

Red Flag Event Summary – NWS Duluth

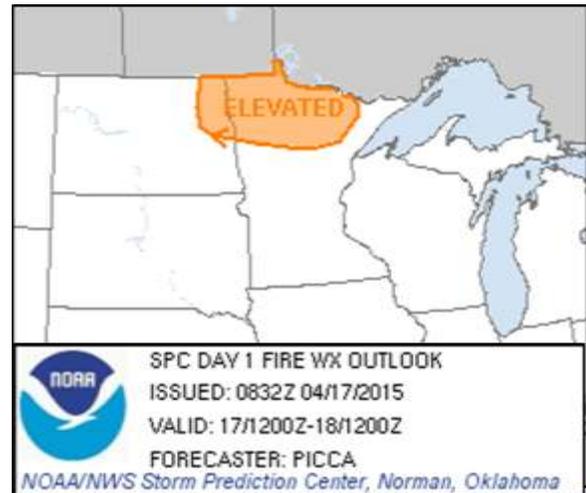
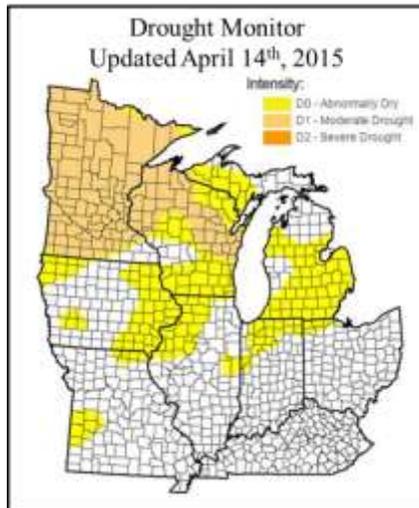
2015 April 17th

Amanda Graning, Fire Weather Program Leader

Synopsis:

In coordination with the MN Department of Natural Resources, the NWS office in Duluth, MN issued a Red Flag Warning the morning of Friday April 17th for the borderland region of Minnesota. The warning was issued for a combination of well above normal temperatures, low relative humidity, and gusty winds.

Since March 1st, the International Falls, MN Airport (KINL) has recorded just 0.90 inches of precipitation. This is nearly half of normal amount of precipitation for this time period. April 2015 has proved to not only be dry, but also warm. The past week has brought temperatures on the order of 15 to 20 degrees above normal and very low relative humidity values of generally 15 to 20%. So far this As of April 17th, the KINL airport has reported 7 days with temperatures above 65 F and 3 days with readings over 70 F.



Weather:

A cold front was positioned in southern Canada with high pressure analyzed across the Northland the morning of Friday, April 17th (Figure 1). The front pushed south and east through the day, passing over northern Minnesota by the late afternoon.

Ahead of the frontal passage was a very dry and warm air mass. Afternoon temperatures were able to once again climb in to the 60s to lower 70s on this day, as RH values dropped into the teens across the forecast area. However, the gusty winds around 30 mph were confined to locations near the cold front; including portions of the Chippewa National Forest, Pine Island State Forest and the western section of the Superior National Forest.

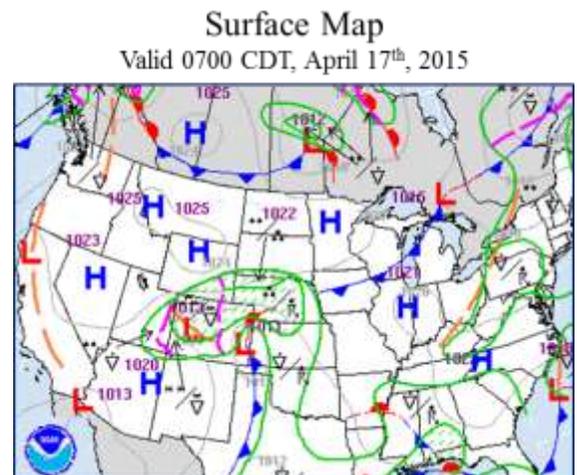


Figure 1

The observed evening sounding at International Falls, MN (Figure 3) depicts the deep mixed boundary layer to nearly 8000 ft with unstable lapse rates and winds of 30 to 40 kt.

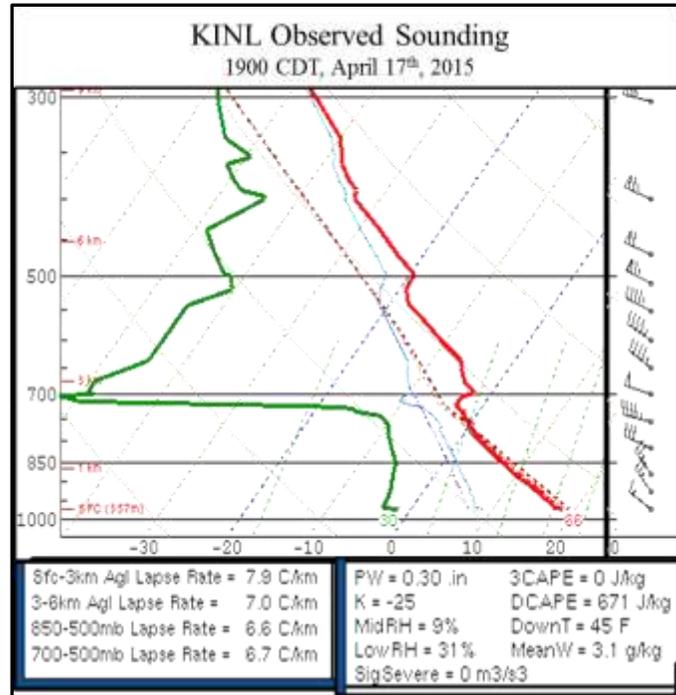


Figure 2

NWS Services:

- Critical Fire Weather conditions were highlighted in the Hazardous Weather Outlook and Fire Weather Planning Forecast.
- No Watch was issued for this event.
- The Red Flag Warning was issued at 645 am Friday morning, April 17th.
- A Fire Danger Monitoring Webpage was linked in the Top News of the Day Section on the Duluth NWS Home Page.
- The critical fire weather conditions were posted on social media.

Red Flag warning Verification:

April 15th, 2015	
# of Warnings Issued:	2
# of Warning Verified:	2
# of Zones Missed:	2
POD:	50%
FAR:	0%
Ave Lead Time:	6.6 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 17th				04/15 0645	10	1200-2000	1308	6:23	LITM5	18%	66	14 G26	72	16%	17	33
				04/15 0645	11	1200-2000	1333	6:48	ORRM5	13%	68	11 G27	72	11%	16	30
							1504		SEAM5	18%	69	11G25	69	17%	16	28
							1304		EFFM5	18%	66	13 G25	71	16%	17	29

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.)