

Red Flag Event Summary – National Weather Service Duluth

April 22nd, 2018

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Synopsis:

In coordination with the Minnesota Department of Natural Resources, the National Weather Service (NWS) office in Duluth, MN issued a Fire Weather Watch (Figure 1) for Koochiching and northern Itasca during the afternoon of April 21st. The watch area was upgraded to a Red Flag Warning (Figure 1) on the morning of Sunday, April 22nd per the request of the Minnesota Department of Natural Resources. The warning was issued due to the combination of gusty southwesterly wind and critically low relative humidity.

The Drought Monitor (Figure 2) updated on April 17th, shows that portions of north-central Minnesota were under the Abnormally Dry status a few days before the event, with much of the western half of Koochiching County under the Moderate Drought status. On April 22nd much of the northern two-thirds of the state had Restricted Burning (Figure 3), including Koochiching and northern Itasca counties.

Weather:

On April 22nd, the Upper Mississippi River Valley was situated between a cold front stretching from Manitoba through the Dakotas, and high pressure building across the Central Great Lakes (Figure 4). There was not too much of a change in the position of these features between 10 AM and 4 PM, however the cold front slid a bit further east across North Dakota. Ahead of the front, gusty winds developed generally out of the south southwest with sustained winds of 5 to 10 mph with gusts of 20 to 25 mph. Relative humidity values ranged from 20 to 30% within the warned area, with values between 15 to 35% across the rest of northeast Minnesota. Maximum temperatures topped out in the low to mid 60s across inland locations while along the Lake Superior Shoreline values ranged from the mid 40s to the 50s. *Despite these conditions, the Red Flag Warnings did not verify as the 25 mph gusts did not coincide with the counties under the warning.*

NWS Services:

- Critical Fire Weather conditions were highlighted in the Hazardous Weather Outlook, Fire Weather Planning Forecast, and on Social Media.
- Part of the Duluth County Warning Area was in the Elevated category of the morning issuance of the SPC Day 1 Fire Weather Outlook.

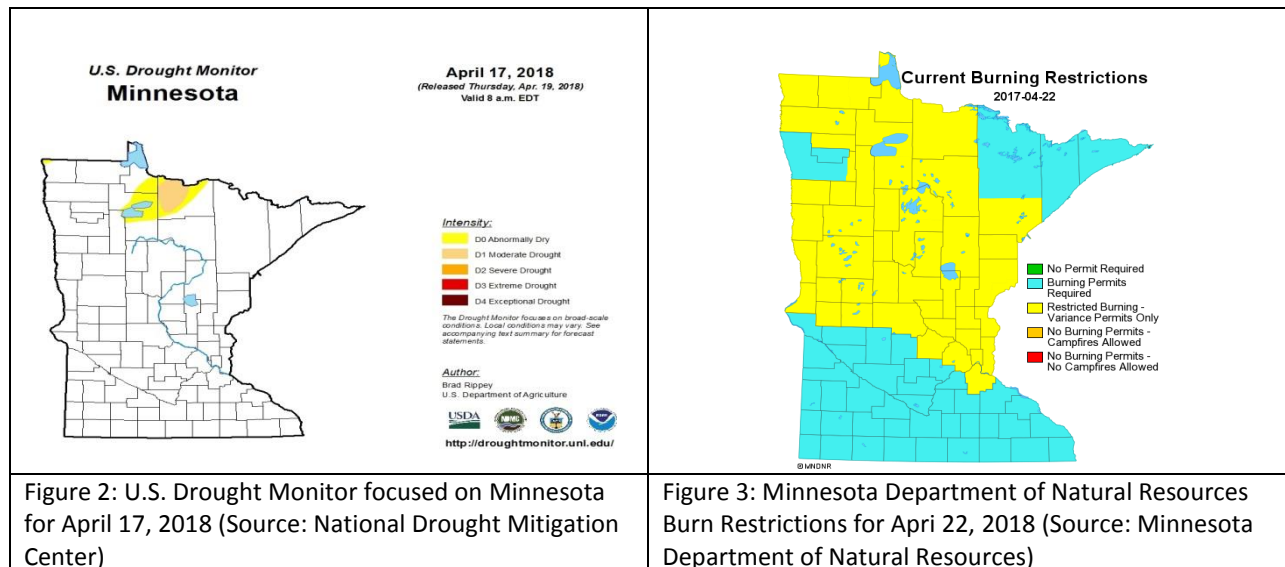
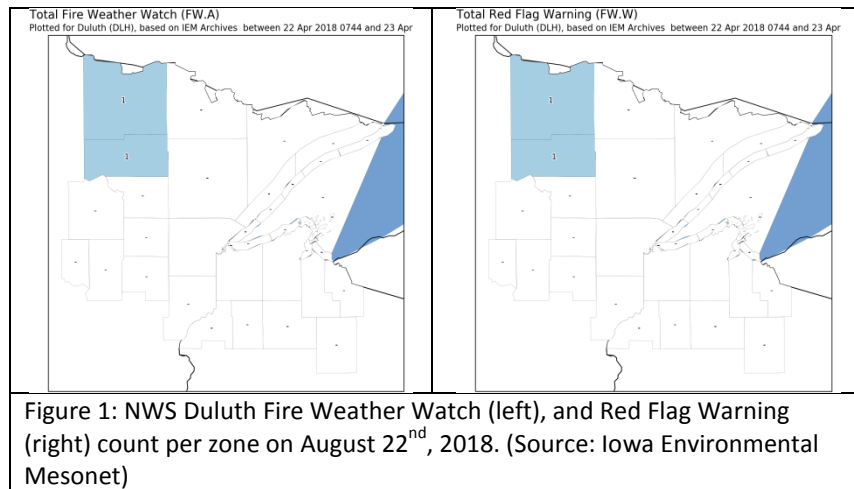
Fires:

The Minnesota Incident Command Center (MNICS) reported 44 wildfires since the beginning of 2018 on the first MNICS call on April 24th.

Red Flag Warning, Weather Verification:

Date:	April 22, 2018
Number of Watches Issued:	2
Number of Warnings Issued:	2
Number of Warnings Verified:	0
Number of Misses:	2
Probability of Detection (POD):	0%
False Alarm Ratio (FAR):	100%
Average Lead Time:	N/A

Figures:



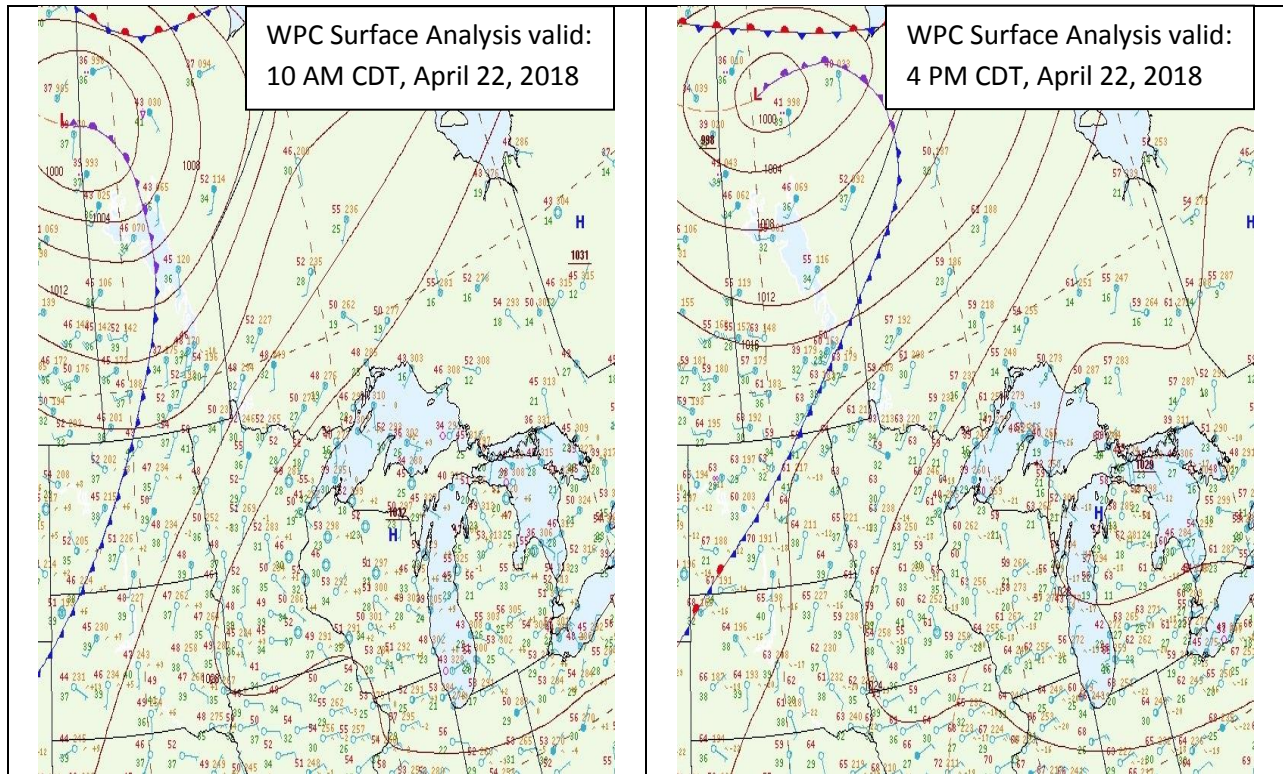


Figure 4: NOAA Weather Prediction Center (WPC) surface analysis valid for April 22, 2018 at 10 AM CDT (left), and 4 PM CDT (right).