Effect	In Effect
8/30/2012	In Effect		9/28/2012	In Effect	
8/31/2012	In Effect		9/29/2012	In Effect	
			9/30/2012	In Effect	
			10/1/2012	In Effect	

Example Stage 1 Forecast and Caution notice (example)

Idaho Department of Environmental Quality • 09/14/12 • For Immediate Release	
<h1>Air Quality Advisory- Issue</h1>	
Time / Date:	09/14/12, 3:30 pm
Location:	Bonner, Kootenai, Shoshone, Benewah Counties
Action:	<p>Stage 1 Forecast and CautionMandatory Burn Ban on Open Outdoor Burning. All open burning is prohibited by Idaho State AQ Rules (IDAPA 58.01.01.550).</p> <p>Health Advisory</p>
Cause of Air Pollution:	Wildfire smoke from numerous wildfires south of us has migrated into Benewah, Kootenai, Shoshone Bonner and Boundary Counties. Smoky skies are expected to continue through Saturday before a surface wind shift is expected which could help keep additional smoke from transporting into our region. Residents of the listed counties should consider limiting physical exertion.
AQI and AQI Category:	Current Conditions: AQI = Benewah County is experiencing UNHEALTHY air quality. Air quality is listed as UNHEALTHY for SENSITIVE GROUPS in most other areas. Poor air quality is expected to persist through most of Saturday
Pollutant (s):	Fine Particulate (PM _{2.5})
Restrictions in Effect Until:	Caution and Restrictions are in effect through Sunday morning.
Next Update:	This notice will expire at 10am on Sunday September 16 unless conditions merit extending this notice.
Contact:	Mark Boyle @ 208-769-1422

What is the Air Quality Index?

AQI	Category	Cautionary Statement
0-50	Good	None
51-100	Moderate	Sensitive* people should consider limiting prolonged outdoor exertion.
101-150	Unhealthy for Sensitive Groups	Everyone should limit exertion outdoors.
151-200	Unhealthy	Everyone should limit exertion.
201-300	Very Unhealthy	Limit any exertion.
301-500	Hazardous	Stay indoors and avoid any exertion.

* Sensitive groups include children, the elderly, those with existing health conditions, and people who have high exposure (those who work, exercise, or spend extensive time out of doors).

For more detailed information about the AQI, visit: <http://www.airnow.gov/>

For more information on Idaho's Air Quality, visit:
<http://www.deq.idaho.gov/air-quality/monitoring/daily-reports-and-forecasts.aspx>

E-2 Idaho Department of Environmental Quality, and Idaho Department of Health and Welfare, Division of Health press releases, posted on the web August through October.

Idaho Department of Environmental Quality New Releases Posted on Web

Department of Environmental Quality

State agencies offer tips on reducing exposure to wildfire smoke

Thursday, July 12, 2012

Idahoans are advised by the Idaho Department of Health and Welfare (IDHW) and Department of Environmental Quality (DEQ) to protect their health by avoiding unnecessary exposure to smoke from wildfires burning throughout Idaho and surrounding states.

Most areas in southwest Idaho are experiencing air quality in the *unhealthy for sensitive groups* category, as defined by the [U.S. Environmental Protection Agency's Air Quality Index \(AQI\)](#). Although air quality in most other areas in Idaho remains in the good to moderate range, areas closer to the wildfires may experience air quality in the *unhealthy for sensitive groups category* or even in the *unhealthy* category affecting everyone at times.

People exposed to smoke may experience symptoms such as coughing and shortness of breath. Older adults, infants, children and people with medical conditions such as asthma, chronic obstructive pulmonary disease, and congestive heart disease are more affected. Those who use inhalers for asthma or other conditions should keep them close at hand. People are advised to seek medical treatment for uncontrolled coughing, wheezing, choking, or if breathing difficulty continues once they are indoors.

IDHW provides these tips for people to reduce their exposure to smoke and protect their health:

- Limit outdoor activity, especially for older adults, small children, and those with respiratory or heart disease.
- If the weather is warm, run your air conditioner to re-circulate air. Turn the fan blower on manually so it continuously filters the air in your home.
- Wash or change filters on air conditioners and/or furnaces frequently. Use high efficiency filters when possible.
- For homes without a central heating and/or cooling system, use portable air purifiers to remove particles (air purifiers that utilize HEPA filters are best, avoid using air purifiers that produce ozone).
- Do not run or engage in heavy work or exercise when the air quality index reaches 'unhealthy' levels.
- Stay well-hydrated by drinking plenty of water. Remaining hydrated helps dilute phlegm in the respiratory tract making it easier to cough smoke particles out. Plan on coughing, it

is nature's way of clearing your lungs. Avoid caffeine products, sugary drinks and alcohol as they have a dehydrating effect.

- If you wear contact lenses, switch to eyeglasses in a smoky environment.

Daily updates on air quality conditions at various locations in Idaho is available on DEQ's [Air Quality Reports and Forecasts webpage](#). For areas where air quality monitors are not available, the [Visibility Range and AQI Table](#) can help determine the necessary precautions to take.

For more information on how to protect against wildfire smoke, read the [Centers for Disease Control and Prevention Wildfires Factsheet](#).

Source: <http://www.deq.idaho.gov/news-archives/2012/july/air-wildfire-smoke-advisory-071212.aspx>

Department of Environmental Quality

Citizens reminded to avoid smoke exposure as new round of wildfires afflicts Idaho

Thursday, August 09, 2012

Idahoans are advised by the Idaho Department of Health and Welfare (IDHW) and Department of Environmental Quality (DEQ) to protect their health by avoiding unnecessary exposure to smoke from wildfires burning throughout Idaho and surrounding states.

Most areas in southwest Idaho are experiencing air quality in the *unhealthy for sensitive groups* category, as defined by the [U.S. Environmental Protection Agency's Air Quality Index \(AQI\)](#). Although air quality in most other areas in Idaho remains in the good to moderate range, areas closer to the wildfires may experience air quality in the *unhealthy for sensitive groups* category or even in the *unhealthy* category affecting everyone at times.

People exposed to smoke may experience symptoms such as coughing and shortness of breath. Older adults, infants, children and people with medical conditions such as asthma, chronic obstructive pulmonary disease, and congestive heart disease are more affected. Those who use inhalers for asthma or other conditions should keep them close at hand. People are advised to seek medical treatment for uncontrolled coughing, wheezing, choking, or if breathing difficulty continues once they are indoors.

IDHW provides these tips for people to reduce their exposure to smoke and protect their health:

- Limit outdoor activity, especially for older adults, small children, and those with respiratory or heart disease.
- If the weather is warm, run your air conditioner to re-circulate air. Turn the fan blower on manually so it continuously filters the air in your home.
- Wash or change filters on air conditioners and/or furnaces frequently. Use high efficiency filters when possible.
- For homes without a central heating and/or cooling system, use portable air purifiers to remove particles (air purifiers that utilize HEPA filters are best, avoid using air purifiers that produce ozone).
- Do not run or engage in heavy work or exercise when the air quality index reaches 'unhealthy' levels.
- Stay well-hydrated by drinking plenty of water. Remaining hydrated helps dilute phlegm in the respiratory tract making it easier to cough smoke particles out. Plan on coughing, it is nature's way of clearing your lungs. Avoid caffeine products, sugary drinks and alcohol as they have a dehydrating effect.
- If you wear contact lenses, switch to eyeglasses in a smoky environment.

Daily updates on air quality conditions at various locations in Idaho is available on DEQ's [Air Quality Reports and Forecasts webpage](#). For areas where air quality monitors are not available, the [Visibility Range and AQI Table](#) can help determine the necessary precautions to take.

For more information on how to protect against wildfire smoke, read the [Centers for Disease Control and Prevention Wildfires Factsheet](#). Information on the fires in your area is available on www.inciweb.org.

Source: <http://www.deq.idaho.gov/news-archives/2012/august/air-wildfire-smoke-advisory-080912.aspx>

Department of Environmental Quality

DEQ declares statewide air quality alert; all outdoor burning prohibited

Friday, September 21, 2012

BOISE — Smoke impacts from wildfires and poor atmospheric conditions have prompted the Idaho Department of Environmental Quality (DEQ) to issue a statewide Stage 1 air quality alert, invoking a ban on all outdoor burning.

This advisory is in effect through the weekend until Monday morning where conditions will be evaluated on a county-by-county basis.

The advisory does not apply to lands within Indian reservation boundaries.

“Air quality is generally in the Unhealthy for Sensitive Groups to Unhealthy categories throughout the central and southern parts of the state,” said DEQ’s Smoke Management Program Coordinator Mary Anderson. “Air quality in the northern Idaho Panhandle is forecasted to be in the good to moderate range; however, stagnate conditions will likely cause smoke from open burning to remain at ground level.”

“Areas may experience some clearing, but generally, smoke will remain throughout the weekend,” she said.

Under a Stage 1 alert, open burning is prohibited. This includes, but not limited to, campfires, recreational, warming, weed control, cooking, and residential fires.

Daily updates on air quality conditions at various locations in Idaho are available on DEQ's [Air Quality Reports and Forecasts](#) and [Current Wildfire Smoke Information](#) webpages. For areas where air quality monitors are not available, the [Visibility Range and AQI Table](#) can help determine the necessary precautions to take.

For information on how to avoid unnecessary exposure to wildfire smoke, visit the [Idaho Department of Health and Welfare's website](#).

Source: <http://www.deq.idaho.gov/news-archives/2012/august/air-central-idaho-air-quality-alert-081012.aspx>

DEQ declares air quality alert in Ketchum area; outdoor burning prohibited

Friday, August 10, 2012

BOISE — A Stage 1 air quality alert has been issued by the Idaho Department of Environmental Quality (DEQ) for the Ketchum area, invoking a ban on outdoor burning. This alert will be reevaluated Saturday morning and may be expanded to cover the entire Blaine County areas.

No new fires may be ignited and, where practicable, existing fires should be extinguished.

Heavy smoke from wildfires is contributing to high levels of particulate matter (PM_{2.5}) in the Ketchum area.

“Sensitive” individuals, including children, the elderly, those with asthma or any other lung or heart condition and those who work, exercise, or spend extensive time outdoors, are advised to avoid prolonged outdoor exertion. Everyone else should limit outdoor activities. Anyone experiencing shortness of breath or chest discomfort should consult a physician. Learn more from the [Idaho Department of Health and Welfare](#).

DEQ will continue to monitor and evaluate PM_{2.5} levels and will issue updates as conditions warrant.

Source: <http://www.deq.idaho.gov/news-archives/2012/august/air-central-idaho-air-quality-alert-081012.aspx>

CDC Fact Sheet included in DEQ News Release of July 12, 2012 (above)

Wildfires

FACT SHEET

Health Threat From Wildfire Smoke

Smoke from wildfires is a mixture of gases and fine particles from burning trees and other plant materials. Smoke can hurt your eyes, irritate your respiratory system, and worsen chronic heart and lung diseases.

How to tell if smoke is affecting you

Smoke can cause—



- Coughing
- A scratchy throat
- Irritated sinuses
- Shortness of breath
- Chest pain
- Headaches
- Stinging eyes
- A runny nose
- Asthma exacerbations

If you have heart or lung disease, smoke might make your symptoms worse.

People who have heart disease might experience—

- Chest pain
- Rapid heartbeat
- Shortness of breath
- Fatigue

Smoke may worsen symptoms for people who have pre-existing respiratory conditions, such as respiratory allergies, asthma, and chronic obstructive pulmonary disease (COPD), in the following ways:

- Inability to breathe normally
- Cough with or without mucus
- Chest discomfort
- Wheezing and shortness of breath

When smoke levels are high enough, even healthy people may experience some of these symptoms.

Know whether you are at risk

If you have heart or lung disease, such as congestive heart failure, angina, COPD, emphysema, or asthma, you are at higher risk of having health problems than healthy people.

Older adults are more likely to be affected by smoke, possibly because they are more likely to have heart or lung diseases than younger people.

Children are more likely to be affected by health threats from smoke because their airways are still developing and because they breathe more air per pound of body weight than adults. Children also are more likely to be active outdoors.

Protect yourself



Limit your exposure to smoke. Following are ways to protect your health:

Pay attention to local air quality reports. Listen and watch for news or health warnings about smoke. Find out if your community provides reports about the Environmental Protection Agency's Air Quality Index (AQI). Also pay attention to public health messages about taking additional safety measures.

Refer to visibility guides if they are available. Not every community has a monitor that measures the amount of particles that are in the air. In the western part of the United States, some communities have guidelines to help people estimate AQI based on how far they can see.

If you are advised to stay indoors, keep indoor air as clean as possible. Keep windows and doors closed unless it is extremely hot outside. Run an air conditioner if you have one, but keep the fresh-air intake closed and the filter clean to prevent outdoor smoke from getting inside. If you do not have an air conditioner and it is too warm to stay inside with the windows closed, seek shelter elsewhere.

Do not add to indoor pollution. When smoke levels are high, do not use anything that burns, such as candles, fireplaces, or gas stoves. Do not vacuum, because vacuuming stirs up particles already inside your home. Do not smoke, because smoking puts even more pollution into the air.

Follow your doctor's advice about medicines and about your respiratory management plan if you have asthma or another lung disease, Call your doctor if your symptoms worsen.

Do not rely on dust masks for protection. Paper "comfort" or "dust" masks commonly found at hardware stores are designed to trap large particles, such as sawdust. These masks will not protect your lungs from smoke. An "N95" mask, *properly worn*, will offer some protection. For more information about effective masks, see the [Respirator Fact Sheet](#) provided by CDC's National Institute for Occupational Safety and Health.

Safe evacuation

As you evacuate and then return home, be cautious and take the same safety measures you would when there is no emergency: buckle up and do not drink and drive. See CDC's [Impaired Driving](#) and [Seat Belts](#) fact sheets for more information on these hazards.

Also, make sure that children are properly buckled up and in the rear seat. See CDC's [Child Passenger Safety](#) fact sheet for more information.

Power outages

Power outages can be more than an inconvenience. Click on the [What You Need to Know When the Power Goes Out](#) page for more information about carbon monoxide poisoning, food safety, safe drinking water, power line hazards and more.

Source: <http://www.bt.cdc.gov/disasters/wildfires/facts.asp>

Visibility Range and AQI Table sent with DEQ News Releases (above)

Visibility Range & Air Quality Index (AQI)

If you can clearly see or if the AQI is...	The Air Quality is likely...	You should take the following precautions:	Health effects may include:
10 miles or better or AQI: 0-50	GOOD	None	None likely
5-10 miles or AQI: 51-100	MODERATE	None	People with preexisting heart and lung diseases may experience some discomfort. Consult <u>with your physician</u> .
3-5 miles or AQI: 101-150	UNHEALTHY FOR SENSITIVE GROUPS	People with pre-existing heart and lung diseases, the elderly, and children should limit outdoor exertion.	Aggravation of pre-existing heart and lung disease symptoms are likely.
1.5-3 miles or AQI: 151-200	UNHEALTHY	People with pre-existing heart and lung diseases, the elderly, and children should avoid outdoor exertion. All population segments should limit outdoor exertion.	Respiratory effects in all population segments likely. Increased aggravation of pre-existing heart and lung disease symptoms. Premature mortality (death) among the most <u>sensitive populations</u> .
1 mile or AQI: 201-300	VERY UNHEALTHY	People with pre-existing heart and lung diseases, the elderly, and children should consider relocating to a "clean air" area. Everyone else should avoid outdoor exertion.	Significant increase of adverse respiratory effects in all population segments likely. Significantly increased aggravation of pre-existing heart and lung disease symptoms. Premature mortality (death) among sensitive populations.
Less than 1 mile or AQI: 301-500	HAZARDOUS	Everyone should avoid any outdoor exertion. Remain indoors if possible. Relocate to a "clean air" area if necessary.	Serious risk of adverse respiratory effects in the general population. Serious aggravation of preexisting heart and lung disease symptoms. Increased premature mortality (death) among <u>sensitive populations</u> .

Idaho Department of Health and Welfare New Releases

Idaho Issues Stage 1 Air Quality Alert for Southwest and Central Counties

posted on August 13, 2012 08:44

The Idaho Department of Environmental Quality (DEQ) has issued a **Stage 1 Air Quality Advisory** that prohibits all open burning. The mandatory burn ban is in effect for Ada, Boise, Canyon, Elmore, Gem, Owyhee, Payette, and Washington counties in southwest Idaho, and Lemhi and Custer counties in central Idaho.

Poor air quality due to smoke from western wildfires plagued parts of Idaho over the weekend and is forecast to continue; DEQ projects the air quality to remain unhealthy for sensitive groups on Tuesday. There is concern that the cumulative impact of continued poor air quality during the week could cause serious health problems for people with chronic health conditions such as respiratory or heart conditions.

ADVISORY
St. Alphonsus Regional Medical Center will have a physician available for media interviews today, Monday, August 13th. Please contact Director of Public Relations Elizabeth Duncan at 367-8121 for information.

Most areas of the state do not have air quality monitors, so people are encouraged to be cautious if visibility is affected by smoke and particulates from wildfires. If visibility is reduced to less than eight miles, sensitive groups should limit activity. If visibility is reduced to less than three miles, air quality is considered unhealthy for everyone and people should avoid heavy work or exercise outdoors.

People exposed to smoke may experience symptoms such as coughing and shortness of breath. Older adults, infants, children and people with medical conditions such as asthma, chronic obstructive pulmonary disease, and heart disease are more affected. People who use inhalers for asthma or other conditions should keep them close at hand. People are advised to seek medical treatment for uncontrolled coughing, wheezing, choking, or if breathing difficulty continues once they are indoors.

To reduce their exposure to smoke and protect their health, public health officials advise:

- Stay well-hydrated by drinking plenty of water. Staying hydrated helps dilute phlegm in the respiratory tract making it easier to cough smoke particles out. Plan on coughing, it is nature's way of clearing your lungs. Avoid caffeine products, sugary drinks and alcohol because they have a dehydrating effect.
- Stay cool if the weather is warm. Run your air conditioner to re-circulate air. Turn the fan blower on manually so it continuously filters the air in your home.
- Use portable air purifiers to remove particles in the air in homes without a central heating and/or cooling system. Air purifiers that utilize HEPA filters are best; avoid using air purifiers that produce ozone. Visit areas in your community that have air conditioning, such as a library.
- Exercise indoors if possible.
- If you wear contact lenses, switch to eyeglasses in a smoky environment.

Daily updates on air quality conditions at various locations in Idaho are available on DEQ's [***Air Quality Reports and Forecasts webpage***](#). For areas where air quality monitors are not available, the [***Visibility Range and AQI Table***](#) can help determine the necessary precautions to take.

For more information on how to protect against wildfire smoke, read the [***Centers for Disease Control and Prevention Wildfires Factsheet***](#). Information on the fires in your area is available on [***www.inciweb.org***](http://www.inciweb.org).

Source:

[*http://www.healthandwelfare.idaho.gov/AboutUs/Newsroom/tabid/130/ctl/ArticleView/mid/3061/articleId/1663/Idaho-Issues-Stage-1-Air-Quality-Alert-for-Southwest-and-Central-Counties.aspx*](http://www.healthandwelfare.idaho.gov/AboutUs/Newsroom/tabid/130/ctl/ArticleView/mid/3061/articleId/1663/Idaho-Issues-Stage-1-Air-Quality-Alert-for-Southwest-and-Central-Counties.aspx)

Air quality in Lemhi, Custer counties considered 'very unhealthy'

posted on September 04, 2012 15:02

Public health officials are alerting people in those counties to stay inside as much as possible to protect themselves from the very unhealthy air.

The Department of Environmental Quality is forecasting very unhealthy levels for the Central Mountain areas of Idaho, particularly the Salmon area. Because of wildfire activity and weather patterns, air quality conditions are not expected to significantly improve in the next few days.

People exposed to smoke may experience coughing and shortness of breath. Older adults, infants, children and people with medical conditions such as asthma, chronic obstructive pulmonary disease, and heart disease are more affected. People who use inhalers for asthma or other conditions should keep them close at hand. Everyone is advised to seek medical treatment for uncontrolled coughing, wheezing, choking, or if breathing difficulty continues once they are indoors. To reduce their exposure to smoke and protect their health, public health officials advise:

Everyone should avoid heavy work or exercising outdoors when the air quality index reaches unhealthy levels.

Older adults, small children, and those with respiratory conditions or heart disease may be more sensitive to poor air quality and should stay indoors and avoid heavy work when air quality reaches unhealthy levels.

Stay well-hydrated by drinking plenty of water. Staying hydrated helps dilute phlegm in the respiratory tract, making it easier to cough out smoke particles. Plan to cough; it is nature's way of clearing your lungs. Avoid caffeine products, sugary drinks and alcohol because they have a dehydrating effect.

Stay cool if the weather is warm. Run your air conditioner to re-circulate air. Turn the fan blower to manual so it continuously filters the air in your home.

For homes without a central heating and/or cooling system, use portable air purifiers to remove particles (air purifiers that utilize HEPA filters are best, avoid using air purifiers that produce ozone). Visit areas in your community that have air conditioning, such as a library. In Salmon, residents are encouraged to go to the Salmon Public Library, 204 Main St., or to the Salmon Valley Baptist Church, 1140 N. Cemetery Lane.

If you wear contact lenses, switch to eyeglasses in a smoky environment.

Not all areas of the state have air quality monitors, so people are encouraged to be cautious if visibility is affected because of smoke and particulates from wildfires. If visibility is reduced to less than eight miles, sensitive groups should limit activity. If visibility is reduced to less than three miles, air quality is considered unhealthy for everyone. Visibility of less than one mile is considered hazardous and everyone should avoid all physical activity outdoors.

Link to air quality guidelines for schools and community event organizers [here](#).

Daily updates on air quality conditions at various locations in Idaho are available on DEQ's [Air Quality Reports and Forecasts webpage](#). For areas where air quality monitors are not available, the [Visibility Range and AQI Table](#) can help determine the necessary precautions to take. Read current [wildfire smoke information](#) and more tips.

For more information on how to protect against wildfire smoke, read the Centers for Disease Control and Prevention Wildfires Factsheet.

Information on the fires in your area is available on www.inciweb.org

Source:

<http://www.healthandwelfare.idaho.gov/AboutUs/Newsroom/tabid/130/ctl/ArticleView/mid/3061/articleId/1669/Air-quality-in-Lemhi-Custer-counties-considered-very-unhealthy.aspx>

Planning to be outside this weekend? Reduce your exposure to smoke from wildfires

posted on September 21, 2012 15:14

Air quality continues to be problematic for most of the state, and public health officials are reminding Idaho residents to take precautions this weekend when they are outside. Most communities are experiencing air quality in the “unhealthy for sensitive groups” range, and several are in the “unhealthy for everyone” range. Conditions are not expected to change significantly through the weekend.

“It’s getting more difficult to escape areas with poor air quality because it’s so widespread, so it’s important to be aware and adjust your level of exertion if you’re outdoors this weekend,” said Jim Vannoy, health program manager for the Department of Health and Welfare.

People exposed to smoke may experience coughing and shortness of breath. Older adults, infants, children and people with medical conditions such as asthma, chronic obstructive pulmonary disease, and heart disease are more affected. People who use inhalers for asthma or other conditions should keep them nearby. Everyone is advised to seek medical treatment for uncontrolled coughing, wheezing, choking, or if breathing difficulty continues once they are indoors.

To reduce exposure to smoke to protect people’s health, public health officials advise:

- Everyone should avoid heavy work or exercise outdoors when the air quality index reaches unhealthy levels.
- Older adults, small children, and those with respiratory conditions or heart disease may be more sensitive to poor air quality and should stay indoors and avoid heavy work when air quality reaches unhealthy levels.
- Stay well-hydrated by drinking plenty of water. Staying hydrated helps dilute phlegm in the respiratory tract, making it easier to cough out smoke particles. Plan to cough; it is nature’s way of clearing your lungs. Avoid caffeine products, sugary drinks and alcohol because they have a dehydrating effect.
- Stay cool if the weather is warm. Run your air conditioner to re-circulate air. Turn the fan blower to manual so it continuously filters the air in your home.
- For homes without a central heating and/or cooling system, use portable air purifiers to remove particles (air purifiers that utilize HEPA filters are best; avoid using air purifiers that produce ozone). Visit places in your community that have air conditioning, such as a library.
- If you wear contact lenses, switch to eyeglasses in a smoky environment.

Not all areas of the state have air quality monitors, so people are encouraged to be cautious if visibility is affected because of smoke and particulates from wildfires. If visibility is reduced to

less than eight miles, sensitive groups should limit activity. If visibility is reduced to less than three miles, air quality is considered unhealthy for everyone. Visibility of less than one mile is considered hazardous and everyone should avoid all physical activity outdoors.

The departments of Health and Welfare and Environmental Quality have issued guidelines for schools and community event organizers, which are available [here](#).

Daily updates on air quality conditions at various locations in Idaho are available on Department of Environmental Quality's **Air Quality Reports and Forecasts webpage**. For areas where air quality monitors are not available, the [Visibility Range and AQI Table](#) can help determine the necessary precautions to take. Read current [wildfire smoke information](#) and find more tips.

Find out more about how smoke might be affecting your children at <http://www.healthandwelfare.idaho.gov/Health/EnvironmentalHealth/tabid/95/Default.aspx>

More information on how to protect against wildfire smoke and other tips from the Centers for Disease Control is available on <http://emergency.cdc.gov/disasters/wildfires/>.

Information on the fires in your area is available on www.inciweb.org.

Source:

<http://www.healthandwelfare.idaho.gov/AboutUs/Newsroom/tabid/130/ctl/ArticleView/mid/3061/articleId/1673/Planning-to-be-outside-this-weekend-Reduce-your-exposure-to-smoke-from-wildfires.aspx>

E-3 Idaho Daily Smoke Monitoring Summary – Example for 9-21-2012.

Daily “Smoke Monitoring Summaries” were sent to FLMs, State Agencies and Local Health Districts to provide monitoring and modeled smoke forecast information, usually in conjunction with a near-daily coordination conference call. This effort helped to advise citizens in affected areas of the current and expected future PM_{2.5} conditions so they could take protective actions.

Summary

Idaho DEQ has issued a Stage 1 Air Quality Alert for all counties, for areas outside reservation boundaries. Currently, all areas south of Potlatch area are in the unhealthy for sensitive groups or unhealthy AQI categories. Areas from Potlatch north are currently in the good to moderate categories. Certain areas of the state may experience some periods of clearing, however, overall smoke will remain the dominant factor throughout the State. The Stage 1 Air Quality Alert will be re-evaluated by DEQ on Monday morning. At this time, the Alert may be lifted or continued based on air quality and forecasted conditions.

Bluesky is forecasting smoke to move into North Idaho on Saturday and Sunday. Wildfires in Western Wyoming are also forecasted to cause smoke impacts in the Rexburg area.

Idaho Fires Update (Descriptive information is copied from Inciweb, fire size, containment and increase in acres taken from National Interagency Coordination Center Incident Management Situation Report)

Mustang Complex – Inciweb 9/21/2012 morning update

332,301 acres, no estimated containment (an increase of ~ 2,655 acres)

Hazards: Concern was expressed by a few North Fork residents at a recent public meeting over the potential release of radioactive contaminants into the air from fire activity near abandoned mines in the Salmon River corridor, west of the community of North Fork, Idaho. Fire officials with the Mustang Complex have been conferring with the Idaho Department of Environmental Quality (IDEQ) to address these concerns. IDEQ considers the risk of potential radioactive airborne contaminants to be low. These contaminants do not pose any significant risk to public health and safety. Poor air quality, due to particulate matter in smoke, is the main health concern of public health officials. IDEQ is in the process of setting up equipment in the North Fork area to monitor air quality.

Firefighters are trained to stay away from mining sites because of the multiple hazards they present. Salmon Challis Forest officials provided fire managers information about abandoned mines and the locations prior to suppression efforts.

Idaho: Light fire activity occurred between Allan Mountain and the Montana border on Thursday. The fire did progress slightly northward from some short range spotting. Hotshot crews have connected hose lays and pumps in this area to help with mop up. There was no further growth in the Hughes Creek and Hull Creek areas. Firefighters continued mop up activities in these locations to cool any hot spots near the fire edge. The spot fire east of Highway

93 has cooled significantly due to mop up actions there. A forest rehabilitation plan is in place and crews will focus efforts on the Butcher Knife Ridge today, to restore dozer lines that were built to slow the fire spread.

Montana: Weather prevented firefighters from completing a burnout in Johnson Creek on Thursday. Firefighters will try again today to finish this burnout; mop up work will also continue. Fire activity picked up in Mine Creek and areas to the east Thursday. Road grading work has been completed in this area.

Halstead Fire - Inciweb 9/21/2012 morning update

175,710 acres, no estimated containment (an increase of ~ 3,582 acres)

Smoky conditions throughout the fire area kept burning activity to a minimum. Noticeable fire behavior was smoldering, creeping and isolated single and group tree torching. Today will bring a wind shift with winds coming out of the south. Winds will be light, however the direction change should clear some of the smoke from the Sawtooth Valley.

What happened yesterday: The Type 1 helicopter continued to work all day in the Jordan Creek area dropping water to cool the fire edge, extinguishing hotspots, checking fire spread. China Creek drainage was monitored for any signs of growth. An engine crew was flown to the lightning caused fire called Blue Bunch on Blue Bunch Mtn., ultimately controlling that fire. A handcrew and an engine crew worked hard to nearly complete suppression work in the Marsh and Lola Creek Campground area. In Duffield Creek and around Mountain King Mine, which were the hot spots the day before, the fire was not noticeably moving. Suppression repair work was also nearing completion. The Nip & Tuck Rd. (Forest Rd. 033) opened for non-motorized traffic. All spur roads leading to the north of the main road are still closed.

The Plan for Today: The area of concentration will be Loon Creek Summit and Jordan Creek. The Type 1 helicopter will continue with water drops to check any advance of the fire in the headwaters of Jordan and China Creeks. A handcrew and engine will work to complete mop up and secure the Marsh Creek, Lola Creek Campground area. Four engines, spiked at Loon Creek Guard Station, are still monitoring fire activity along the Loon Creek drainage. Three excavators, a road grader, water tender and engine will continue with suppression repair work, as well as grading the dirt roads along the Hwy 21 corridor.

Fire Weather: Winds will be from the south, along with an increase in temperatures nearly 14 degrees above normal for this time of year. Air quality below 7500-foot elevation may remain stagnant until the inversion lifts about noon. The Stage I air quality advisory for Lemhi and Custer Counties remains in effect.

Trinity Ridge Fire – Inciweb 9/21/2012 morning update

146,832 acres, 75% contained (an increase of 0 acres)

No update available

Mcguire Complex – Inciweb 9/21/2012 morning update

5 miles W of Dixie, ID

64,263 acres, 3% contained, 10/31 estimated containment (an increase of ~ 5,122 acres)

No update available

Wesley Fire – Inciweb 9/21/2012 morning update

Approximately 12 miles NNE of New Meadows

11,429 acres, 8% contained (an increase of ~ 550 acres)

The Wesley Fire is burning in the headwaters of upper Lick Creek, upper Rapid River and the headwaters of upper Boulder Creek. The fire is currently 11,429 acres.

It was a calm day on the fire yesterday with little movement along the perimeter and less spot fires outside the perimeter. Fire crews were able to improve containment lines while helicopters made good progress with water drops on the southwest portion of the fire. Additional resources were moved to the southwest edge of the fire to concentrate efforts where most needed. Firefighters continue to guard against fire spotting across fire lines and extinguish them when found. In the Rapid River Corridor a number of bridges were wrapped with fire resistant material as an extra precaution against potential fire advancement.

Objectives today are to hold existing containment lines and extinguish any heat still remaining around the northeast and the east side of the fire. Line construction and locating spot fires to extinguish on the southeastern edge is progressing steadily. Fire managers will continue to place additional resources into the southwest portion of the fire to secure the area.

The forecast for Friday calls for temperatures in the 70s and 80s with light winds out of the North to Northeast with tree torching and spotting predicted along the fire perimeter. Air resources will continue to assist fire fighters with water drops as needed.

Sheep Fire - Inciweb 9/21/2012 morning update

7 miles north of Riggins, near Lucile, ID

43,760 acres, 23% contained (an increase of ~ 2,724 acres)

No update available

Karney Fire – Inciweb 9/21/2012 morning update

8 miles NE of Boise

440 acres, 40% contained (an increase of ~90 acres)

Firefighters reported very little fire activity on the 440-acre Karney Fire Thursday night. Today crews will continue to mop-up hotspots within 200 feet of the fireline and to secure areas adjacent to structures.

Interior smoke will persist as the fire continues to burn logs and other pockets of unburned vegetation inside the fire perimeter. The fire is 40 percent contained. Full containment is estimated for September 23 at the end of the day.

Crews also will continue work on fireline repair in areas where dozer line was constructed. This is done to help prevent erosion when rain returns.

More than 300 personnel are assigned to the incident including 8 hand crews, 10 engines, 3 water tenders, and 1 dozer.

Because fire managers and crews are moving toward further containment of the Karney Fire, the plan now is to start downsizing the organization in the next 24 hours.

Other fires in Idaho

Fire Name (location)	Total size (acres)	Size Change last 24 hrs
Powell SBW Complex (45 miles SW of Lolo, MT)	51,000	1,075

Idaho DEQ monitoring data summary

Today's Trends (most recent hour taken is 10 am MDT)

Location/ Monitor	1- hour peak ($\mu\text{g}/\text{m}^3$)	Rolling 8- hour ($\mu\text{g}/\text{m}^3$) (ending 10 am MDT) and trend	Rolling 24-hour ($\mu\text{g}/\text{m}^3$) (ending 10 am MDT) and trend	Today's AQI forecast
Coeur d'Alene Regional Office				
Boundary County				
Mt. Hall		15	13	Good
Porthill		10	9	Good
Kootenai County				

Location/ Monitor	1- hour peak ($\mu\text{g}/\text{m}^3$)	Rolling 8- hour ($\mu\text{g}/\text{m}^3$) (ending 10 am MDT) and trend	Rolling 24-hour ($\mu\text{g}/\text{m}^3$) (ending 10 am MDT) and trend	Today's AQI forecast
Lancaster		19	24	Moderate
Garwood school		25	27	Moderate
Athol		22	25	Moderate
Sandpoint		16	18	Moderate
St. Maries		19	26	USG
Pinehurst		20	23	USG
Lewiston Regional Office				
Latah County				
Genesee		70	57	USG
Kendrick		36	54	USG
Moscow		38	42	USG
Potlatch		24	31	USG
Nez Perce County (Lewiston)		40	43	USG
Idaho County (Grangeville)		73	63	Unhealthy
Boise Regional Office				
McCall		161	110	USG
Idaho City		53	62	USG
Garden Valley		53	59	USG
Weiser		48	46	USG

Location/ Monitor	1- hour peak ($\mu\text{g}/\text{m}^3$)	Rolling 8- hour ($\mu\text{g}/\text{m}^3$) (ending 10 am MDT) and trend	Rolling 24-hour ($\mu\text{g}/\text{m}^3$) (ending 10 am MDT) and trend	Today's AQI forecast
Nampa		52	36	USG
Meridian		59	46	USG
Twin Falls Regional Office				
Ketchum		38	43	USG
Twin Falls		78	50	USG
Paul		42	39	USG
Pocatello Regional Office				
Pocatello		56	75	Unhealthy
Soda Springs		87	73	Unhealthy
Franklin		39	29	Moderate
Idaho Falls Regional Office				
Idaho Falls		81	81	USG
Salmon		136	148	Unhealthy (could approach Very Unhealthy)
Rexburg		64	66	USG
Emergency Monitors (PM _{2.5} , North Fork is e-sampler, all others are EBAM)				
North Fork				
Fairfield		53	47	USG
Challis, ID		187	119	Unhealthy
Mountain Home		61	50	USG

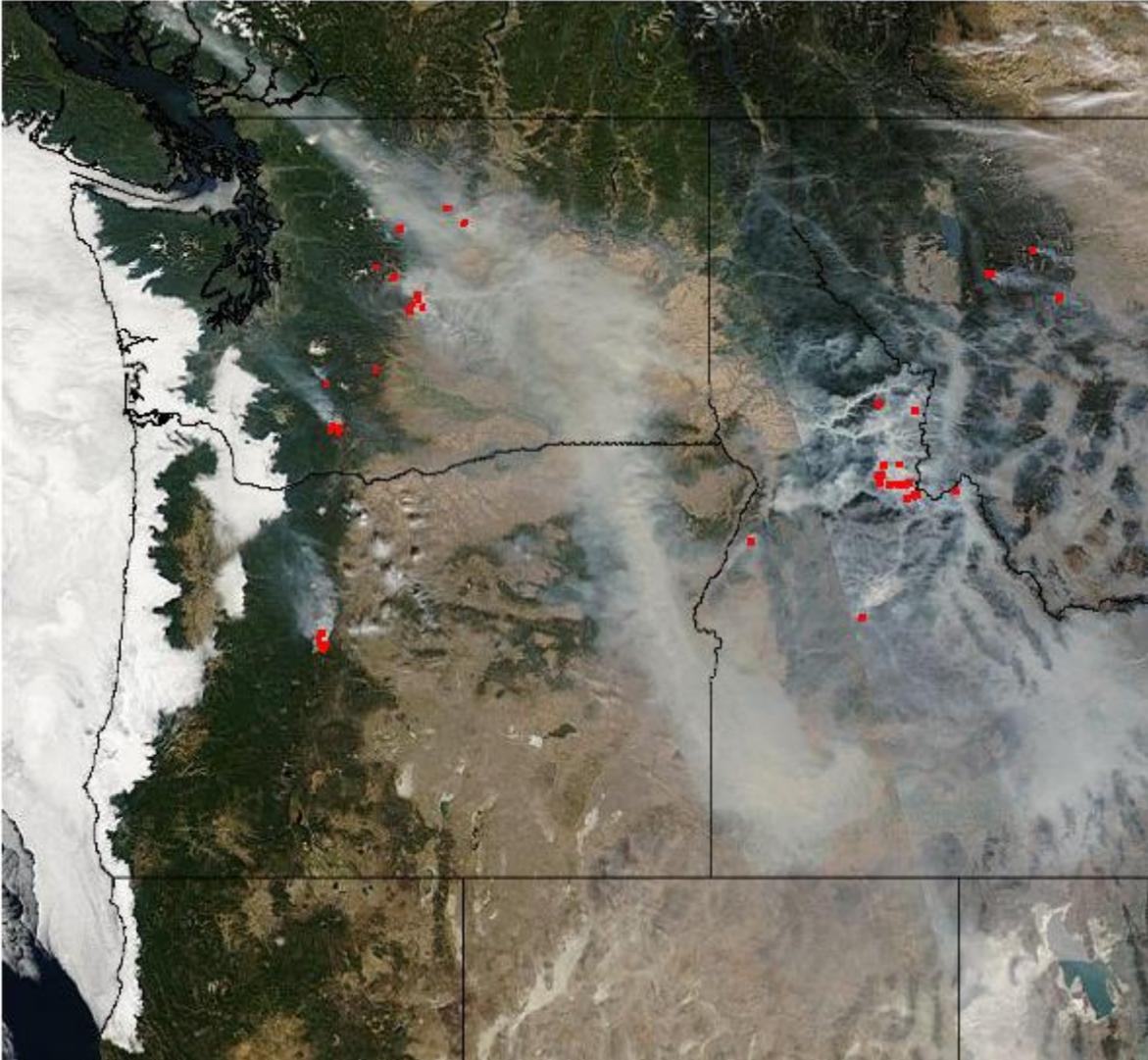
Yesterday's data for 9/20/2012

Location/ Monitor	1- hour peak ($\mu\text{g}/\text{m}^3$)	8- hour peak ($\mu\text{g}/\text{m}^3$)	Yesterday's 24- hr ($\mu\text{g}/\text{m}^3$)	Air Quality Index
Coeur d'Alene Regional Office				
Boundary County				
Mt. Hall	19	13	12	Good
Porthill	12.8	9	8	Good
Kootenai County				
Lancaster	40.2	37	30	Moderate
Garwood school	47.6	39	32	Moderate
Athol	38.3	37	30	Moderate
Sandpoint	33.4	24	20	Moderate
St. Maries	42.9	42	32	Moderate
Pinehurst	41.5	41	30	Moderate
Lewiston Regional Office				
Latah County				
Genesee	100.4	84	55	USG
Kendrick	124.9	85	57	Unhealthy (based on 8-hour)
Moscow	96.8	71	46	USG
Potlatch	72.8	49	36	USG
Nez Perce County (Lewiston)	62.2	52	43	USG
Idaho County	97.3	88	56	Unhealthy (based

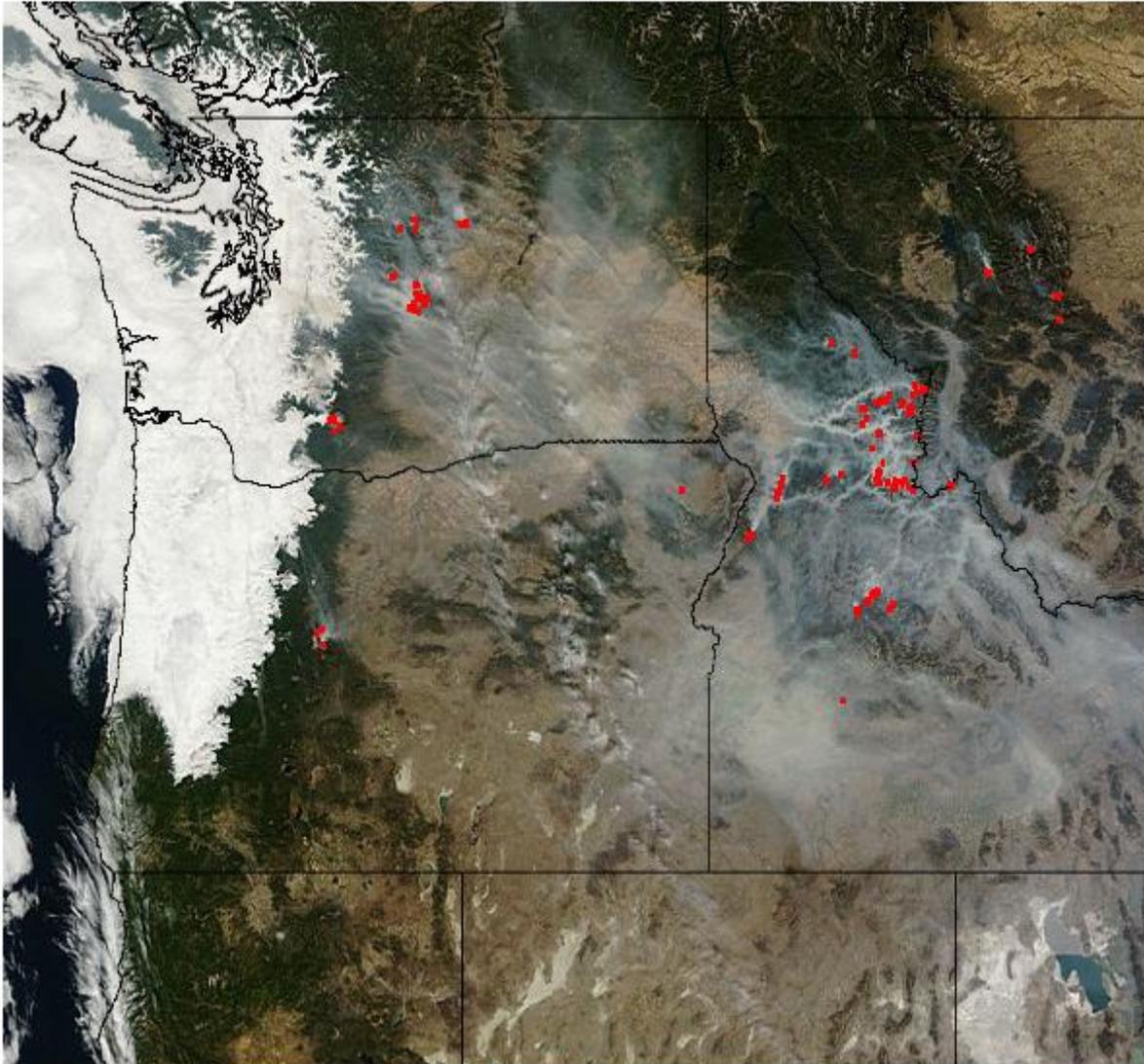
Location/ Monitor	1- hour peak ($\mu\text{g}/\text{m}^3$)	8- hour peak ($\mu\text{g}/\text{m}^3$)	Yesterday's 24- hr ($\mu\text{g}/\text{m}^3$)	Air Quality Index
(Grangeville)				on 8-hr
Boise Regional Office				
McCall	198.4	111	88	USG
Idaho City	84.3	76	62	USG
Garden Valley	83.2	70	55	USG
Weiser	64.4	51	37	USG
Nampa	40.2	30	26	Moderate
Meridian	45.7	41	36	USG
Twin Falls Regional Office				
Ketchum	69.1	58	44	USG
Twin Falls	59	39	34	Moderate
Paul	46.4	42	35	Moderate
Pocatello Regional Office				
Pocatello	114.8	106	63	Unhealthy (based on 8-hour)
Soda Springs	115.3	99	46	Unhealthy (based on 8-hour)
Franklin	40	25	22	Moderate
Idaho Falls Regional Office				
Idaho Falls	122.4	105	60	Unhealthy (based on 8-hr)
Salmon	189	180	160	Very Unhealthy
Rexburg	95.1	87	65	Unhealthy (based on 8-hr)

Location/ Monitor	1- hour peak ($\mu\text{g}/\text{m}^3$)	8- hour peak ($\mu\text{g}/\text{m}^3$)	Yesterday's 24- hr ($\mu\text{g}/\text{m}^3$)	Air Quality Index
Emergency Monitors (PM _{2.5} , North Fork is e-sampler, all others are EBAM)				
North Fork				
Fairfield	56	44	38	USG
Challis, ID	121	94	85	Unhealthy
Mountain Home	89	57	41	USG

Aqua Modis (afternoon) imagery for 9/20/2012



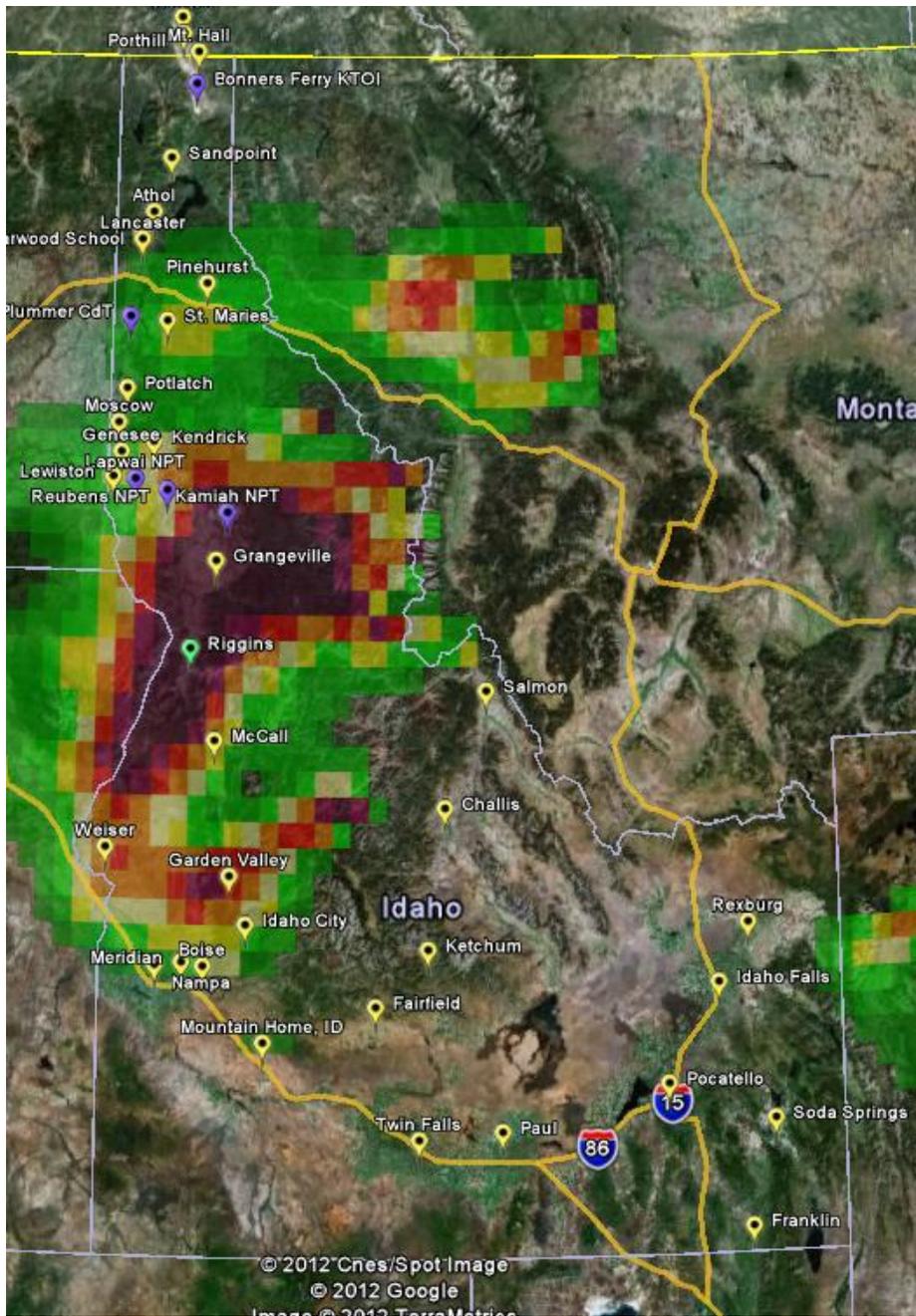
Terra Modis (morning) imagery for 9/21/2012



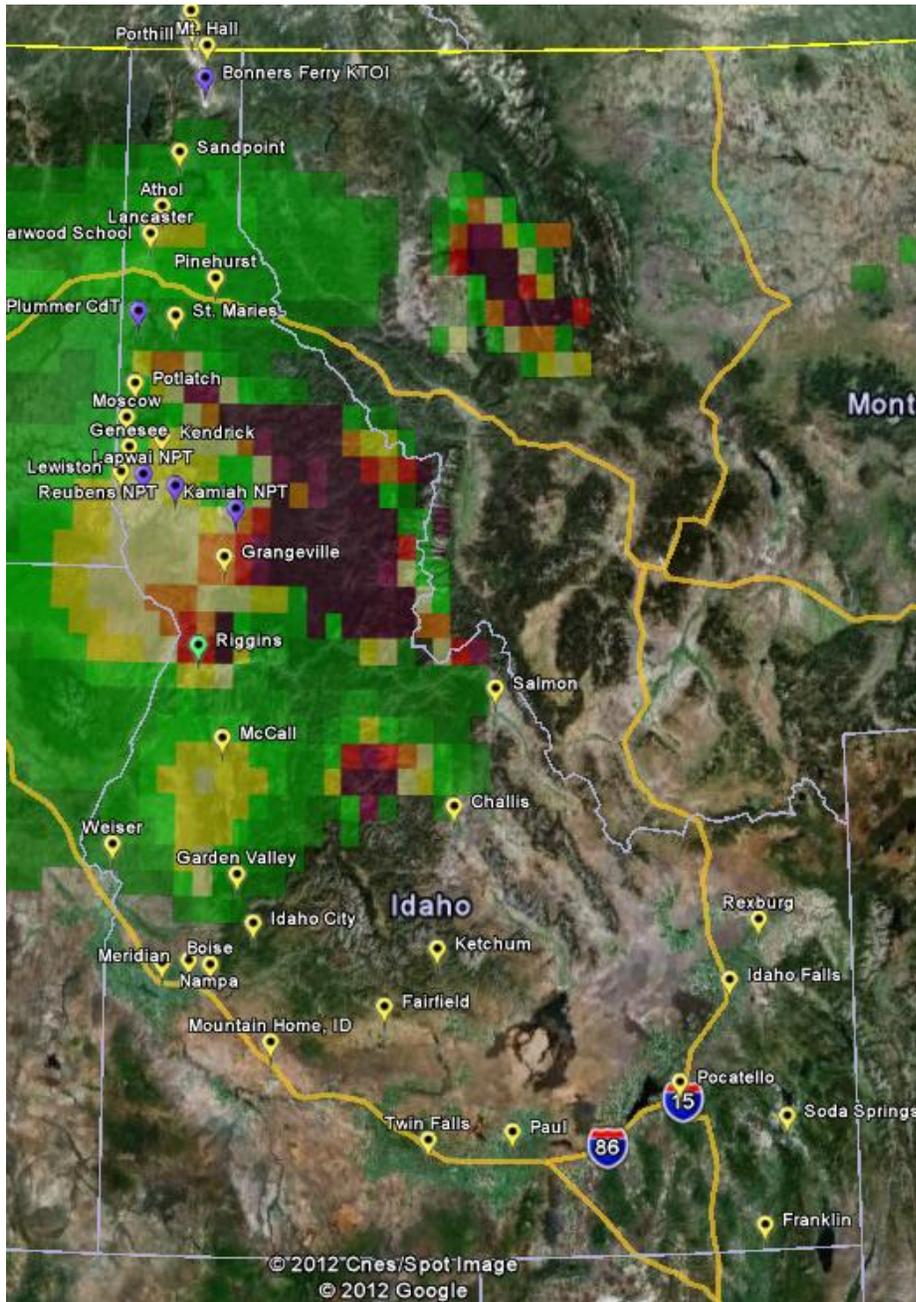
Bluesky model runs (9/21/2012 morning)

Note: The Bluesky model runs start from zero. This means that any smoke in the area from the day before is not included in the model run. That is why southern Idaho and the Grangeville area start clean in the model runs; however, in reality, these areas are experiencing smoke impacts.

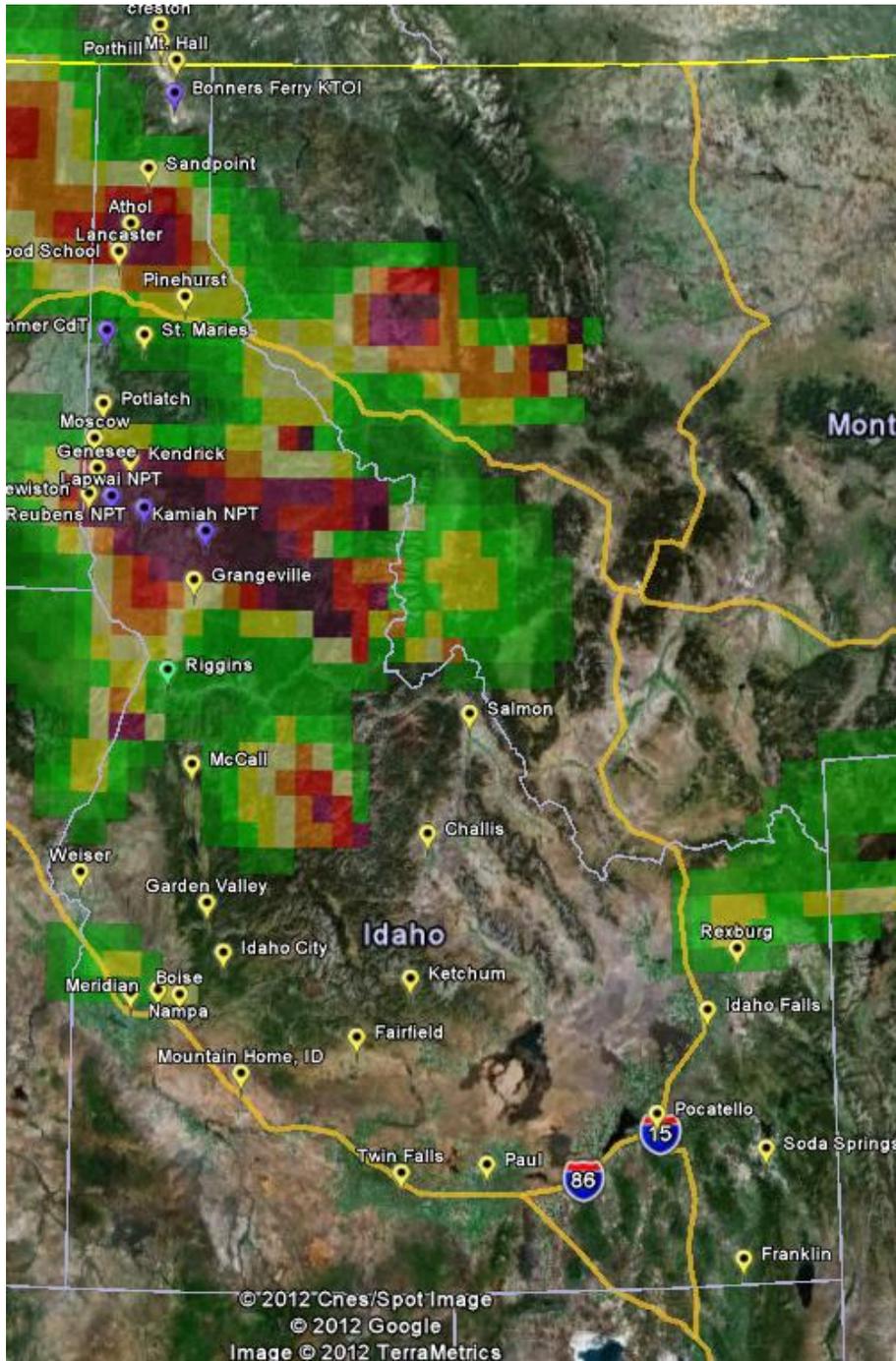
9/21/2012 morning



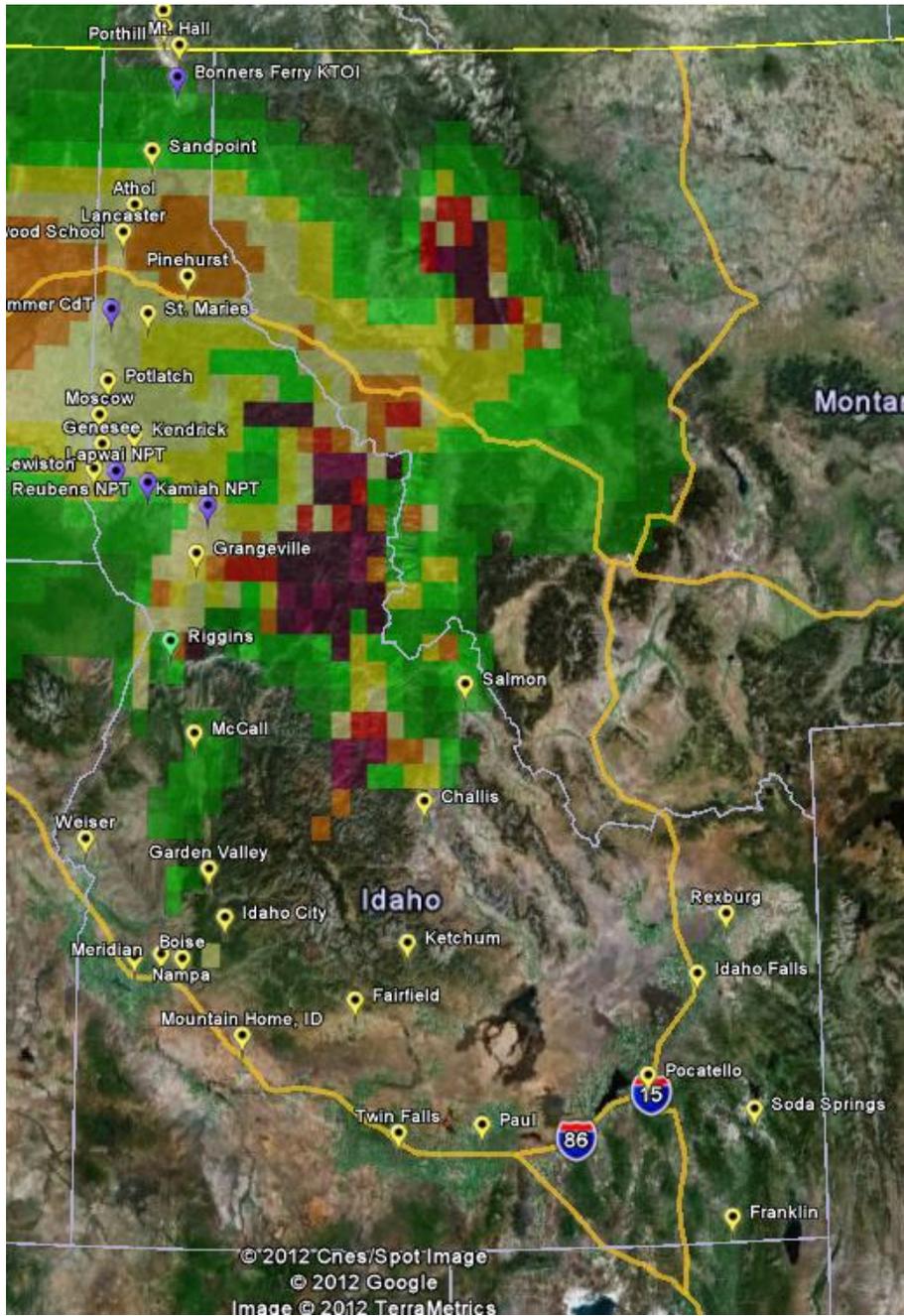
9/21/2012 evening



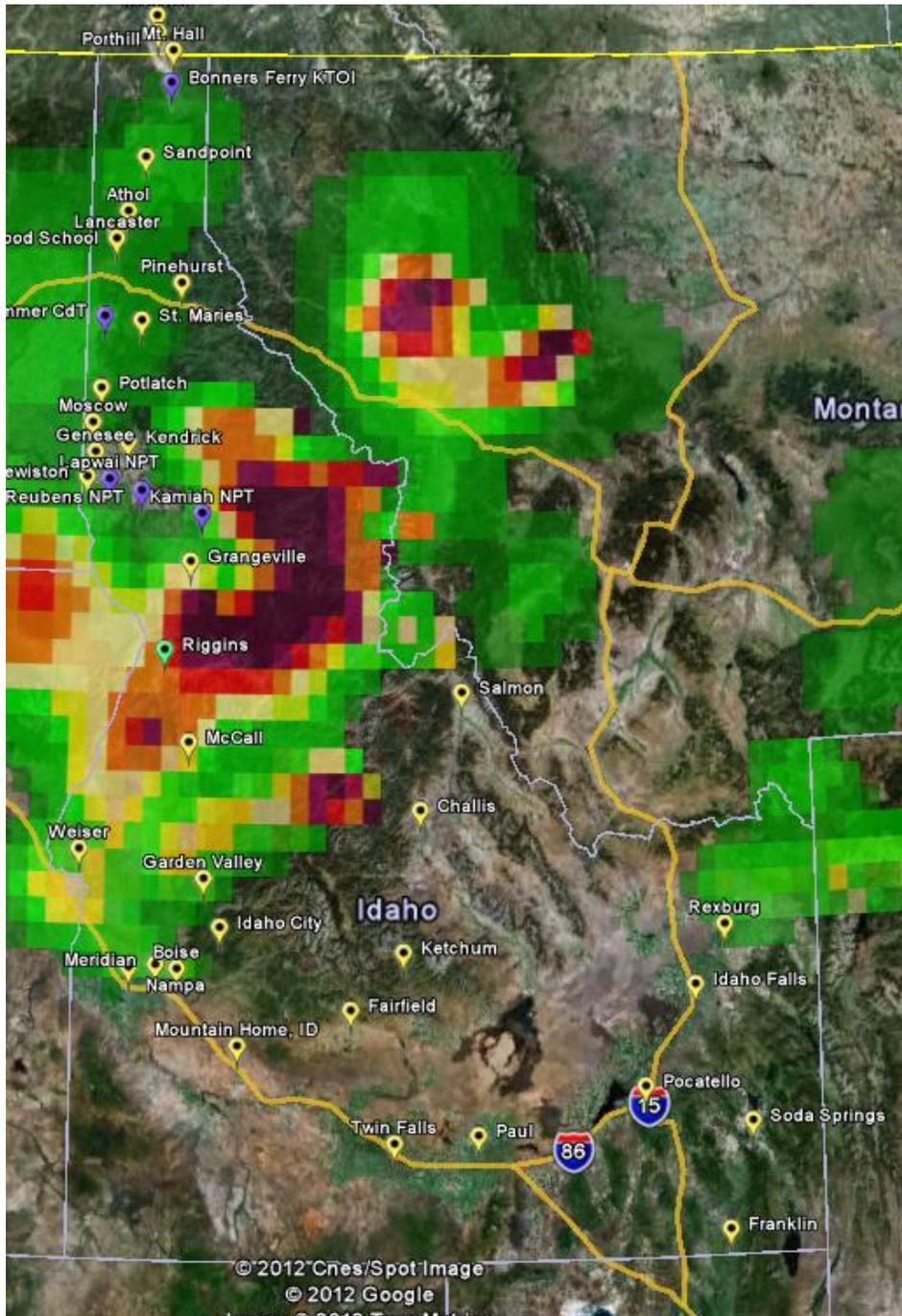
9/22/2012 morning



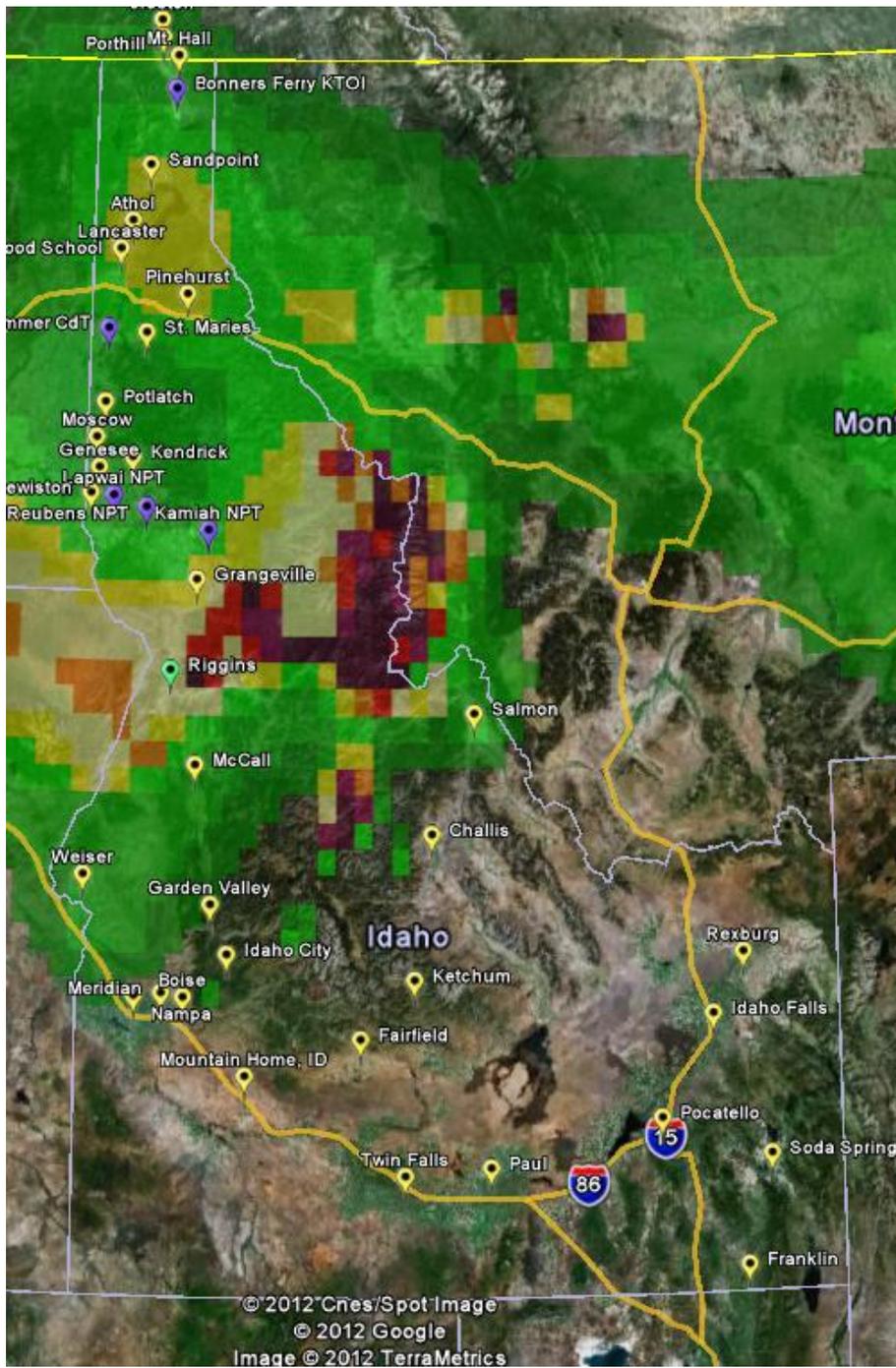
9/22/2012 evening



9/23/2012 morning



9/23/2012 evening



Appendix F: News Stories

1. Salmon related news stories
2. Pinehurst related news stories

Appendix F-1 Salmon area News Articles

8-15-12 Post Register

NATION

Post Register A5

Halstead Fire moves south; evacuations are advised

■ A community meeting is set for today at the Stanley Community Center.

POST REGISTER

A northwest wind that arrived a day early pushed the Halstead Fire about two miles south Wednesday, putting it on a path that threatened an unknown number of structures, the U.S. Forest Service reported.

The fire, burning in the Salmon-Challis National Forest 18 miles northwest of Stanley, had consumed 58,269 acres as of 10 p.m. Wednesday.

"It got pretty active today," fire information officer Bruce Palmer said.

Earlier Wednesday, the Halstead Fire Incident Management Team — working with the Custer County Sheriff's Office — recommended the evacuation of homes along Highway 75, from roughly Joe's Gulch to Sunbeam.

The threatened area did not include lower Stanley, Palmer said.

People living in the area were advised to leave within the next 48 hours, Palmer said. He wasn't sure exactly how many struc-



Paul Lambert / plambert@postregister.com

Jefferson County fire crews and local residents respond to a wildfire in a wheat field northeast of Highway 26 less than 500 yards from the Hillview Sinclair gas station near Ririe High School just before 8 p.m. Tuesday. The fire threatened nearby powerlines, though volunteer crews contained the fire in less than 40 minutes.



On the INTERNET

Latest info on wildfires:

- www.idahofireinfo.blm.gov/
- www.nifc.gov/fireInfo/nfn.htm
- <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

tures or people were threatened.

Extreme fire behavior and downhill runs Wednesday pushed the Halstead

Fire into the upper reaches of Basin Creek, the Forest Service reported.

A community meeting was scheduled for 7 p.m. today at the Stanley Community Center.

A new fire erupted Tuesday on Bureau of Land Management land west of Idaho Falls. Dubbed the Gun Range Fire, BLM spokesman Jason Fallon said the blaze had burned about 75 acres Wednesday evening and remained active. BLM and Bonneville

County firefighters were battling the blaze that erupted along U.S. Highway 20. The fire may have been human caused, Fallon said, and an investigation was continuing.

A smaller fire erupted Wednesday evening in a farm field in Bonneville County, just outside Ririe and near the border with Jefferson County. By 9:30 p.m., firefighters had left the scene at 300 Swan Valley Highway and the fire was out, officials said.

8-15-12 Post Register

Farmers could get burn ban exception

By RUTH BROWN
rbrown@postregister.com

As of Aug. 27, farmers in the region will be allowed to burn agricultural waste, atmospheric conditions and the Department of Environmental Quality permitting.

Agricultural field burners in the Central and Roberts fire districts will be allowed to burn their field stubble, Central Fire District Chief Jim Deuel said. Those areas include the Rigby, Ririe, Lewisville and Menan areas, as well as portions of Bonneville and Madison counties and the

Roberts area.

The burn-ban exemption applies only to farmers who have registered their fields with the DEQ and conduct the burn under DEQ guidelines. A burn ban remains in effect for other residents.

Farmers use fire to burn stalks left behind after harvesting crops such as wheat and barley, Deuel said.

This summer marks the first burn ban the Central Fire District has ever put in place, Deuel said. It was necessary because of the region's especially dry conditions.

All registered farmers must still get DEQ approval before burning a field, Deuel said.

DEQ smoke management program coordinator Mary Anderson said burn requests will be evaluated on a daily basis. The department looks at air quality, wind direction and how well the smoke will disperse when approving a burn day for farmers.

Those days have been rare this summer due to all of the wildfire smoke in the air, Anderson said.

"I don't foresee a burn day for a while," she said.

8-16-12 Post Register

Smoke is likely to linger

■ The smoky conditions could last until at least Sunday — or even weeks.

By **RUTH BROWN**
rbrown@postregister.com
AND **ZACH KYLE**
zkyle@postregister.com

The smoke from wildfires shrouding eastern Idaho isn't going anywhere.

Weather conditions won't help the Snake River Plain until at least Sunday, when wind might push out smoke that's been settling over Idaho Falls and the surrounding area, said Dean Hazen, science officer at the National Weather Service Office in Pocatello.

Wind won't help Salmon and mountainous central Idaho anytime soon.

■ Health advisory similar to one in Salmon is expected to be issued in I.F. today

SMOKE, Continued on Page A3

SMOKE

From Page A1

The growing Mustang Complex and Halstead fires in the Salmon-Challis National Forest will keep Salmon in a haze for some time, said Mary Anderson, smoke management program coordinator for the Idaho Department for Environmental Quality.

"Where they are, even if the wind shifts, it just changes which fire is affecting them," Anderson said.

Northwest winds condensed smoke over Idaho Falls on Wednesday and promised to do the same today, DEQ representative Rensay Owen said. Owen is the regional manager for air, waste and remediation in the Idaho Falls-region DEQ office.

Any relief for Idaho Falls could be short-term. Both fires are only marginally contained and are expected to burn into the fall, so smoke conditions likely will fluctuate with the weather.

"It's more of a week-to-week, day-to-day thing," Hazen said. "Certainly, we can expect to see a change in the fall as we always do. It's a matter of when, and this has been an unusual year."

The Salmon area remained under a health advisory issued Monday by the Idaho Department of Health and Welfare. The advisory declared the air was unsafe to breathe for sensitive groups. Those groups include children,

the elderly and anyone with respiratory or heart conditions.

Anderson anticipated a similar advisory would be issued for Idaho Falls today.

The smoke was affecting daily life in Salmon, said Shanda Fitte, owner of Precious Cargo Early Learning Center/Daycare and Preschool. Fitte could see the mountains Wednesday for the first time in four days, she said, but ash and soot continued falling and piling up in the play area outside.

Fitte allows the children to play outside only in the morning before the smoke intensifies. They still come in covered in ash and soot, she said.

"They look like little coal miners because they are covered with soot from the ground," Fitte said. "We use lots of baby wipes."

Salmonites have tried to stay inside and away from the smoke, she said.

"Everybody is talking about it, hacking and stuff," she said. "It's brought on more seasonal allergies, coughing, sore throats."

Two patients who were coughing and wheezing were admitted to Eastern Idaho Regional Medical Center on Wednesday, emergency room doctor Andrew Garrity said. Garrity said he expected more patients with similar conditions if the smoke worsened today, though in Idaho Falls he didn't anticipate anyone without pre-existing respiratory issues to have problems.

"Probably most of us aren't bothered by it," he said.

8-17-12 Post Register

**INSIDE**

■ Fire stalls near Idaho towns of Featherville, Pine / **Wildfire update, Page C6**

Custer urges evacuations

■ The growing Halstead Fire, now at 77,251 acres, is menacing structures and campgrounds.

By **MIKE MOONEY**
mmooney@postregister.com

Custer County officials Thursday night urged residents and campers to leave an area from Sunbeam Store to the Loon Creek Summit, including Custer Town and Jordan Creek.

Residents and campers were asked to be out of the area by 5 p.m. today.

"If you fail to evacuate as instructed we CAN NOT guarantee your safety. Emergency Services or a Rescue may not be available to you if you do not evacuate as requested," the county's evacuation notice said.

It was not clear Thursday night how many people or structures were threatened by the advancing Halstead Fire, which as of 10 p.m. had burned an estimated 77,251 acres.

Stanley and Lower Stanley were not included in the evacuation notice.

Those living in the threatened area were asked to call



On the INTERNET

Latest info on wildfires:

- www.idahofireinfo.blm.gov/
- www.nifc.gov/fireInfo/nfn.htm
- <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

the Custer County Sheriff's Office at (208) 879-2232 for further information or assistance.

Information also was available at Stanley City Hall or the Custer County Courthouse in Challis.

Burning about 18 miles northwest of Stanley, the Halstead Fire's southeast flank expanded Thursday as it moved into the bug-killed trees below Basin Butte. The fire was expected to meet the boundary of the 2006 Potato Fire burn area.

It was hoped that would take some of the energy out of the fire as the fuels change, fire officials said.

"On average, this fire has spread approximately one mile per day, which is the equivalent of around 10,000 acres per day," fire officials

■ A new fire erupted Thursday southeast of Blackfoot

○ **CUSTER**, Continued on Page A4

8-20-12 Post Register

Smoke-choked air keeping people indoors in Salmon

■ Weather forecasts indicate the air will stay unhealthy throughout the weekend.

By LAURA ZUCKERMAN
news@postregister.com

SALMON — Doris Davis spent much of the week indoors to avoid coughing fits brought on by wildfire-driven smoke and ash that began pouring into Salmon last weekend.

"I have allergies. The air is choking me up to the point I can't breathe," the 61-year-old Davis said.

Wildfires that have been burning for weeks in the backcountry northwest of Salmon and central Idaho forests have blanketed the community in smoke and haze.

Salmon's air quality has been rated unhealthy for days, according to preliminary figures from the Idaho Department of Environmental Quality.

As a result, state health officials advise residents to limit — or even avoid — extended outdoor exertion, especially children, the elderly and those with heart or lung conditions.

Asthmatic Juanita Grkovic, 84, hasn't

■ DEQ officials say the smoke is worse in Salmon than any where else in the state

AIR, Continued on Page A5

On the INTERNET

Salmon air quality report and forecast:

■ <http://tinyurl.com/cvplew2>

AIR

From Page A1

ventured outside much since Monday.

"I've stayed inside except to go to the grocery store," she said. "Even then, coming out of the grocery, (the smoke-filled air) hits you all of the sudden."

Weather forecasts indicate the air in Salmon will remain in the unhealthy range throughout the weekend.

Health officials advise residents to drink plenty of water and use air purifiers or air conditioners with freshly cleaned or replaced filters. Medical treatment

Orr said.

Grkovic compared the smoke-filled air to the haze that hovered in the valley for weeks during the Clear Creek Fire, which erupted in 2000 in the Salmon-Challis National Forest.

"I think the air is worse now, but I didn't have asthma back then," Grkovic said.

Steve Lish, administrator of Discovery Care Center in Salmon, said many of the facility's elderly residents — concerned about the effects of the smoke pollution — have no desire to venture outdoors.

Similar concerns have been voiced at recent meetings of state and federal agencies, including the

Department of Environmental Quality, U.S. Forest Service and Idaho Department of Health and Welfare.

Problems caused by wildfire smoke can range from eye and respiratory tract irritations to reduced lung function and premature death, according to the Idaho Department of Health and Welfare.

Stephanie Orr, chief nursing officer at Steele Memorial Hospital in Salmon, said the hospital and its sister clinic have not noticed an increase in the number of patients with respiratory complaints.

"We have seen a number of people experiencing a flare-up of allergies that is possibly related to smoke,"

she said.

Davis, who described herself as an "outdoorsy type," said too many days indoors are bringing on another problem for her. "I'm going stir crazy," she said.

And with some wildfires predicted to burn for weeks to come, air quality issues likely will linger.

Department of Environmental Quality, U.S. Forest Service and Idaho Department of Health and Welfare.

she said.

8-20-12 Post Register

Halstead wildfire takes a breather

■ Some Custer County residents evacuated; others remained with their homes.

By MIKE MOONEY
mmooney@postregister.com

At least 41 Custer County residents evacuated their homes Friday at Yankee Fork and Casino Creek, two areas threatened by the Halstead Fire.

Chief Deputy Mike Talbot of the Custer County Sheriff's Office said the evacuations went smoothly, though some residents decided to stay with their homes.

In other wildfire developments:

■ The Mustang Complex Fire northwest of Salmon expanded to 79,807 acres burned as of 10 p.m. Friday.

■ The Fox Hill Fire burning southeast of Blackfoot had charred 364 acres. Firefighters hoped to contain the blaze Friday night.

Earlier Friday at Yankee Fork, 31 residents were evacuated while seven decided to stay with their homes, Talbot said. A

■ Fire officials say the wind continues to push the fire to the southeast

FIRES, Continued on Page A5



INSIDE
■ Forest Service's response to wildfires questioned / A5

"It didn't move much today," fire information officer Brian Harris said.

The Lost Packer Fire, which is burning to the west of Mustang in the Frank Church River of No Return Wilderness, moved south toward Corn Creek on Friday.

Fire officials said protection work around Salmon River homes and businesses has prevented the loss of any buildings. No residents or firefighters have been injured. Firefighters also are working to protect homes at Gattin Ranch in the event the fire continues north from Cayuse Point.

continues to push the fire to the southeast. There's a lot of smoke."

At the nearby Bench Fire, firefighters reported 70 percent containment Friday night.

Managers of the Mustang Complex Fire, meanwhile, were keeping Salmon River Road open to Colson Creek residents, as well as jet boaters leaving Corn Creek and Middle Fork river rafters taking out at Stoddard, Cache Bar and Corn Creek.

Generally, the fire was moving east toward Spring Creek Road and northeast toward the border with Montana.

On the INTERNET

- Latest info on wildfires:
 ■ www.idahofireinfo.blm.gov/
 ■ www.nifc.gov/fireinfo/mfn.htm
 ■ <http://gacc.nifc.gov/egbc/dispatch/id-cc/>

Halstead Fire, which is burning about 18 miles northwest of Stanley.

"It was a relatively quiet day today," fire information officer Bruce Palmer said. "We didn't get the fire spread we earlier anticipated. The wind is still mainly from the northwest and

FIRES

From Page A1
 total of 10 Casino Creek residents left their homes, while three others elected to remain despite the fire threat.

Operations at Hecla Mine continued Friday, Talbot said. Employees were logging in and out to make it easier for officials to keep track of them. The mine is located in a rocky area with little vegetation.

When all was said and done, however, Friday was a relatively uneventful day for the 83,857-acre

9-1-12 Post Register

Residents near Yankee Fork urged to evacuate

■ A growing Halstead Fire is threatening at least 31 homes in the area.

By MIKE MOONEY
mmoney@postregister.com

Deputies from the Custer County Sheriff's Office went door-to-door Friday, urging Yankee Fork residents to leave their homes as quickly as possible.

By mid-afternoon, the 123,893-acre Halstead Fire had reached the ridge of Yankee Fork. At least 31 homes are scattered throughout that area, as well as seven campgrounds, the Hezla Mine and a couple of U.S. Forest Service lookout stations.

"So far, the fire had not spotted over Yankee Fork Road," Forest Service spokeswoman Mary Cernicek said.

In fact, a controlled burning operation — to remove vegetation that might fuel the fire — was underway late Friday. The idea was to create a "black area" to try and stop the fire from moving through

Sunbeam and into the Highway 75 area. A 15-mile stretch of Highway 75 remained closed Friday between Lower Stanley and Gardner Creek.

As of 9:30 p.m., no homes — or structures of any kind — had been damaged or destroyed by the fire, Forest Service spokesman Eric Mosley said.

Mosley pointed out that areas within Yankee Fork have been closed for the past two weeks.

"We just want people to understand there is a threat," he said.

Firefighters were concentrating their efforts Friday on Stanley Creek Road and establishing an anchor point — a spot along the fire line that is secure — to keep the fire from burning around the perimeter, according to fire managers.

■ Three structures were reported destroyed by fire Friday in the upper Spring Creek area

INSIDE

■ Montana fires could be danger into the weekend / B7



On the INTERNET

For the latest fire information visit:

■ <http://www.idahofireinfo.blm.gov/>

■ www.nifc.gov/fireInfo/nfn.htm

■ <http://gacc.nifc.gov/egbc/dispato/vid-cic/>

FIRES, Continued on Page A3

Post Register A3

FIRES

From Page A1

"The fire was most active (Friday) on the north boundary," Cernicek said.

A lot of burning was reported around Pinyon Peak.

Sprinklers also were put in place to protect structures related to mining operations, as well as the Seafoam Guard Station, Cernicek said.

In the 205,481-acre Mustang Complex Fire, a Level 1 evacuation notice was issued Friday for the Highway 93 corridor and the community of Gibbonsville. Under a Level 1 alert, residents are advised to make preparations for a possible evacuation.

A Level 3 alert (mandatory evacuation) remained in effect Friday for those living in the Hull, Hughes, Idaho and Sheep creek areas.

Extensive structure assessment and protection

measures, including laying sprinkler lines, was underway along the Highway 93 corridor.

Although three structures were reported destroyed by fire Friday in the upper Spring Creek area, Forest Service officials said no homes or businesses were damaged by the flames.

More than 800 firefighters and support personnel are battling the Mustang Fire, which was reported 16 percent contained.

Lightning ignited the fires that form the Mustang Complex during the weekend of July 29. Five of the fires, the Mustang, Broomtail, Roan, Cayuse and East Butte, eventually burned together over the next four weeks, Forest Service officials have said.

Today, the Mustang Complex is the largest of three major fires burning in Idaho.

Mike Mooney can be reached at 542-6764. Comment on this story on Post Talk at www.postregister.com/posttalk/.

9-2-12 Post Register

Massive crew battles the Mustang Complex fire



Roger Plathow /rplathow@postregister.com

A meadow near North Fork serves as the temporary home for personnel fighting the Mustang Complex fire.

■ Hundreds work behind the scenes in support roles to keep the firefighters on the frontlines.

By ZACH KYLE
zkyle@postregister.com

NORTH FORK — The bigger the wildfire, the more shovels, vehicles and food needed to fight it.

That also means more computers, more paperwork, more planning, and hundreds of other items and personnel critical to the effort.

As the growing Mustang Complex topped the 200,000-acre mark, the incident center that sprang up in North Fork grew with it.

About 800 people were in camp Thursday. Many will never

see the Mustang. Their jobs — security, parking, technical support, shower maintenance and everything else — keep firefighters digging fire lines and defending homes, U.S. Forest Service spokesman Lynn Ballard said.

“You basically create a small town and try to take care of all those needs of the firefighters you put on the ground,” he said.

A U.S. map posted in the incident center was full of pushpins representing the hometowns of the transient campers.

Colorful dots spread across the map. Nearly every state boasted a pushpin.

Perhaps one was for Tim Marshall, 38, who runs the 19-person food crew.

They work for Stewart’s Firefighter Food Catering, which is based in Pendleton, Ore. Stewart’s contracts with the federal government. Sometimes, Stewart’s heads to natural disasters such as Hurricane Katrina.

During fire season, Marshall’s and other crews head to fires. This summer, his crew fed personnel at fire incident centers in Rockersville and Edgemont, S.D.

He said the team was home for four hours before getting orders to head to McCall.

The Mustang is the crew’s fourth fire. They’ve been in North

■ Firefighters need to eat about 7,000 calories a day

SUPPORT, Continued on Page A4

9-2-12 Post Register



The Cost of Fire

As Idaho wildfires get bigger, so does the price of fighting them

By ALEX STUCKEY
astuckey@postregister.com

Federal agencies have spent an estimated \$55.5 million fighting the three fires — Mustang Complex, Trinity Ridge and Halstead — that have combined to torch more than 466,000 acres.

And with fire season only halfway over, it seems it won't be man that stops this year's fires, but winter's first snow.

All told, the fires searing through Idaho have surpassed 1.1 million acres, or about 1,700 square miles. That's about 200 square miles larger than Rhode Island.

It's the largest fire season since 2007, when 2.3 million acres burned statewide, said Emily Anderson, Idaho Department of Lands spokeswoman.

But with a fire season that could reach well into October, this year's fires could surpass that acreage, Anderson said.

"We've been on a trend toward increasing fires and increasing severities for quite some time," said Adam Sowards, a University of Idaho professor.

YAGO

“We’ve been on a trend toward increasing fires and increasing severities for quite some time. That is a result of not just the drought and climate change, but also because of fire suppression.”

ADAM SOWARDS
A University of Idaho professor

“That is a result of not just the drought and climate change, but also because of fire suppression.”

State fire officials don't see it coming to an end any time soon.

“The bigger the fire gets, the longer

■ Congress gave about \$2.29 billion to the U.S. Forest Service for fires

COST, Continued on Page A6

9-2-12 Post Register Continued

A6 Post Register

NATION

Sunday, September 2, 2012

COST

From Page A1

it goes, (it) just increases in multitude," said Jennifer Jones, spokeswoman for the Forest Service's National Interagency Fire Center in Boise.

About \$35.5 million has been spent fighting the three big fires in Idaho across various agencies, such as the Bureau of Land Management and the U.S. Forest Service.

Congress appropriated about \$2.29 billion to the U.S. Forest Service this year to train for, and fight, such fires, said Lynn Ballard, Eastern Idaho Interagency Fire Center spokesman.

Ballard said the amount of money appropriated across the nation purely for fire suppression — \$448 million in 2012 — is tapped into by all states when they need it.

If the budget for the Forest Service's fight against wildfires is depleted, officials can tap into other monies in the service's budget, which the forest service has started to do this year, he said.

The Bureau of Land Management could not provide budget information by press time.

Mustang Complex

The red and orange flames associated with the Mustang Complex fire have charred more than 205,000 acres, scorching a path through timber on the northern end of the Salmon-Challis National Forest. To date, federal agencies have spent \$13 million fighting it.

Fifty-nine fire engines, 800 people and two helicopters are working to extinguish the ever-growing blaze, according to the fire center.

The fire is 11 percent contained, and evacuation notices have been issued for Hull, Hughes and Sheep creeks. Residents in the U.S. Highway 93 corridor between Copper Gulch and Sheep Creek and the Highway 93 corridor just north of Sheep Creek through the Lost Trail Pass and along Dahlenega



Roger Plathow / rplathow@postregister.com

A helicopter refills near Stanley. The Mustang Complex fire has 59 fire engines, 800 people and two helicopters working to extinguish the blaze. About 550 personnel, 35 fire engines and seven helicopters are working to extinguish the Halstead Fire. More than 1,200 personnel, 66 fire engines and nine helicopters are battling the Trinity Ridge Fire.

Road for Gibbonsville are also on alert.

The fire is in steep, inaccessible terrain, making firefighting difficult.

Officials hope to have the fire contained by Sept. 30.

Firefighters and other personnel hope to suppress the fire and prevent loss of homes, businesses and natural resources, according to the fire center.

Halstead

Lightning struck July 27 in an area of the Salmon-Challis National Forest, incinerating nearly 117,000 acres of timber. Beetles had previously killed many of the trees that went up in

smoke.

Federal agencies have spent \$15.5 million fighting the fire, which is now 7 percent contained.

About 550 personnel, 35 fire engines and seven helicopters are working to extinguish the fire.

Officials estimate the fire will be contained Oct. 16.

Firefighters and other personnel will work to keep the fire from spreading onto private land in the Valley Creek area and hope to complete burnouts in the coming days, weather permitting. Another goal is to keep the fire from crossing state Highway 75 or the Salmon River, according to the Incident Information System.

Trinity Ridge

On Aug. 3, a utility vehicle ignited a blaze that has burned 144,000 acres across the Boise National Forest. Since the fire began just a month ago, 12 structures have been torched, including four Forest Service cabins and four outbuildings.

Federal agencies have spent \$27.4 million fighting the blaze with more than 1,200 personnel, 66 fire engines and nine helicopters.

Residents of Pine and Featherville have been evacuated, and officials estimate the fire will be contained Oct. 1.

Firefighters and other personnel plan to complete a series of

burnouts from Forest Road 357 to Rabbit Creek Summit and south to Thorn Creek Butte. They are also trying to contain the 30-acre spot fire north of the North Fork of the Boise River.

Despite efforts to control the fires, Anderson said this season's fires will only continue to burn until the snow flies.

"There will absolutely be more fires before October," Anderson said. "This has absolutely been a more active fire season than the past three years."

Alex Stuckey can be reached at 542-6755. Comment on this story on Post Talk at www.postregister.com/posttalk/.

9-4-12 Post Register

Mustang Complex and Halstead Fire grow

POST REGISTER

The two large fires in the Post Register readership continue to grow.

The Mustang Complex fire grew to nearly 222,000 acres Monday.

On Monday evening, the Lemhi County Sheriff's Office elevated evacuation levels on U.S. Highway 93 between North Fork and Hull Creek.

The area is now under a level 2 evacuation notice, which means "residents must be fully prepared to leave at a moment's notice," according to a Forest Service news



On the INTERNET

Latest info on wildfires:

■ www.idahofireinfo.blm.gov/

■ www.nifc.gov/fireInfo/nfn.htm

■ <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

release.

"This may be the only notice residents receive — every attempt will be made to advise residents and businesses as conditions change," the news release said.

The fire is 16 percent contained.

Fire officials believe it will be contained Sept. 30.

The Halstead Fire reached 128,830 acres Monday night, but the threat to people and property eased.

Officials lifted the road closure on the lower two miles of Yankee Fork. Property owners and mine workers can now access Yankee Fork via Sunbeam. A forest area closure is still in effect, which prohibits entry by the general public.

Custer County has lifted the mandatory evacuation

order for Yankee Fork. Residents in the area are now under a 48-hour, pre-evacuation notice.

The pilot car is still operating on state Highway 75 between Lower Stanley and Peach Creek. Motorists are asked to not stop at any of the pull-outs through this 14-mile stretch. Pilot car operations will be evaluated on a daily basis depending on fire conditions.

The fire is 7 percent contained.

Officials believe it will be contained Oct. 16.

9-5-12 Post Register

Wednesday, September 5, 2012

NATION

Wildfire smoke, ash plague Salmon

■ The air quality dropped into the 'very unhealthy' range on Tuesday.

By LAURA ZUCKERMAN
news@postregister.com

SALMON — Idaho health officials advised Salmon area residents to stay indoors Tuesday and protect themselves from air polluted with wildfire smoke.

Notice that the air in the Salmon area had dipped into the "very unhealthy" range came as a thick haze blanketed the city and small flakes of ash fell from the sky.

Dense smoke has plagued portions of Lemhi County for nearly a month, periodically triggering air-



On the INTERNET

To see a forecast of air quality conditions and see the current status, visit:

■ www.deq.idaho.gov/air-quality/monitoring/daily-reports-and-forecasts.aspx

quality warnings that sometimes empty Salmon streets.

State environmental officials said wildfire activity and weather patterns suggested the air may remain at very unhealthy levels for the next several days. The warning came as Salmon hospital and clinic officials reported an increase Tuesday in the number of people seeking treatment for respiratory problems.

"We're seeing more people presenting with allergy-like symptoms exacerbated by the smoke," said CEO Jeff Hill of Steele Memorial Medical Center.

The uptick focused on patients with lung ailments, such as chronic obstructive pulmonary disease, Hill said. Symptoms ranged from breathing difficulties to congestion. Asthma sufferer Shawn Brownlee, an assistant chef at Bertram's Brewery in Salmon, said the smoke-polluted air had impaired his breathing for weeks.

"I've had to go home and hit the inhaler," he said.

Idaho Department of Health and Welfare officials recommended that residents — especially the elderly, very young and those

with respiratory issues — avoid heavy work or exercising outdoors when air pollution reaches unhealthy levels.

Those exposed to smoke may experience coughing and shortness of breath, according to state health officials. People experiencing uncontrolled coughing, wheezing or choking should seek immediate medical treatment.

Such recommendations have been taken to heart in the community, where scores of residents have complained of irritated eyes, runny noses and coughing spells in recent days.

"The smoke is all people talk about all day long," Burger King employee Steven Abrams said.

9-7-12 Post Register



Roger Plothow / rplothow@postregister.com

The skies over Salmon were quite smoky last week.

Smoke continues to plague Salmon area

BY LAURA ZUCKERMAN
news@postregister.com

SALMON — Idaho Department of Environmental Quality officials scrambled Thursday to repair an air monitor in Salmon that stopped transmitting pollution readings Wednesday afternoon, when dense smoke from area wildfires settled over the valley.

Rensay Owen, regional manager for air quality with the DEQ office in Idaho Falls, said the malfunction was unfortunate but had no bearing on a recommendation already in place — advising Salmon-area residents stay

■ A thick haze has covered Salmon off and on since late July

SMOKE, Continued on Page C6

9-7-12 Post Register Continued

SMOKE

From Page C1

indoors to avoid unhealthy air.

Owen said anecdotal reports the agency received Wednesday about diminished visibility, including near white-out conditions southeast of Salmon, underscored what already was known.

"The air is in the very unhealthy range and it is not likely to improve much for any length of time any time soon," he said.

A thick haze has blanketed the area off and on since late July, when lightning ignited the Mustang Complex fire north of Salmon and the Halstead Fire near Stanley.

Air quality has steadily deteriorated, periodically triggering warnings from Idaho environmental and health officials for Lemhi County and neighboring Custer County.

Air pollution in North Fork — the center of firefighter operations for the Mustang blaze — soared into the hazardous zone Wednesday, according to monitoring by the U.S. Forest Service, Owen said.

Readings in the hazardous zone range from 301 to 500. The reading at North Fork was 370.

Bob Worrell, fire information officer, said air pollution also is a concern for fire managers, who seek to limit exposure of firefighters by rotating crews every

14 days.

The fine particles found in smoke and haze pose a health threat because they can enter lungs and even the bloodstream, according to the U.S. Environmental Protection Agency.

Studies have linked particle pollution to everything from premature death in people with heart or lung disease to aggravated asthma, according to an EPA report.

Smoky conditions Wednesday caused a medical helicopter to cancel a planned flight to Salmon to ferry a patient to a hospital in Montana.

Janet Nelson, Lemhi County emergency services coordinator, said that was the first smoke-caused cancellation this season.

Nelson said local and state officials are responding to requests for help by schools in Salmon, as well as the nursing home. Air-purifying filters are under consideration to improve conditions at those facilities.

The Salmon VA clinic, meanwhile, has ordered 95 masks for its clients and the county is offering masks to people who meet certain criteria, including elderly residents with respiratory ailments.

Those seeking masks from the county can contact Nelson at (208) 756-2815, ext. 266.

The DEQ's Owen said the air quality forecast for Saturday morning, when the Salmon Marathon gets under way, is poor.

will be expanded to allow other school professionals to compete. Also, teachers will be rewarded not only for raising student achievement, but also for taking on hard-to-fill positions or leadership roles.

Luna's budget also includes an \$8.4 million increase in funding for laptops that will start going to high school students next year. The state is already spending \$2.5 million to give teachers the devices this year under the reforms, which go before voters in November.

Critics succeeded last summer in getting repeal measures on the ballot, decrying the sweeping changes that limited teacher collective bargaining and introduced merit pay while phasing in laptops and making online courses a graduation requirement.

The state Department of Education and other state agencies typically submit budget proposals in September for the next fiscal year, which doesn't start until July 1.

TAPP

From Page C1

came to their apartment.

Goff's story matches Browning's. During a July 31 interview, Goff also was shown a photograph of a man, named Jeff Smith, who she identified as the man who came to their apartment in 1996, according to the petition submitted by defense attorneys.

Tapp's charges came

9-8-12 Post Register

Saturday, September 8, 2012

NATION

Firefighters struggle with Mustang, Halstead fires

POST REGISTER

The Mustang Complex Fire spread overnight Thursday and Friday morning, creating a fire line parallel to U.S. Highway 93 on the fire's east flank, fire managers reported.

Average distance from the fire to the highway was 2 miles and evacuation notices remained in effect.

The northwest corner of the fire, located in the River of No Return Wilderness, continued to advance slow-



On the INTERNET

Latest info on wildfires:

- www.idahofireinfo.blm.gov/
- www.nifc.gov/fireInfo/nfn.htm
- <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

ly toward the northeast. The southeast corner still was moving toward the

Salmon River, as well as the Incident Command Post in North Fork.

As of 10 p.m., the blaze had consumed 255,560 acres as of 10 p.m. Friday.

In the 148,021-acre Halstead Fire, crews continued to keep the flames from crossing state Highway 75 on Friday. They worked to protect power lines, infrastructure and the community of Sunbeam, fire managers reported.

Fire managers estimated the probability of success

in the battle at 80 percent.

"We had a really good day today," Salmon-Challis National Forest spokeswoman Mary Swinney said. "The good news is (the fire) is 30 percent contained."

Finally, the Flint Canyon Fire, which erupted Thursday southwest of Pocatello, was reported 80 percent contained Friday night. The fire had burned 650 acres and the cause still had not been determined.

9-11-12 Post Register

Mustang Complex fire continues to grow

POST REGISTER

The Mustang Complex fire continues to grow, but luckily, the growth has been away from populated areas.

The fire reached 281,000 acres Monday with steady winds blowing the flames to the northwest toward the wilderness.

While the bulk of fire growth has been away from North Fork, the fire crested the hill above North



On the INTERNET

Latest info on wildfires:

■ www.idahofireinfo.blm.gov/

■ www.nifc.gov/fireInfo/nfn.htm

■ <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

Fork and can be seen from Highway 93.

The fire is 16 percent

contained.

To date, no homes have been destroyed by the fire.

Because of rough, rocky terrain, containment of the fire will be difficult in the absence of substantial precipitation, a press release said.

Firefighters continue to be challenged by exceptionally dry fuels, rugged terrain and frequent adverse fire weather conditions.

Nearly 1,100 personal

are fighting the fire.

Conditions are quieter on central Idaho's other large fire, the Halstead Fire. It is 40 percent contained and growth is slower because the fire is largely hemmed in by older blazes.

Closer to Idaho Falls, fire managers are working on the West Menan Fire, which started Sunday. It is at 434 acres. The human-caused blaze is 25 percent contained.

9-11-12 Post Register



Photo courtesy of Tam Ambrose

Tam Ambrose, owner of The Village at North Fork, took this photo around 9 p.m. Sunday. The fire was burning about a half-mile downriver from the resort property.

Mustang fire leaves people living in limbo

■ Residents, ready to leave at a moment's notice, grow tired of the stressful situation.

BY LAURA ZUCKERMAN
For the Post Register

NORTH FORK — Like many of her neighbors, Scheri Blackburn is staying put.

The Mustang Complex fire sent smoke and flames across a ridge above North Fork on Monday, but in the face of evacu-

INSIDE

■ Jackson, Wyo., residents warned of wild-fire danger / B4

ation orders, the retired educator decided she was going to stay on her beloved property that is north of North Fork.

Predicted high winds, erratic fire behavior and concerns about access along the U.S. Highway 93 corridor north of Salmon prompt-

■ Salmon residents are being generous in helping out evacuees

MUSTANG, Continued on Page A3

9-11-12 Post Register Continued

MUSTANG

From Page A1

ed an evacuation order Sunday for 400 properties on a 21-mile stretch that included areas north of North Fork and Gibbonsville.

It is unclear how many people heeded the call to leave and how many, like Blackburn, stayed put.

"I'm taking it in stride," she said.

As the 281,000-acre blaze enters its seventh week, owners of properties threatened by the fire say they have occasionally been worn by worry even as they have been buoyed by offers of aid.

Blackburn last July permanently moved to the property she and her family began building in 1989. It is her home and she is ready for the battle. Still, weeks of thick smoke and uncertainties about the fire have taken their toll.

Blackburn said she has had difficulties with breathing and sleeping.

"It's exhausting; I'm dragging," she said, echoing an overall sentiment in the area. Blackburn has cat carriers — she calls them "apartments" — for her three cats within arm's reach and her vehicle is primed for travel if conditions worsen. In the meantime, she hopes to stay in place like many of her neighbors.

"I love this place so much that it would break my heart if it burns," she said.

Blackburn said her sense of security has been bolstered by firefighters, members of the Lemhi County Sheriff's Office and other officials.

"I feel they have been keeping a very careful eye on things and they have kept us informed," she said.

Red Cross volunteer Tommie Palmer said just a few of the evacuated have taken advantage of private rooms, free meals and

shower facilities offered at the Salmon Valley Baptist Church.

Instead of using the shelter, Palmer said evacuees are bunking with friends in Salmon. Blackburn and Palmer described an outpouring of support.

"We've seen a wonderful response from the community," said Palmer, adding that some residents have offered their homes as shelters, garages as storage facilities and pastures for displaced horses.

She said Bertram's Brewery provided food during a critical period and many other restaurants are standing by.

"All I have to do is call," Palmer said.

Lemhi County Sheriff Lynn Bowerman said late Monday afternoon that planning and actions taken to manage the fire may prevent any structures from being destroyed, but authorities will always err on the side of caution.

Lemhi County deputies

and Idaho National Guard troops continue to patrol neighborhoods where residents have been asked to evacuate.

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9-12-12 Post Register

Plan of attack

Salmon residents get help to cope with smoke



LAURA MCCORMICK / COURTESY OF THE USFS
Vehicles negotiate exiting the parking lot during "rush hour" Friday at the Incident Command Post for the Mustang Complex fire at North Fork.

■ Air purifiers will be installed in schools and libraries as air quality continues to suffer.

By LAURA ZUCKERMAN
news@postregister.com

SALMON — State environmental and local emergency officials refined a plan Tuesday to stem the effects of smoke pollution in Salmon.

They moved closer to installing air purifiers in Salmon schools, identified so-called clean air zones and dispensed masks.

The Salmon area has been plagued by poor air quality for weeks as the Mustang Complex fire in the Salmon-Challis National Forest and other area wildfires have pumped smoke — and sometimes ash — into the valley.

After a weekend of mostly clear skies and fresh air, Salmon residents hunkered down Monday night as a thick haze settled across the horizon and triggered air quality readings that remained in the hazardous zone for hours.

"The air smelled and my eyes started to

INSIDE

■ Jackson residents wary as wildfire nears resort town / **CS**

On the INTERNET

For air quality reports and forecasts:

■ <http://tinyurl.com/8ctfgru>

Latest info on wildfires:

■ www.idahofireinfo.blm.gov/

■ www.nifc.gov/fireinfo/nfn.htm

■ <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

burn," Stephanie Orr said.

Orr and her husband unsuccessfully sought to prevent the outdoor air from seeping into their home and exposing their infant son.

Officials with the Idaho Department of Environmental Quality are tapping the expertise of agencies from the Environmental Protection Agency to Idaho National Laboratory to determine how best to create areas of clean air for Salmon residents in need, acting air quality administrai-

tor Mike Simon said.

"We're at a stage where it constitutes a kind of crisis; we're looking for anything and everything," he said.

The department is coordinating with the school district and state Bureau of Homeland Security to provide air purifying systems for the elementary and middle schools.

Carl Brown, air toxics coordinator for the department, renewed a call for residents to avoid the outdoors amid smoky conditions.

Smoke, which contains such chemicals as carbon monoxide, emits small particles that can irritate the eyes, lodge in the lungs and aggravate existing respiratory or heart conditions.

Environmental officials suggested they were breaking new ground with a pollution event that has spanned weeks.

"I don't quite know what the best term is to describe the incident, but I do know we don't want anyone exposed to that air

■ Residents are advised to keep children indoors and use masks when going out

SMOKE, Continued on Page A4

SMOKE

From Page A1

quality," Brown said.

Amy Berasi, developmental specialist for the Child Development Center in Salmon, which focuses

on infants and toddlers requiring speech and occupational therapy, said workers have done all they can to keep children indoors and provide them with masks when outings are necessary.

A young client was forced to go on a mild aller-

gy medication because of the smoke, she said, and two medically fragile children are sequestered.

Janet Nelson, Lemhi County emergency services coordinator, said her office has distributed 300 masks and scores more were available free-of-charge at the Salmon Public Library.

The library and Salmon Valley Baptist Church had volunteered to act as havens of clean air for those seeking escape from the smoke.

Nelson pledged to respond to needs wherever they arise.

"We're ready to do all we can," she said.

9-13-12 Post Register

Thursday, September 13, 2012

Fire crews have productive day

■ The Halstead Fire is now 50 percent contained, making it the least dangerous it's been since it started.

By **MIKE MOONEY**
mmooney@postregister.com

Fire crews battling the Halstead Fire in the Salmon-Challis National Forest reached a significant milestone Wednesday — 50 percent containment.

"We're halfway there; how about that?" spokesman Bernie Pineda said.

As of 9:30 p.m. Wednesday, the fire had burned 153,995 acres but progress was continuing in the fight to keep the blaze from consuming homes and businesses.

"The fire is less threatening now than at any point (since it started)," Pineda said.

A July 27 lightning strike ignited the blaze, which was still burning about three miles northwest of Stanley late Wednesday.

Fire crews battling the Mustang Complex fire also reported a "very successful day" spokeswoman Anna-leasa Winter said.

But an inversion layer, which held down the flames, continued to spread heavy smoke, Winter said.

While the 294,760-acre fire remained just 16 percent contained, firefighters were able to take advantage of Wednesday's favorable weather conditions. They completed a number of successful "burnout" operations — getting rid of dried brush and other potential fuels, Winter said.

Earlier Wednesday, the Lemhi County Sheriff's Office downgraded an evacuation warning for the



On the INTERNET

Latest info on wildfires:

- www.idahofireinfo.blm.gov/
- www.nifc.gov/fireInfo/rfn.htm
- <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

INSIDE

■ Stubborn fires continue to vex crews in Northwest / **B4**

Indian Creek area.

Those returning to their homes were warned to watch for possible hazards, including weakened trees, smoldering debris around property and possibly damaged power lines.

The U.S. Highway 93 corridor remained under a Level 3 (mandatory) evacuation notice from the North Fork Fire Station to Quartz Creek, just north of Gibbonsville.

In the Hull and Hughes Creek drainages, a slow backing fire continued to work toward Highway 93 on Wednesday night, Winter said.

But the favorable weather forecast may allow firefighters to use a direct-attack approach in those areas today, she said.

In the Halstead Fire, crews will continue to monitor the fire's progression today near the Loon Creek Guard Station, Diamond D Ranch, Bonanza and Marsh Creek drainage.

Additionally, structure protection will continue along state Highway 75, Yankee Fork, Sunbeam, Lost Packer Mine and Seafoam Guard Station.

"I wouldn't say we've turned the corner (on the Halstead Fire), but we're getting pretty close to that corner," Pineda said.

9-15-12 Post Register

Halstead Fire expands, smoke still a problem

POST REGISTER

Smoke was a problem Friday for crews battling both the Mustang Complex and Halstead fires.

But no structures were lost and firefighters were hoping for improved weather conditions today and a lifting of the inversion that was responsible for all the smoke in the air.

The 159,980-acre Halstead Fire expanded Friday but it won't be known until later this morning exactly how much it grew due to the smoky conditions.

With record dry conditions and gusty winds, firefighters had their hands full keeping both fires in check, a U.S. Forest Service spokesman said.

Custer County law enforcement reported heavy smoke in the air Friday night.

Fire managers said residents in Challis, as well as Salmon in Lemhi County, could expect to awaken today to a "pretty good blanket of haze and smoke." But it was expected to begin lifting about noon today.

The Mustang Complex fire grew to 301,825 acres Friday and was reported 18



On the INTERNET

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- www.idahofireinfo.blm.gov/
- www.nifc.gov/fireInfo/nfn.htm
- <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

percent contained. But no major problems were reported, other than a thick blanket of acrid smoke.

Motorists were warned to expect intermittent road closures and delays along U.S. Highway 93 this morning due to smoke from the Mustang Complex fire. Evacuation notices remain in effect.

"Visibility and smoke conditions will be closely monitored and escorts or (road) closures may occur at any time," according to a U.S. Forest Service news release.

Additionally, the Forest Service urged the public to "avoid unnecessary travel along Highway 93, as firefighter personnel and equipment will be staged roadside and in adjacent neighborhoods."

9-16-12 Post Register

Hamilton and Mustang fires burn into each other

POST REGISTER

A fire has started on the east side of U.S. Highway 93 near North Fork, prompting officials to reconsider easing evacuation levels around the popular highway.

Pending suppression efforts, the change to the evacuation levels along the Highway 93 corridor may be delayed, a press release said Saturday.

Three hotshot crews and North Fork Fire District personnel are fighting the blaze, which may be an extension of the Mustang Complex Fire or a new start. It is roughly 50 to 60 acres in size.

The Mustang Complex Fire also burned into the



On the INTERNET

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- <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

Hamilton Fire on Saturday, adding another 18,000 acres of destroyed timber and brush, the U.S. Forest Service reported.

Early Saturday evening, however, the fire's official acreage still remained at 301,825.

Despite the merging of the two fires, which hap-

pened in a wilderness area, no new structures were threatened Saturday evening, fire information officer Arlene Perea said.

"The fire is pretty much status quo," she said.

Highway 93 was open Saturday evening, but the public was warned to expect intermittent delays from North Fork to south of Gibbonsville, due to decreased visibility from smoke.

The Halstead Fire, also burning in the Salmon-Challis National Forest had grown to 162,800 acres by Saturday evening.

The Horsethief Canyon fire near Jackson, Wyo., has burned 3,330 acres. It is 42 percent contained.

9-21-12 Post Register

Mustang evacuation notices ratcheted down

POST REGISTER

Lemhi County Sheriff Lynn Bowerman continued to ratchet down evacuation orders for the Mustang Complex fire Thursday.

The affected areas included: Indian Creek, Sage Creek, a portion of the U.S. Highway 93 corridor — from North Fork to Quartz Creek (just north of Gibbonsville), Ditch Creek, Hughes Creek and Hull Creek.

Despite the reduced threat, hazards remain.

“As a precaution, persons with special needs, as well as residents with mobile property, and (under certain circumstances) pets and livestock are further warned against reoccupying the evacuation area,” a news release said.

The fire had burned 332,301 acres as of 9:30 p.m. Thursday and was 20 percent contained. Full containment was projected for Sept. 30.

Removal of equipment and supplies from the fire area also is under way, the news release said, includ-

On the INTERNET

- www.idahofireinfo.blm.gov/
- www.nifc.gov/fireInfo/nfn.htm
- <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

ing backhauling of trash, port-a-potties, hose and water handling equipment.

Highway 93 was open Thursday, but travelers were advised to drive with headlights on and reduce speed due to increased fire traffic from backhauling operations and smoky conditions, according to the news release.

The 175,710-acre Halstead Fire remained 59 percent contained Thursday night. Full containment of the fire burning 18 miles northwest of Stanley was not expected until Oct. 16.

Fire spread was reduced and checked in Jordan Creek near Loon Creek Summit on Thursday, according to a news release.

Structure protection continued along Yankee Fork and around Lost Packer Mine, but an inversion and smoke-caused “shading” decreased the fire’s behavior.

9-21-12 Post Register

Radiation threat is latest fire concern

■ Experts said the risk from burned-over contamination sites is minimal as tensions begin to flare up over the Mustang Complex fire.

By LAURA ZUCKERMAN
news@postregister.com

SALMON — State environmental officials began taking air samples near North Fork on Thursday after learning that sites contaminated by radiation either were burned over or still threatened by the Mustang Complex fire.

But Erick Neher, regional administrator of the Idaho Department of Environmental Quality, said the potential health threat is believed to be minimal.

A more significant and known risk to area residents, Neher said, is the dense smoke that has cloaked Salmon and surrounding communities since the fire erupted July 30.

"There may be some minor increase in background levels of radioactivity — which we're exposed to every day — but that is nothing compared to fine particulates from smoke," he said.

Earlier this week, residents near North Fork raised concerns about the sites contaminated by uranium or thorium, both radioactive elements.

Cindy Hallen, who lives just miles from a former uranium mine that underwent an EPA cleanup, said she is running an air purifier and staying indoors.

"I don't want to be sounding alarms, but we're dealing with radioactive materials," she said.

Air-quality specialists at Idaho National Laboratory said the risk of radiation exposure from wildfires burning over previously contaminated soils is low because the soil itself doesn't burn. As a result, the radiation cannot escape into the air.

INSIDE

■ Evacuation notices ramped down for Mustang fire / A4

Salmon-Challis National Forest Supervisor Frank Guzman did not return a telephone call Thursday seeking comment.

A Forest Service spokeswoman said she was unable to provide information on the radiological deposits or their status.

News about the radioactive materials in the fire zone came as an evacuation order was lifted for residences north of Salmon once believed to be threatened by the fire.

In a sign that tempers are fraying in the fire zone, the informal and friendly atmosphere of earlier public meetings has faded.

At a Tuesday night public meeting, there was a visible law enforcement pres-

■ The cause of a Saturday fire east of the U.S. Highway 93 fire line remains unclear

RADIATION, Continued on Page A4

RADIATION

From Page A1

ence and fire officials required those with questions to wait until the end of the meeting to line up and ask questions one at a time.

Jon Cummings, co-owner of 100 Acre Wood Lodge near North Fork, was among those who elected not to wait.

Instead, Cummings joined a letter-writing campaign directed at Gov. C.L. "Butch" Otter and other state leaders.

"We need to see this wrapped up," he said. "People aren't going to take much more of it."

Cummings and other residents are frustrated by the fire's long duration, all the smoke and the disruption to daily life.

Those frustrations seemed to peak Saturday when a spot fire burned more than 150 acres on the east side of U.S. Highway 93 — once a fire line — opposite 100 Acre Wood Lodge.

Mike Tibbetts, who lives 35 miles downriver of

North Fork, said people are weary of the fire, which has damaged recreation areas, destroyed habitat and killed wildlife.

"It's been terrible," he said.

Earlier this week, Salmon-Challis Forest officials said the cause of the Highway 93 blaze, which since has been extinguished, was due to spotting — burning embers spewed from the fire's main body.

Deputy District Ranger Ingrid Drieling said Wednesday that officials could not say with certainty whether the spot fire resulted from embers from the fire's main body or burn-out operations conducted in the area last week.

"We'll never really know the answer to that, but we do know it was not (arson)," she said.

Drieling acknowledged that tensions are rising in the fire zone and attributed the phenomenon to smoke.

"People are tired of the smoke," she said. "It's oppressive — more oppressive than anyone could have imagined — and people are feeling the effects of it."

Saturday, September 22, 2012

NA



Photo courtesy U.S. Forest Service

Thick smoke fills the sky from the Mustang Complex fire.

Growth of Mustang Complex, Halstead fires starting to slow

POST REGISTER

The Mustang Complex Fire was reported "pretty well buttoned up" along the U.S. Highway 93 corridor Friday.

"It's looking good. We've pulled all the hose and pumps along the ... corridor," fire information officer Peter D'Aquanni said.

There was no further growth in the Hughes Creek and Hull Creek areas of the Mustang Complex fire on Friday.

Fire crews continued mop up activities in both locations to cool any hot spots near the fire's edge, according to a U.S. Forest Service news release.

The spot fire that erupt-



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ed Sept. 15 east of Highway 93 had cooled significantly as of Friday due to mop up actions.

As of 9 p.m. Friday, the Mustang Complex Fire had burned 332,301 acres and remained 20 percent contained. A total of 665 fire crews and support person-

nel were battling the blaze.

The 179,035-acre Halstead Fire was reported 62 percent contained Friday night.

Smoke continued to plague the Sawtooth Valley on Friday, a news release said, and the fire showed more activity in localized areas.

A total of 97 firefighters and support personnel are assigned to the blaze.

Fire managers were hopeful that beginning Sunday, a predicted storm would start dropping as much as three-quarters of an inch rain over the Salmon-Challis National Forest where both fires are burning.

A4 Post Register

NATION

Mustang Fire 'behaves itself' Saturday

POST REGISTER

The aggressive behavior fire crews battling the Mustang Complex fire expected Saturday failed to materialize.

No one was complaining.

"We didn't get the fire activity we thought we would," fire information officer Arlene Perea said. "It's behaving itself. All (operations) are normal."

Acreage burned in the



On the INTERNET

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■ <http://gacc.nifc.gov/egbc/dispatch/id-cic/>

blaze held at 332,301 as of 10 p.m. Saturday, largely because fire managers

haven't been able to get new infrared pictures.

Fire crews were hoping the rainfall predicted for the next several days actually materializes. A total of 664 firefighters and support personnel remain on the fire, which remained at 20 percent contained.

The Halstead Fire, meanwhile, had burned 179,055 acres as of Saturday night. The blaze was reported 62 percent

contained.

In localized areas, according to a news release, the fire was more active — particularly in the Marsh and Bear Valley creeks.

Additionally, southwest winds did begin to clear some smoke from the Sawtooth Valley.

Of the 86 personnel still assigned to the blaze, 63 are firefighters.

9-23-12 Post Register

A pall over Salmon

■ Smoke-weary residents in Lemhi County are worried about their health.

By LAURA ZUCKERMAN
news@postregister.com

SALMON — Pam Davis is the first to admit she's not herself.

As Lemhi County marks its eighth week of smoke, mixed with occasional ash, from the massive Mustang Complex fire, residents are growing restless.

"Every morning, it's the same thing over and over again: I wake up and look out and there's the haze. I definitely get upset. It's depressing," Davis said.

Davis, a chef at a Salmon restaurant, blames the unhealthy air for a trend she has observed: fewer people frequenting local eateries, downtown shops and the movie theater.

"For the people I do see in the public eye, they seem irritated," she said. "And then there's the people who won't go out in it. And what is this stuff doing to our health?"

Exposure to smoke, which emits noxious gases and fine particles, can irritate the eyes and throat and worsen lung and heart ailments, according to the Idaho Department of Health and Welfare.

State health officials advise residents affected by smoke pollution to limit outdoor activities.

■ The long-term effect of smoke exposure are unknown

SMOKE

From Page C1

In Salmon, it's not unusual to see people wearing respirator masks while walking or cycling. The masks are considered a first line of defense but do not filter the fine particles that can lodge deep in the lungs, in some instances triggering asthma attacks and bronchitis.

The long-term health effects of smoke exposure are mostly unknown because episodes typically happen in isolated areas with small populations, according to medical experts.

Beth McDonald of North Fork doesn't need peer-reviewed studies to understand the consequences of chronic smoke exposure.

Her husband, Fred, remains on oxygen after a weeks-long battle that began late last month with double pneumonia. His Montana doctor said her husband's condition was brought on by smoke, McDonald said.

The 56-year-old manager of Lemhi Lumber takes medication for rheumatoid

"It's like what happens here in the winter; People go indoors and get a little stir crazy."

CHRIS RECKARDS
Nature's Pantry clerk

arthritis that leaves him vulnerable to infection.

But Beth McDonald said nothing could have prepared them for the sudden and severe illness that hospitalized her husband for two weeks.

"The smoke put him over the edge," she said.

More than a month ago, customers at Nature's Pantry, a Salmon health food store, began requesting remedies and supplements to clear and protect their lungs, clerk Chris Reckards said.

Some customers also are seeking natural treatments for increased irritability, Reckards said.

"It's like what happens here in the winter; People go indoors and get a little stir crazy," he said. "But this is summer and we're already confined. That will

make this winter especially tough."

Russell Jones, professor of psychology at Virginia Tech, said his decades of study of how people respond to fires shows varying degrees of stress reactions, including depression and increased anxiety.

The severity of loss — including life and property — is linked to symptoms associated with post-traumatic stress disorder, he said.

"Not everyone develops that. From 60 to 80 percent of individuals in the United States experience a negative event that could lead to PTSD but only 8 to 15 percent develop it," Jones said.

Vannoy, health program manager for the Idaho Department of Health and Welfare, said state officials expect to design a future program to better respond to the smoke inundation events of the kind that has plagued Lemhi County.

"It kind of caught us all off guard," he said. "But we know it will happen again in Idaho, it's 'when,' not 'if.'"



9-26-12 Post Register

Wednesday, September 26, 2012

Crews wind down on the Mustang and Halstead fires

■ 367 firefighters and support people remain at the Mustang Complex fire.

POST REGISTER

Although both the Mustang Complex and Halstead fires continue to burn in the Salmon-Challis National Forest, firefighting efforts are winding down.

A total of 367 firefighters and support personnel remained on the scene at the Mustang Complex, which had burned 336,744 acres as of Tuesday night. It was reported 25 percent contained.

Creeping and smoldering was reported throughout the fire's area Tuesday, according to a Forest Service news release. Although clear skies allowed some warming, there was only minimal increase in fire behavior, the news release said.

In the Halstead Fire, 66 firefighters and support personnel remained on the



On the INTERNET

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scene. The blaze had burned 179,308 acres as of Tuesday night and was 62 percent contained.

Fire behavior reportedly moderated on localized areas of the fire.

The Indian Springs Guard Station survived an aggressive attack by the fire a couple of days ago, fire managers reported. And despite a lack of moisture, green plants are starting to return to burned areas of the fire.

Appendix F-2 Pinehurst area News Articles

No local fires, but plenty of haze

Stage 1 Fire Restrictions expanded

Posted: Tuesday, August 28, 2012 10:15 am | Updated: 11:18 am, Tue Aug 28, 2012.

No local fires, but plenty of haze By **BOBBY ATKINSON** Staff writer

The smoky haze that filled the skies across Shoshone County Sunday weren't from any fires in the Silver Valley, but from the fires raging to the east, west and south. The rampant fires in the Northwest are a constant reminder of the danger fires pose to the area.

The Silver Valley has been fortunate this year to see only small fires no larger than a couple of acres, but in Washington, Oregon, Montana and central Idaho, forest fires have caused much destruction. The threat of fires spreading rises even more with Labor Day weekend as residents across the Silver Valley are likely to take to the outdoors to celebrate the symbolic last weekend of summer.

To help prevent any fires from breaking out, local wild land fire protection agencies expanded Stage 1 Fire Restrictions today at midnight. The newly expanded area now includes parts of southernmost Shoshone County until further notice.

Under Stage 1 Restrictions, it is prohibited to build a fire, campfire or stove fire except within a designated recreational site or on their own land; it is prohibited to smoke on public lands except within an enclosed vehicle, building or designated recreation site, or in an area 3 feet in diameter barren or clear of flammable materials.

There are a few exemptions from the restrictions, such as people with a permit, using fire solely by liquid petroleum, conducting activities authorized by written notice, or firefighters and personnel working on official duty.

Those who aren't in southernmost Shoshone County under Stage 1 Fire Restrictions are still under "Very High" threat according to Idaho Forest Service. With such a high threat, residents planning to venture outdoors are asked to be extremely careful and call for help if you see any fires.

<http://shoshonenewspress.com/content/tncms/live/>

DEQ lifts North Idaho burn ban as air quality improves

Posted: Tuesday, September 18, 2012 12:00 am | Updated: 12:51 am, Tue Sep 18, 2012.

DEQ lifts North Idaho burn ban as air quality improves

Idaho Department of Environmental Quality said Monday a burn ban has been lifted and air quality is improving in North Idaho. However, that could change.

DEQ said that wildfire smoke has dispersed, but stagnant conditions will persist through the work week.

"The high pressure system over the area will continue to strengthen and bring dry and mainly clear conditions," DEQ said in a press release. "Smoke from wildfires around the western U.S. can move into the area and degrade air quality."

Anyone planning open burning should check with their local fire district first. Several districts still have fire safety burn bans in place.

Air quality is forecast to be in the good range for most of North Idaho today, DEQ said.

On Friday, it was moderate in Kootenai County and the Silver Valley. It was "unhealthy for sensitive groups" in St. Maries.

Smoke from Eastern Washington wildfires will continue to affect communities near the fires over the next several days. Some light southwesterly winds will develop today, but they may not be strong enough to blow air pollution away.

Regional fires send air quality south

Posted: Friday, September 21, 2012 10:19 am

Regional fires send air quality south By KELSEY SAINTZ

Taking in the Silver Valley's beautiful mountain views has been more difficult than usual lately due to hazy, lingering dirty air.

"It's kind of pouring in from all directions," said Mark Boyle, the Department of Environmental Quality's air quality manager, especially from wildfires in central Washington, and somewhat from southern Idaho.

As of press time, there were eight fires burning in Idaho totaling about 800,000 acres. Washington had six fires at about 66,000 acres. Up-to-date information on wildfires can be found online at the National Interagency Fire Center's website, www.nifc.gov.

Due to the low air quality, there is an open outdoor burning and woodstove ban effective immediately in the counties of Shoshone, Kootenai, Bonner and Benewah.

As of Thursday afternoon, the DEQ has rated the air to be unhealthy for sensitive groups, such as young children, the elderly and people with heart or lung disease. It can cause various symptoms, such as shortness of breath, tightness in chest, coughing or other minor irritations. Some people are more susceptible than others. Sensitive people should avoid prolonged or heavy exertion outdoors.

"The way things look, it's going to last probably into the weekend," Boyle said. "... We're monitoring the situation and hopefully things will change for us."

However, expect periods of smoke, then a day of clearing with the high possibility of it returning.

<http://shoshonenewspress.com/content/tncms/live/>

Panhandle fire danger remains 'very high'

Posted: Friday, September 21, 2012 12:00 am | Updated: 1:18 am, Fri Sep 21, 2012.

Panhandle fire danger remains 'very high'

COEUR d'ALENE - A lack of rain and persistent warm and dry weather across the Idaho Panhandle are combining to keep much of the forest in "very high" fire danger.

Forest visitors are being urged to exercise extreme caution with campfires, cigarettes and other sources of ignition as they venture into the woods for hunting, camping, firewood gathering and other recreational pursuits.

"We are very concerned about the dry conditions throughout the forest and the occurrence of human-caused fires," said Forest Supervisor Mary Farnsworth. "We need the public's help in preventing wildfire."

Current long-term weather outlooks indicate no break in the weather pattern in the foreseeable future, which means the fire danger is likely to remain very high for at least a few more weeks.

During this year's fire season, firefighters across the Idaho Panhandle National Forests have suppressed all of the 12 human-caused and 42 lightning-caused fires.

"However, in these conditions it only takes one smoldering campfire or cigarette carelessly tossed out a window to cause the kind of devastating wildfires we have witnessed throughout the West this year," according to a press release.

No breathing room

Haze leads to burn ban, bad-air advisories



SHAWN GUST/Press

No breathing room

SHAWN GUST/Press Carlos Venzor, of Coeur d'Alene, rides on the Centennial Trail Thursday as hazy skies diffuse the landscape around him.

Posted: Friday, September 21, 2012 12:00 am | Updated: 1:18 am, Fri Sep 21, 2012.

No breathing room By ALECIA WARREN/Staff writer

As smoke from southern wildfires continues to clog the Panhandle skies, most of the five northern counties have been issued air quality advisories and Stage One burn bans through this afternoon.

"Some of it's a little surprising," said Mark Boyle with the Department of Environmental Quality, about the wildfires' pollution. "The lower level winds migrate it up here."

Kootenai County, still hosting patches of gray overhead on Thursday afternoon, has a Moderate air quality forecast and a ban against any outdoor burning today, according to the DEQ.

Areas of Benewah and Shoshone counties have the same burn ban, and an air quality status of Unhealthy for Sensitive Groups. Bonner County has the burn ban and a Moderate air quality advisory.

Poor atmospheric mixing is expected throughout the day, Boyle confirmed. "Any ground-level smoke generated from wildfires is likely to persist at the low levels, at or just above our breathing level," he said.

Kootenai County's air quality forecast advises that individuals unusually sensitive to smoke should reduce prolonged or heavy exertion outdoors.

The Unhealthy for Sensitive Groups status in other areas recommends that the elderly, children and anyone with heart or lung disease should reduce long or active outdoor exercise. "It's pretty common sense right now," Boyle said. "If you are feeling impacts, get ahold of your healthcare provider. Don't delay."

Prestige Senior Living in Coeur d'Alene has taken the precautionary route, said RN Debbie Brouillette. Staff ensures residents on oxygen or with other health issues aren't going out or sitting outside for long periods of time, Brouillette said. "For an extended length of time, you get more concerned," she said of the smoky haze. "When it's just a day here or there with the field burning, that's one thing, but now I'm getting more concerned."

The burn ban could have benefits beyond air quality. Glenn Lauper with the Coeur d'Alene Fire Department said there haven't been any notable fires in the region - yet. But "historically, October is the month we go into pretty extreme (fire hazard) if we don't get any moisture," Lauper said, adding that the district is meeting with organizations about emergency preparedness.

The air quality advisories and the burn ban are in effect through 4:30 p.m.

DEQ expects pollutants to build through the weekend, as low level winds herd the smoke back toward North Idaho and Eastern Washington. Boyle said the wildfire smoke has been lingering in North Idaho since about Sept. 14.

"If you're susceptible to the pollutants, they're likely to come and go over the next few days," Boyle said.

Haze leads to burn ban, air advisories

Posted: Saturday, September 22, 2012 10:00 am

Haze leads to burn ban, air advisories By CAMERON RASMUSSEN and ALECIA WARREN Staff writers

SANDPOINT — Despite concerns about the the smoky air, the Idaho Department of Environmental Quality hasn't yet upgraded Sandpoint's status.

With sporting events being canceled in Washington and Montana, local athletic organization associates are keeping a close eye on air quality reports. However, DEQ still places Sandpoint's air quality at the moderate level.

As of 4:26 p.m. on Friday, the department assigned the region an air quality index of 51. For comparison, Treasure Valley currently bears a status of "unhealthy for sensitive groups" and has an air quality index of 115. On DEQ's scale of air quality, conditions degrade from good to moderate before progressing to unhealthy for sensitive groups, unhealthy, very unhealthy and hazardous.

Similar air quality advisories and Stage One burn bans were in effect in Kootenai, Shoshone, Boundary and Benewah counties. "Some of it's a little surprising," said Mark Boyle with the Department of Environmental Quality, about the wildfires' pollution. "The lower level winds migrate it up here."

Sandpoint also has a particulate matter level of 2.5. That means that any particles in the air are 2.5 microns or less in size. As one might expect, these fine particles usually exist when environmental conditions create smoke or haze.

According to the DEQ's air quality forecast, wildfire smoke still lingers throughout the five northern counties. There are no recommended limitations for short spans of physical activity in moderate conditions, according to government guidelines. However, those with respiratory conditions or other disorders should exhibit some caution when undertaking strenuous or prolonged activities.

"It's pretty common sense right now," Boyle said. "If you are feeling impacts, get a hold of your healthcare provider. Don't delay."

The burn ban could have benefits beyond air quality. Glenn Lauper with the Coeur d'Alene Fire Department said there haven't been any notable fires in the region — yet. But "historically, October is the month we go into pretty extreme (fire hazard) if we don't get any moisture," Lauper said, adding that the district is meeting with organizations about emergency preparedness.

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"If you're susceptible to the pollutants, they're likely to come and go over the next few days," Boyle said.

Stuck in smoke

Posted: Tuesday, September 25, 2012 12:00 am | Updated: 8:36 am, Tue Sep 25, 2012.

Stuck in smoke By BRIAN WALKER/Staff writer

We're stuck in a "pot dome" and Ma Nature won't lift the lid on us and the wildfire smoke for a while, says Cliff Harris. Without much precipitation expected for the next week, the climatologist said it may be next week at the earliest before the area is completely relieved of the smoke.

"We need to have a storm, and I think we'll get one in early October," Harris said. "We're just not there yet."

Harris said it could be worse. We could still be in the 80s and there could be high winds, fanning the flames of the regional wildfires. Highs in the mid-70s and lows in the 40s are in the forecast.

Ralph Paul, airshed coordinator with the Idaho Department of Environmental Quality, said the air quality throughout North Idaho remains "Moderate" - one stage above "Unhealthy for Sensitive Groups." "The air quality hasn't changed much since things got bad on Friday," Paul said. "It's been consistently bad because of the high pressure over the area." Paul said the smoke in North Idaho can't be pinpointed on any particular wildfire over another, but just wildfires throughout the region in general.

People sensitive to poor air quality should consider reducing prolonged or heavy exertion outdoors.

A burn ban remained in effect on Monday and conditions will be re-evaluated today, Paul said.

Harris said this area has only had 0.23 of an inch of rain since July 20, making it even drier than the 0.37 of an inch recorded during the Dust Bowl of 1934. The dry spell comes on the heels on the wettest spring on record.

Kenneth Wakefield, an asthma and allergy specialist at Asthma and Allergy of Idaho in Coeur d'Alene, said more patients are complaining about breathing, eye or nasal issues due to the smoke, but they're not necessarily coming in specifically for those reasons.

"What I'm mostly hearing from people is that they have scratchy throats or eyes," Wakefield said. "You can't prove that it's from the bad air quality, but I suspect it is."

Wakefield said many people like to keep their windows open at night this time of year, but they may have to stop that or reduce outdoor exercising if their breathing is affected. He said he may also increase asthma medication dosages for some patients.

"Other than that, there's not a lot you can do," he said.

Most other areas of the region have worse air quality than the Panhandle.

Some areas in Central Washington on Monday ranged from "Unhealthy" to "Hazardous." In most of eastern Washington, the air was "Unhealthy for Sensitive Groups."

In the Orofino area, some residents are wearing dust masks to help with breathing.

Bone dry: fire danger still high

Posted: Thursday, September 27, 2012 9:45 am | Updated: 10:50 am, Thu Sep 27, 2012.

Bone dry: fire danger still high By BOBBY ATKINSON | 0 comments

The Silver Valley's wildfire threat and smoky, hazy air look as though they will be sticking around for the foreseeable future or until the dry, warm conditions finally make way for some rain.

The smoky haze has been plaguing the Silver Valley for weeks now, and with so many fires still raging across the region — six across Idaho, seven in Washington and four in Montana — the air quality probably won't be improving anytime soon.

Ralph Paul of the Idaho Department of Environmental Quality, which has been extending burn bans daily, said such poor air quality is unusual for this time of the year and burn bans typically are more common in the winter. "We've had some burn bans go into effect in winters, but it's not very common this time of the year," Paul said.

Paul added that this year marks some of the worst lingering air quality in recent memory. The burn ban would be lifted just as soon as air quality shows some kind of improvement, but with so many fires still burning out of control across the Northwest, it's very difficult to make a guess as to when the air might clear up.

U.S. Forest Service public affairs officer Jason Kirchner said that while the air quality and conditions across Shoshone County have been very poor this year and lasting longer than in years past, the Silver Valley has been fortunate this year to have not had any wildfires break out in such a forested area.

"[Shoshone County has] been very lucky so far," Kirchner said. "There have only been small fires — no bigger than an acre. But all it takes is one fire to get out of control and we have a disaster on our hands with such dry conditions."

Kirchner said the fire threat will continue to hang around "high" to "very high" for the time being, at least until the weather decides it's fall and some rain returns to the Silver Valley. With the conditions, the Forest Service has law enforcement patrolling in the area to watch out for fires with many people hitting the forest for hunting season.

Kirchner added that residents across Shoshone County need to be aware of the conditions and should always report fires of any size to Forest Service.

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