

Red Flag Event Summary – NWS Duluth

2015 April 13th

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Synopsis:

The fire weather season continues to be active heading into the middle of April. Afternoon temperatures topped out in the mid 50's and low 60's, which is 10 to 20 degrees above normal for this time of year. The Drought Monitor produced by the U.S. Department of Agriculture on April 7th, 2015 depicted the majority of Minnesota and the northern half of Wisconsin in a Moderate Drought status (Figure 1).

The previous evening, on April 12th, a cold front swept over the Northland and brought much needed rainfall to many areas. Amounts range from generally 0.10 to 0.5 inches over far northeast Minnesota, to 0.10 to 2.0 inches across portions of northwest Wisconsin (Figure 1).

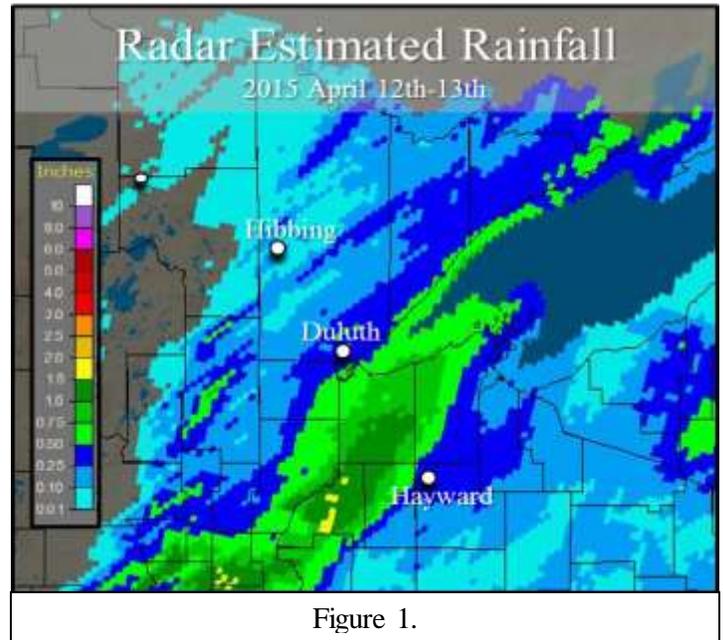


Figure 1.

Weather:

This Red Flag Warning was issued in coordination with the Minnesota Land Managers for low relative humidity and strong westerly winds. Minimum relative humidity values on Monday the 13th ranged from the mid-teens to the mid-20s, along with frequent wind gusts of 25 to 30 mph.

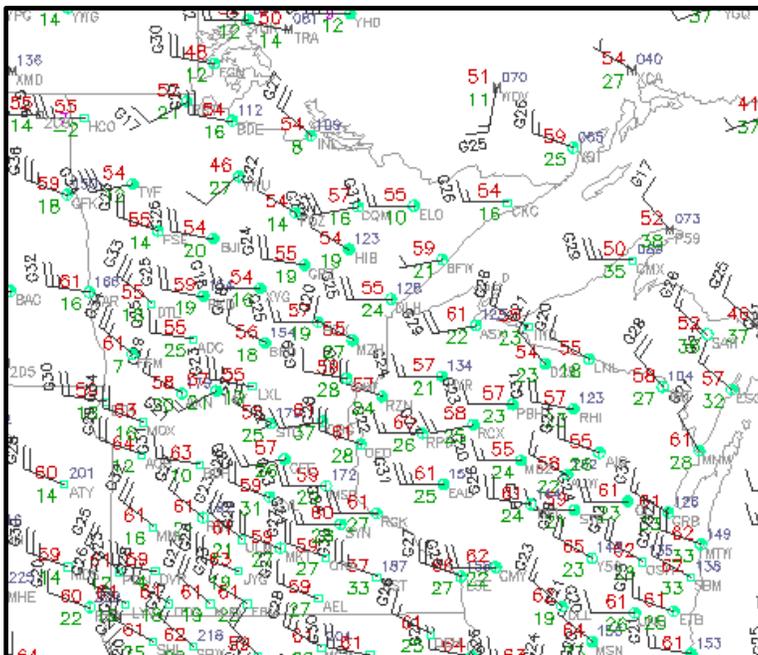


Figure 2

An unstable and dry air mass moved over the region on Monday in the wake of the cold front. Figure 2 is a surface plot of weather conditions at 1300 L on the 13th, showing the breezy westerly winds and low dew points (values in green) across Minnesota and Wisconsin.

The 00Z upper air sounding at International Falls, MN (Figure 3.) depicts the deep mixed layer to nearly 9000 ft. This ample mixing of the lower atmosphere brought the strong winds and dry air from aloft to the surface through the afternoon. The combination of dry and unstable air also produced a Haines Index of 6, or extreme, across the Western Great Lakes.

NWS Services:

- Critical Fire Weather conditions were highlighted in the Hazardous Weather Outlook and Fire Weather Planning Forecast.
- A Fire Weather Watch was issued at 130 PM on Sunday April 12th, for all of Northeast Minnesota.
- A Fire Weather Watch was issued at 514 pm on Sunday April 12th, for Bayfield, Douglas, Burnett, Washburn and Sawyer counties in Northwest Wisconsin.
- The watch was upgraded to a Red Flag Warning at 459 am Monday morning, April 13th for all of Northeast Minnesota.
- It was decided that the Northwest Wisconsin counties did not need a Red Flag Warning due to rainfall from the night before.
- The Weather Story Graphic produced the morning of April 13th highlighted the Critical Fire Weather Conditions.

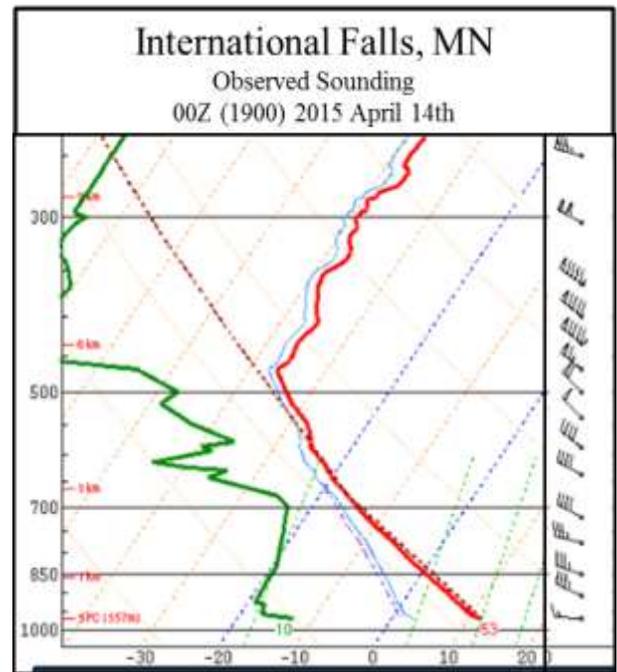


Figure 3

Fire Reports:

- According to MNICS, on April 13th the Northeast Region of MN had 6 fires for 14 acres. Mostly which was due to the Hwy 65 fire near Littlefork. The Central Region of MN reported 3 fires for 30 acres and the Chippewa NF reported 5 new fires for 5 acres.

Red Flag warning Verification:

April 13th, 2015

of Warnings Issued: 15
 # of Warning Verified: 15
 POD: 75%
 FAR: 0.00
 Ave Lead Time: 8.8 hours

2015	Red Flag Watch		Red Flag Warning			Verification						Observations				
	Date(s)	Issued	Zones	Time Issued	Zones	Valid Time	Time	Lead Time	Site	RH	Temp	Wind	Max T	Min RH	Max SUS	Max Gust
April 13 th	04/12 1330	10		04/13 0459	10	1300-2000	1208	7:09	LITM5	14%	55	17 G28	55	13%	18	36
	04/12 1330	11		04/13 0459	11	1300-2000	1304	8:05	MEAM5	20%	55	8 G25	55	16%	10	37
	04/12 1330	12		04/13 0459	12	1300-2000	1304	8:05	SEAM5	24%	55	14 G30	55	14%	18	36
	04/12 1330	20		04/13 0459	20	1300-2000	1414	9:15	KBFW	24%	57	14 G33	61	16%	14	33
	04/12 1330	21		04/13 0459	21	1300-2000	1344	8:45	TS546	22%	57	12 G27	58	15%	12	28
	04/12 1330	19		04/13 0459	19	1300-2000	1407	9:08	HIBM5	21%	54	19 G32	54	18%	20	42
	04/12 1330	37		04/13 0459	37	1300-2000	1308	8:09	MZHM5	25%	57	16 G25	59	14%	19	29
	04/12 1330	18		04/13 0459	18	1300-2000	1207	7:08	EFFM5	21%	56	14 G26	56	16%	22	39
	04/12 1330	26		04/13 0459	26	1300-2000	1407	9:08	HCYM5	25%	57	11 G26	59	17%	12	27
	04/12 1330	25		04/13 0459	25	1300-2000	1401	9:02	CASM5	20%	57	17 G28	57	13%	17	31
	04/12 1330	33		04/13 0459	33	1300-2000	1614	11:15	KPWC	23%	57	13 G27	57	22%	16	32
	04/12 1330	34		04/13 0459	34	1300-2000	1306	8:07	BIRM5	20%	59	16 G32	61	14%	20	36
	04/12 1330	35		04/13 0459	35	1300-2000	1711	12:12	MN051	25%	57	12 G30	60	25%	19	37
	04/12 1330	36		04/13 0459	36	1300-2000	1352	8:53	RLKM5	20%	57	19 G30	59	13%	19	35
	04/12 1330	38		04/13 0459	38	1300-2000	1315	8:16	SCXM5	25%	60	12 G26	61	15%	15	30
	04/12 1814	2			2		1502	0:00	WSHW3	23%	59	15 G28	59	23%	15	31
	04/12 1814	3			3		1253	0:00	KASX	22%	61	19 G30	63	22%	21	36
	04/12 1814	6			6		1330	0:00	KRZN	25%	59	22 G29	60	18%	22	32
04/12 1814	7			7		1803	0:00	MRZW3	22%	59	15 G30	59	20%	16	33	
04/12 1814	8			8		1253	0:00	KHYR	24%	57	15 G25	59	21%	15	26	

Yellow colored cells denote weather conditions within NWS Red Flag Criteria with no RFW in effect.

(Fuel conditions, rainfall, are not considered in this table.)