

Appendix B – Conditions From August 21-25, 2011

The following pages provide weather information which was used to assess the Pagami Creek Fire during the August 21-25, 2011 period for determination of leaving in monitoring status or devise a new strategy. One spot weather forecast was ordered (on August 21, 2011). All other weather information was obtained through the daily fire weather forecast produced by the National Weather service Office in Duluth, Minnesota. The fire was monitored from the air on August 21, 22, and 25. Beaver pilots provided the following descriptions of fire behavior:

August 21 at 15:58 “No smoke, no activity and no size change”

August 22 at 17:43 “over fire, no smoke”

August 25 at 16:03 “open flame, active fire on ground, no tree torching; winds light from NW; fire creeping into the jack pine. No major threat, approximately ½ acre”

The observation of fire behavior provided by the Beaver pilot on the afternoon of August 25 triggered a decision by the West Zone Duty Officer to send two firefighters into the fire to conduct an on-site size-up.

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Fernberg RAWS											
Date	Time(CDT)	Temperature	Relative Humidity	Wind	Precipitation	FFMC	DMC	DC	ISI	BUI	FWI
21-Aug	13:00	70	41	7	0.12	77.9	28.5	310.5	1.7	46.3	4.7
22-Aug	13:00	80	38	6	0	88.8	32.1	318.3	5.8	51.2	15.2
23-Aug	13:00	78	60	4	0	88.3	34.3	325.9	4.6	54.3	13.1
24-Aug	13:00	65	67	14	0	86.2	35.6	332.2	7.7	56.2	19.6
25-Aug	13:00	79	45	5	0.02	88.3	38.7	339.9	5.1	60.2	14.8

Table B1. Weather observations at Fernberg RAWS August 21-25, 2011.

Ely RAWS											
Date	Time(CDT)	Temperature	Relative Humidity	Wind	Precipitation	FFMC	DMC	DC	ISI	BUI	FWI
21-Aug	13:00	68	44	7	0.02	87.8	24.5	252.4	5.5	39.5	12.5
22-Aug	13:00	77	48	11	0	88.5	27.3	259.9	8.4	43.2	18.2
23-Aug	13:00	74	71	9	0	86.2	28.8	267.1	5.1	45.3	12.8
24-Aug	13:00	67	61	16	0	86.2	30.5	273.6	9.2	47.6	20.4
25-Aug	13:00	77	53	7	0	87.4	33	281.1	5.2	51.1	13.9

Table B2. Weather observations at Ely RAWS August 21-25, 2011.

Wind was greater than 15 mph for 7 hours on August 24 from 1000 to 1600 and was 10 mph or greater from 2300 on August 19 to 1900 on August 24. The effect these winds had on the Pagami Creek Fire was to generate short distance spread toward the adjacent jack pine stand on the low ridge to the north. Throughout the strong wind episode the fire remained on the surface (no torching) and increased in size to only about ½ acre.

Spot Forecast for Pagami Creek Fire
National Weather Service Duluth 350 PM CDT Sun Aug 21 2011

SPOT FORECAST FOR PAGAMI CREEK FIRE...USFS
 NATIONAL WEATHER SERVICE DULUTH MN 350 PM CDT SUN AUG 21 2011
 FORECAST IS BASED ON REQUEST TIME OF 1528 CDT ON AUGUST 21.

.DISCUSSION...AN UPPER LEVEL DISTURBANCE WILL PRODUCE SCATTERED SHOWERS AND ISOLATED THUNDERSTORMS ACROSS ARROWHEAD OF MINNESOTA THROUGH THIS EVENING. NORTHWEST WINDS THIS AFTERNOON SHOULD BECOME LIGHT AND VARIABLE THIS EVENING. HOWEVER THERE COULD BE LOCALIZED THUNDERSTORM WIND GUSTS UP TO 25 MPH LATE THIS AFTERNOON AND EARLY THIS EVENING. CONDITIONS WILL BE MAINLY DRY OVERNIGHT TONIGHT AND ON MONDAY AS A RIDGE OF HIGH PRESSURE BUILDS OVER THE GREAT LAKES REGION.

.REST OF TODAY...

SKY/WEATHER.....PARTLY SUNNY. A CHANCE OF SHOWERS AND THUNDERSTORMS. CHANCE OF PRECIPITATION 40 PERCENT.

MAX TEMPERATURE.....68 [actual=71]

MIN HUMIDITY.....38 PERCENT [actual=31]

WIND (20 FT).....NORTHWEST WINDS 4 TO 8 MPH. GUSTY AND ERRATIC WINDS EXPECTED NEAR THUNDERSTORMS
 [actual= NW 12 mph with gusts to 23]

MIXING HEIGHT.....6750 FT AGL.

TRANSPORT WINDS.....NORTHWEST 20 TO 25 MPH.

SMOKE DISPERSAL.....EXCELLENT (113100).

TIME (CDT)	4PM	5PM	6PM
TEMP.....	67	67	67
RH.....	38	38	40
20 FT WIND DIR..	NW	NW	N
20 FT WIND SPD..	6	5	4
20 FT WIND GUST.	8	6	5

.TONIGHT...

SKY/WEATHER.....PARTLY CLOUDY. A CHANCE OF SHOWERS AND THUNDERSTORMS IN THE EVENING. PATCHY FOG AFTER MIDNIGHT. CHANCE OF PRECIPITATION 30 PERCENT.

MIN TEMPERATURE.....43-48.

MAX HUMIDITY.....93 PERCENT.

WIND (20 FT).....LIGHT AND VARIABLE WINDS.

MIXING HEIGHT.....5000 FT AGL DECREASING TO 300 FT AGL.

TRANSPORT WINDS.....NORTHWEST 10 TO 15 MPH BECOMING SOUTHWEST 5 TO 10 MPH.

SMOKE DISPERSAL.....EXCELLENT (75000) DECREASING TO POOR (2500).

TIME (CDT)	7 PM	9 PM	11 PM	1 AM	3 AM	5 AM
TEMP.....	66	59	52	49	46	46
RH.....	43	52	71	80	89	93
20 FT WIND DIR..	N	W	W	SW	S	S
20 FT WIND SPD..	2	4	3	1	2	2
20 FT WIND GUST.		5				

.MONDAY...

SKY/WEATHER.....PARTLY SUNNY. PATCHY FOG EARLY IN THE MORNING.

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A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS THROUGH THE DAY. CHANCE OF PRECIPITATION 20 PERCENT.
MAX TEMPERATURE.....73-78.
MIN HUMIDITY.....48 PERCENT.
WIND (20 FT).....LIGHT WINDS BECOMING SOUTHWEST 3 TO 7 MPH. GUSTY AND ERRATIC WINDS EXPECTED NEAR THUNDERSTORMS.
MIXING HEIGHT.....300 FT AGL INCREASING TO 2500 FT AGL.
TRANSPORT WINDS.....SOUTHWEST 5 TO 10 MPH INCREASING TO 10 TO 15 MPH.
SMOKE DISPERSAL.....POOR (3000) INCREASING TO FAIR (25000).

Table with 7 columns: TIME (CDT), 7 AM, 9 AM, 11 AM, 1 PM, 3 PM, 5 PM. Rows include TEMP, RH, 20 FT WIND DIR, 20 FT WIND SPD, and 20 FT WIND GUST.

MINNESOTA FIRE WEATHER FORECAST

NATIONAL WEATHER SERVICE DULUTH, MN

304 PM CDT MON AUG 22 2011

.DISCUSSION...WARMER AND HUMID CONDITIONS WILL MAKE A RETURN TO THE NORTHLAND ON TUESDAY INTO EARLY WEDNESDAY BEFORE A COOLER AND WETTER PATTERN SETS UP ACROSS THE AREA FROM FRIDAY THROUGH MONDAY. BEST CHANCES FOR PRECIPITATION APPEAR TO BE ACROSS THE BRAINERD LAKES THROUGH THE HAYWARD LAKES CORRIDOR AFTER MIDNIGHT TONIGHT. A COLD FRONT MOVES THROUGH THE AREA IN THE PREDAWN HOURS ON WEDNESDAY SWITCHING WINDS FROM THE NORTHWEST. WINDS WILL INCREASE IN THE WAKE OF THE COLD FRONT AND GUSTS FROM THE NORTHWEST TO 30 MPH WILL BE POSSIBLE IN THE AFTERNOON ON WEDNESDAY. THURSDAY WILL BE DRY WITH SOUTHWESTERLY WINDS AHEAD OF THE NEXT WEATHER SYSTEM BEFORE A COUPLE OF UNSETTLED PERIODS BEGIN ON FRIDAY AND AGAIN ON SUNDAY.

ST. LOUIS...SUPERIOR NF WEST INCLUDING...AURORA...COOK...ELY

TONIGHT...
SKY/WEATHER.....PARTLY CLOUDY UNTIL 2400...THEN MOSTLY CLOUDY. A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS AFTER 2100 UNTIL 2400...THEN A CHANCE OF SHOWERS AND THUNDERSTORMS. CHANCE OF PRECIPITATION 50 PERCENT.
MIN TEMPERATURE.....61-66.
MAX HUMIDITY.....95-100 PERCENT.
20-FOOT WINDS.....SOUTH WINDS 7 TO 12 MPH DECREASING TO 3 TO 7 MPH LATE.
PRECIPITATION.....SCATTERED 0.05 TO 0.10 INCH AMOUNTS.

TUESDAY [Aug 23]

SKY/WEATHER.....PARTLY CLOUDY. A CHANCE OF SHOWERS AND THUNDERSTORMS UNTIL 1200...THEN A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS. CHANCE OF PRECIPITATION 40 PERCENT. [actual= 0 precip]

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MAX TEMPERATURE.....84-89. [actual= 82]
MIN HUMIDITY.....45-50 PERCENT. [actual= 47%]
20-FOOT WINDS.....SOUTHWEST WINDS 7 TO 12 MPH. [actual= 6 mph]
HAINES INDEX.....6 OR HIGH.
HOURS OF SUN.....7 HOURS.
PRECIPITATION.....SCATTERED TRACE TO 0.05 INCH AMOUNTS. [actual= 0 precip]
MIXING HEIGHT.....AROUND 4400 FT AGL (AVE 12-6 PM).
TRANSPORT WINDS.....WEST AROUND 17 MPH (AVE 12-6 PM).
SMOKE DISPERSAL.....AROUND 74000 OR EXCELLENT (AVE 12-6 PM).

TUESDAY NIGHT...
SKY/WEATHER.....PARTLY CLOUDY.
MIN TEMPERATURE.....59-64.
MAX HUMIDITY.....83-88 PERCENT.
20-FOOT WINDS.....WEST WINDS 6 TO 11 MPH.
PRECIPITATION.....NONE.

WEDNESDAY [Aug 24]
SKY/WEATHER.....PARTLY CLOUDY. A SLIGHT CHANCE OF RAIN SHOWERS.
CHANCE OF SHOWERS 20 PERCENT. [actual= 0 precip]
MAX TEMPERATURE.....73-78. [actual= 68]
MIN HUMIDITY.....40-45 PERCENT. [actual= 56]
20-FOOT WINDS.....BREEZY. WEST WINDS 10 TO 15 MPH INCREASING TO
16 TO 21 MPH. [actual= WNW 19 with gusts to 38; winds were
>10 mph from 0300-2100]
HAINES INDEX.....5 OR MODERATE.
HOURS OF SUN.....8 HOURS.
PRECIPITATION.....ISOLATED TRACE TO 0.05 INCH AMOUNTS. [actual= 0 precip]
MIXING HEIGHT.....AROUND 7900 FT AGL (AVE 12-6 PM).
TRANSPORT WINDS.....NORTHWEST AROUND 33 MPH (AVE 12-6 PM).
SMOKE DISPERSAL.....AROUND 265000 OR EXCELLENT (AVE 12-6 PM).

EXTENDED FORECAST...

.THURSDAY...MOSTLY SUNNY. HIGHS 75 TO 80. [actual= 82] WEST WINDS 4 TO 9 MPH.
[actual= 8 with gusts to 16]
.FRIDAY...MOSTLY CLOUDY. A CHANCE OF SHOWERS AND THUNDERSTORMS.
HIGHS 75 TO 80. [actual= 82] SOUTHWEST WINDS 3 TO 8 MPH BECOMING WEST IN THE
AFTERNOON. [actual= southerly shifting to west, 15 with gusts to 28] CHANCE OF
PRECIPITATION 30 PERCENT. [actual= 0 precip]Note: actual low RH of 18%
.SATURDAY...MOSTLY SUNNY. HIGHS 70 TO 75. NORTHWEST WINDS 3 TO
7 MPH BECOMING NORTH IN THE AFTERNOON.

MINNESOTA FIRE WEATHER FORECAST **NATIONAL WEATHER SERVICE DULUTH, MN** **300 PM CDT TUE AUG 23 2011**

.DISCUSSION... A COLD FRONT WILL TRACK EASTWARD ACROSS THE
NORTHLAND TONIGHT...CAUSING SOUTHWEST WINDS TO SHIFT OUT OF THE
NORTHWEST. THERE IS A SMALL CHANCE OF SHOWERS AND THUNDERSTORMS
ACROSS THE ARROWHEAD OF MINNESOTA AND NORTHWEST WISCONSIN THIS
EVENING IN ASSOCIATION WITH THE FRONT...BUT MOST OF THE FORECAST
AREA SHOW BE MAINLY DRY TONIGHT. HIGH PRESSURE WILL THEN BUILD
OVER THE MIDWEST WEDNESDAY AND BRING DRY AND SEASONABLY WARM
CONDITIONS TO THE REGION THROUGH THURSDAY. BECAUSE OF A STRONG

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PRESSURE GRADIENT AND STRONG MIXING OVER THE NORTHLAND ON WEDNESDAY...WINDY AND GUSTY CONDITIONS ARE EXPECTED WEDNESDAY AND WEDNESDAY EVENING. ANOTHER COLD FRONT IS EXPECTED TO AFFECT THE AREA THURSDAY NIGHT AND FRIDAY.

ST. LOUIS...SUPERIOR NF WEST INCLUDING...AURORA...COOK...ELY .TONIGHT...

SKY/WEATHER.....PARTLY CLOUDY.

MIN TEMPERATURE.....57-62.

MAX HUMIDITY.....90-95 PERCENT.

20-FOOT WINDS.....SOUTHWEST WINDS 4 TO 9 MPH BECOMING WEST 6 TO 11 MPH AFTER MIDNIGHT.

PRECIPITATION.....NONE.

.WEDNESDAY [AUGUST 24]

SKY/WEATHER.....PARTLY SUNNY. A SLIGHT CHANCE OF RAIN SHOWERS UNTIL 1200...THEN A CHANCE OF RAIN SHOWERS.

CHANCE OF SHOWERS 30 PERCENT. **actual= 0 precip]**

MAX TEMPERATURE.....72-77. **actual= 68]**

MIN HUMIDITY.....40-45 PERCENT. **actual= 56%]**

20-FOOT WINDS.....BREEZY. NORTHWEST WINDS 16 TO 21 MPH. **actual= 19 with gusts to 38]**

HAINES INDEX.....5 OR MODERATE.

HOURS OF SUN.....7 HOURS.

PRECIPITATION.....SCATTERED TRACE TO 0.05 INCH AMOUNTS. **actual= 0 precip]**

MIXING HEIGHT.....AROUND 6600 FT AGL (AVE 12-6 PM).

TRANSPORT WINDS.....NORTHWEST AROUND 35 MPH (AVE 12-6 PM).

SMOKE DISPERSAL.....AROUND 233000 OR EXCELLENT (AVE 12-6 PM).

.WEDNESDAY NIGHT...

SKY/WEATHER.....PARTLY CLOUDY.

MIN TEMPERATURE.....46-51.

MAX HUMIDITY.....95-100 PERCENT.

20-FOOT WINDS.....NORTHWEST WINDS 10 TO 15 MPH BECOMING WEST 3 TO 7 MPH.

PRECIPITATION.....NONE.

.THURSDAY [AUGUST 25]

SKY/WEATHER.....MOSTLY SUNNY.

MAX TEMPERATURE.....76-81. **actual= 82]**

MIN HUMIDITY.....40-45 PERCENT. **actual= 35%]**

20-FOOT WINDS.....WEST WINDS 3 TO 7 MPH. **actual= 8 with gusts to 16]**

HAINES INDEX.....4 OR LOW.

HOURS OF SUN.....12 HOURS.

PRECIPITATION.....NONE.

MIXING HEIGHT.....AROUND 5000 FT AGL (AVE 12-6 PM).

TRANSPORT WINDS.....WEST AROUND 9 MPH (AVE 12-6 PM).

SMOKE DISPERSAL.....AROUND 43000 OR GOOD (AVE 12-6 PM).

MINNESOTA FIRE WEATHER FORECAST

NATIONAL WEATHER SERVICE DULUTH, MN

317 PM CDT WED **AUG 24 2011**

.DISCUSSION... GUSTY WINDS WILL DECREASE THIS EVENING AS A STRONG LOW PRESSURE SYSTEM MOVES WELL EAST OF THE REGION. HIGH PRESSURE WILL BUILD INTO THE AREA LATE TONIGHT AND EARLY TUESDAY. A FRONTAL SYSTEM WILL APPROACH THURSDAY NIGHT...WITH CLOUDS AND SOUTHERLY WINDS INCREASING. SHOWERS AND THUNDERSTORMS ARE POSSIBLE FRIDAY AS THE FRONT MOVES ACROSS THE NORTHLAND. WINDS WILL SHIFT INTO THE NORTHWEST BY LATE FRIDAY IN MOST LOCATIONS. DRY WEATHER IS

ST. LOUIS...SUPERIOR NF WEST
INCLUDING...AURORA...COOK...ELY

.TONIGHT...
SKY/WEATHER.....MOSTLY CLOUDY UNTIL 2100...THEN PARTLY CLOUDY
UNTIL 0300...THEN MOSTLY CLEAR.
MIN TEMPERATURE.....50-55.
MAX HUMIDITY.....85-90 PERCENT.
20-FOOT WINDS.....NORTHWEST WINDS 7 TO 12 MPH DECREASING TO 3 TO
7 MPH.
PRECIPITATION.....NONE.

THURSDAY [August 25]
SKY/WEATHER.....MOSTLY SUNNY.
MAX TEMPERATURE.....76-81. **actual= 82]**
MIN HUMIDITY.....40-45 PERCENT. **actual= 35%]**
20-FOOT WINDS.....WEST WINDS 3 TO 7 MPH. **actual= west winds 8 with gusts to
16]**
HAINES INDEX.....4 OR LOW.
HOURS OF SUN.....11 HOURS.
PRECIPITATION.....NONE.
MIXING HEIGHT.....AROUND 4200 FT AGL (AVE 12-6 PM).
TRANSPORT WINDS.....WEST AROUND 8 MPH (AVE 12-6 PM).
SMOKE DISPERSAL.....AROUND 34000 OR GOOD (AVE 12-6 PM).

.THURSDAY NIGHT...
SKY/WEATHER.....PARTLY CLOUDY. A CHANCE OF SHOWERS AND
THUNDERSTORMS AFTER 2400. CHANCE OF
PRECIPITATION 30 PERCENT.
MIN TEMPERATURE.....54-59.
MAX HUMIDITY.....90-95 PERCENT.
20-FOOT WINDS.....SOUTHWEST WINDS 4 TO 9 MPH.
PRECIPITATION.....SCATTERED TRACE TO 0.05 INCH AMOUNTS.

FRIDAY [August 26]
SKY/WEATHER.....PARTLY CLOUDY UNTIL 1500...THEN MOSTLY SUNNY. A
CHANCE OF SHOWERS AND THUNDERSTORMS UNTIL 1200.
CHANCE OF PRECIPITATION 30 PERCENT.
MAX TEMPERATURE.....71-76. **actual= 82]**
MIN HUMIDITY.....47-52 PERCENT. **actual= 18%]**

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20-FOOT WINDS.....WEST WINDS 5 TO 10 MPH INCREASING TO NORTHWEST
11 TO 16 MPH. **actual= NW at 15 with gusts to 28]**
HAINES INDEX.....4 OR LOW.
HOURS OF SUN.....8 HOURS.
PRECIPITATION.....SCATTERED TRACE TO 0.05 INCH AMOUNTS. **actual= 0 precip]**
MIXING HEIGHT.....AROUND 5400 FT AGL (AVE 12-6 PM).
TRANSPORT WINDS.....NORTHWEST AROUND 22 MPH (AVE 12-6 PM).
SMOKE DISPERSAL.....AROUND 121000 OR EXCELLENT (AVE 12-6 PM).

MINNESOTA FIRE WEATHER FORECAST

NATIONAL WEATHER SERVICE DULUTH, MN

259 PM CDT THU **AUG 25 2011**

.DISCUSSION... A COLD FRONT WILL MOVE FROM THE DAKOTAS INTO NORTHWEST MINNESOTA BY EARLY FRIDAY. INCREASING SOUTH AND SOUTHWEST WINDS WILL OCCUR AHEAD OF THE FRONT AFTER MIDNIGHT. A FEW SHOWERS OR THUNDERSTORMS MAY DEVELOP NEAR THE FRONT AS IT MOVES ACROSS THE STATE TOMORROW. THE MOST LIKELY AREA TO RECEIVE PRECIPITATION WILL BE THE BORDERLAND AND THE ARROWHEAD OF MINNESOTA. THE FRONTAL SYSTEM WILL MOVE OUT OF THE REGION BY FRIDAY EVENING WITH NORTHWEST WINDS SPREADING ACROSS THE NORTHLAND. HIGH PRESSURE WILL GIVE A QUIET DAY SATURDAY

ST. LOUIS...SUPERIOR NF WEST INCLUDING...AURORA...COOK...ELY

TONIGHT...
SKY/WEATHER.....PARTLY CLOUDY UNTIL 0300...THEN MOSTLY CLOUDY.
A CHANCE OF SHOWERS AND THUNDERSTORMS AFTER
2400. CHANCE OF PRECIPITATION 30 PERCENT.
MIN TEMPERATURE.....57-62.
MAX HUMIDITY.....88-93 PERCENT.
20-FOOT WINDS.....SOUTH WINDS 4 TO 9 MPH.
PRECIPITATION.....SCATTERED 0.05 TO 0.10 INCH AMOUNTS.

FRIDAY [August 26]

SKY/WEATHER.....PARTLY CLOUDY. A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS UNTIL 1200. CHANCE OF PRECIPITATION 20 PERCENT. **actual= 0 precip]**
MAX TEMPERATURE.....72-77. **actual= 82]**
MIN HUMIDITY.....45-50 PERCENT. **actual= 18%]**
20-FOOT WINDS.....SOUTHWEST WINDS 4 TO 9 MPH BECOMING WEST 6 TO 11 MPH IN THE MORNING...THEN INCREASING TO NORTHWEST 11 TO 16 MPH IN THE AFTERNOON. **actual= NW winds at 15 with gusts to 28]**
HAINES INDEX.....5 OR MODERATE.
HOURS OF SUN.....7 HOURS.
PRECIPITATION.....ISOLATED TRACE TO 0.05 INCH AMOUNTS. **actual= 0 precip]**
MIXING HEIGHT.....AROUND 5200 FT AGL (AVE 12-6 PM).
TRANSPORT WINDS.....NORTHWEST AROUND 23 MPH (AVE 12-6 PM).
SMOKE DISPERSAL.....AROUND 120000 OR EXCELLENT (AVE 12-6 PM).

.FRIDAY NIGHT...

SKY/WEATHER.....MOSTLY CLEAR.
MIN TEMPERATURE.....45-50.
MAX HUMIDITY.....90-95 PERCENT.

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20-FOOT WINDS.....NORTHWEST WINDS 6 TO 11 MPH DECREASING TO
 AROUND 5 MPH.
 PRECIPITATION.....NONE.

. SATURDAY...
 SKY/WEATHER.....MOSTLY SUNNY.
 MAX TEMPERATURE.....69-74.
 MIN HUMIDITY.....42-47 PERCENT.
 20-FOOT WINDS.....NORTHWEST WINDS 3 TO 7 MPH.
 HAINES INDEX.....4 OR LOW.
 HOURS OF SUN.....10 HOURS.
 PRECIPITATION.....NONE.
 MIXING HEIGHT.....AROUND 5300 FT AGL (AVE 12-6 PM).
 TRANSPORT WINDS.....NORTHWEST AROUND 9 MPH (AVE 12-6 PM).
 SMOKE DISPERSAL.....AROUND 50000 OR GOOD (AVE 12-6 PM).

EXTENDED FORECAST...

. SUNDAY...PARTLY SUNNY. A CHANCE OF SHOWERS AND THUNDERSTORMS.
 HIGHS 70 TO 75. NORTHWEST WINDS 3 TO 6 MPH BECOMING EAST 3 TO
 7 MPH IN THE AFTERNOON. CHANCE OF PRECIPITATION 40 PERCENT.
 . MONDAY...PARTLY CLOUDY. A SLIGHT CHANCE OF RAIN SHOWERS. HIGHS
 65 TO 70. NORTH WINDS 4 TO 9 MPH. CHANCE OF SHOWERS 20 PERCENT.
 . TUESDAY...PARTLY CLOUDY. HIGHS 65 TO 70. SOUTH WINDS 5 TO
 10 MPH.

Actual Weather observations at Fernberg RAWS from August 21-25, 2011.

Date/Time	Temp	RH	Windspeed	Wind Gust	Wind Direction
8-25-2011 23:13 CDT	63	78	4	7	184
8-25-2011 22:13 CDT	65	70	4	8	177
8-25-2011 21:13 CDT	67	62	3	8	189
8-25-2011 20:13 CDT	70	54	3	6	229
8-25-2011 19:13 CDT	76	44	2	9	232
8-25-2011 18:13 CDT	80	36	6	13	287
8-25-2011 17:13 CDT	81	35	5	12	241
8-25-2011 16:13 CDT	82	35	4	13	250
8-25-2011 15:13 CDT	80	40	7	14	297
8-25-2011 14:13 CDT	80	40	8	16	289
8-25-2011 13:13 CDT	79	45	5	14	288
8-25-2011 11:13 CDT	74	53	7	13	311
8-25-2011 10:13 CDT	70	61	6	10	300
8-25-2011 9:13 CDT	67	75	4	6	305
8-25-2011 8:13 CDT	62	90	0	0	
8-25-2011 7:13 CDT	58	95	0	0	
8-25-2011 6:13 CDT	56	96	0	0	
8-25-2011 5:13 CDT	56	97	0	0	
8-25-2011 4:13 CDT	57	96	0	0	
8-25-2011 3:13 CDT	57	96	0	0	
8-25-2011 2:13 CDT	58	95	0	0	
8-25-2011 1:13 CDT	58	94	0	0	

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8-25-2011 0:13 CDT	59	89	0	0	
8-24-2011 23:13 CDT	61	86	0	0	
8-24-2011 22:13 CDT	62	87	0	13	315
8-24-2011 21:13 CDT	62	83	11	18	314
8-24-2011 20:13 CDT	64	79	12	21	314
8-24-2011 19:13 CDT	64	84	10	31	325
8-24-2011 18:13 CDT	66	72	12	26	313
8-24-2011 17:13 CDT	66	72	18	29	312
8-24-2011 16:13 CDT	65	73	17	35	311
8-24-2011 15:13 CDT	66	70	18	34	306
8-24-2011 14:13 CDT	64	72	18	34	309
8-24-2011 13:13 CDT	65	67	14	28	303
8-24-2011 12:13 CDT	65	61	19	38	298
8-24-2011 11:13 CDT	68	56	15	30	296
8-24-2011 10:13 CDT	67	58	13	28	293
8-24-2011 9:13 CDT	68	58	12	23	292
8-24-2011 8:13 CDT	66	63	12	23	297
8-24-2011 7:13 CDT	63	67	14	26	294
8-24-2011 6:13 CDT	64	66	14	30	298
8-24-2011 5:13 CDT	68	63	13	25	294
8-24-2011 4:13 CDT	71	58	13	23	294
8-24-2011 3:13 CDT	73	59	12	21	289
8-24-2011 2:13 CDT	71	85	6	15	268
8-24-2011 1:13 CDT	72	89	6	18	237
8-24-2011 0:13 CDT	72	85	6	14	201
8-23-2011 23:13 CDT	71	84	7	16	196
8-23-2011 22:13 CDT	69	82	6	14	187
8-23-2011 21:13 CDT	69	75	6	11	179
8-23-2011 20:13 CDT	71	64	4	9	181
8-23-2011 19:13 CDT	75	56	5	10	224
8-23-2011 18:13 CDT	76	53	5	12	233
8-23-2011 17:13 CDT	80	47	5	13	219
8-23-2011 16:13 CDT	78	52	5	12	186
8-23-2011 15:13 CDT	77	54	5	12	215
8-23-2011 14:13 CDT	78	55	6	12	273
8-23-2011 13:13 CDT	78	60	4	15	248
8-23-2011 12:13 CDT	80	58	5	14	254
8-23-2011 11:13 CDT	82	60	4	11	203
8-23-2011 10:13 CDT	74	79	4	11	236
8-23-2011 9:13 CDT	72	83	5	10	184
8-23-2011 8:13 CDT	69	86	6	12	177
8-23-2011 7:13 CDT	67	87	5	10	175
8-23-2011 6:13 CDT	65	91	5	11	167
8-23-2011 5:13 CDT	65	87	5	10	181
8-23-2011 4:13 CDT	65	82	6	9	177
8-23-2011 3:13 CDT	65	80	4	10	176
8-23-2011 2:13 CDT	64	81	5	8	167
8-23-2011 1:13 CDT	63	80	4	7	170
8-23-2011 0:13 CDT	64	75	5	10	172
8-22-2011 23:13 CDT	65	70	5	8	175

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8-22-2011 22:13 CDT	67	66	5	11	191
8-22-2011 21:13 CDT	68	58	4	7	185
8-22-2011 20:13 CDT	71	50	3	13	190
8-22-2011 19:13 CDT	77	42	5	15	236
8-22-2011 18:13 CDT	81	34	5	16	252
8-22-2011 17:13 CDT	82	32	8	23	266
8-22-2011 16:13 CDT	83	31	9	21	268
8-22-2011 15:13 CDT	84	33	7	16	266
8-22-2011 14:13 CDT	82	35	6	14	221
8-22-2011 13:13 CDT	80	38	6	15	192
8-22-2011 12:13 CDT	78	37	7	15	200
8-22-2011 11:13 CDT	72	48	5	10	214
8-22-2011 10:13 CDT	69	55	5	10	202
8-22-2011 9:13 CDT	58	74	5	8	174
8-22-2011 8:13 CDT	55	83	0	0	
8-22-2011 7:13 CDT	54	79	0	0	
8-22-2011 6:13 CDT	53	81	0	0	
8-22-2011 5:13 CDT	53	77	0	0	
8-22-2011 4:13 CDT	52	80	0	5	186
8-22-2011 3:13 CDT	52	83	3	6	187
8-22-2011 2:13 CDT	52	82	3	6	208
8-22-2011 1:13 CDT	54	76	2	7	208
8-22-2011 0:13 CDT	57	64	4	7	284
8-21-2011 23:13 CDT	56	67	4	7	291
8-21-2011 22:13 CDT	57	62	4	7	297
8-21-2011 21:13 CDT	57	61	5	7	303
8-21-2011 20:13 CDT	59	54	4	13	309
8-21-2011 19:13 CDT	64	44	9	15	319
8-21-2011 18:13 CDT	65	46	12	23	327
8-21-2011 17:13 CDT	70	31	10	20	311
8-21-2011 16:13 CDT	71	33	10	18	312
8-21-2011 15:13 CDT	70	38	9	15	318
8-21-2011 14:13 CDT	68	43	5	15	315
8-21-2011 13:13 CDT	70	41	7	15	329
8-21-2011 12:13 CDT	66	52	7	13	310
8-21-2011 11:13 CDT	62	62	5	9	303
8-21-2011 10:13 CDT	60	78	3	7	335
8-21-2011 9:13 CDT	55	91	4	8	316
8-21-2011 8:13 CDT	51	96	0	0	
8-21-2011 7:13 CDT	49	96	0	0	
8-21-2011 6:13 CDT	47	96	0	0	
8-21-2011 5:13 CDT	47	96	0	0	
8-21-2011 4:13 CDT	48	95	0	0	
8-21-2011 3:13 CDT	49	92	0	0	
8-21-2011 2:13 CDT	51	93	0	0	
8-21-2011 1:13 CDT	50	95	0	0	
8-21-2011 0:13 CDT	50	95	0	0	

Appendix B – Conditions From August 21-25, 2011

The key weather factors which led to the 1 ½ mile run on August 26 was the very low relative humidity of 18% (the low forecasted was 45-50%) coupled with strong winds (peaked at 15 mph at 1600) which were sustained for several hours (were > 10 mph for 9 hours that day).