

FIRE ENVIRONMENT FORECAST

FORECAST NUMBER: 51

TYPE OF FIRE: Initial Attack

FIRE NAME: MNICS Statewide Forecast

OPERATIONAL PERIOD: 11/1 – 11/4

DATE ISSUED: 11/1/22

TIME ISSUED: 0900

UNIT: MN-MNCC

SIGNED: Travis Verdegan

Typed/printed: Travis Verdegan

INPUTS

WEATHER SUMMARY:

Precip over the last week has been minimal across the state with most of it having occurred early last week. The last few days have been dominated by warm temps, low humidity, and clear skies.

Today and tomorrow expect clear skies to continue to dominate before chances for precip start to build later in the week.

Temps are forecast to peak in the 60s and 70s through the middle of week then by the week's end a cooling pattern may keep highs in the 30s and 40s.

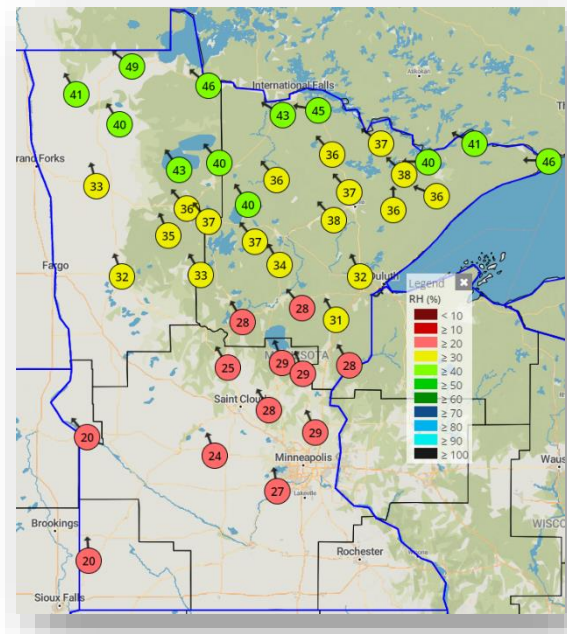
Southerly flow will stick around till the end of the week with notably strong winds forecast for tomorrow with sustained values in high teens to 20s and gusts up near 40 mph in some parts of the state.

RH minimums are forecast to be in the 20s and 30s today with some teens likely. Starting tomorrow values are expected to be on the rise and be in the 40s and 50s.

Some longer-term relief may be instore by the weekend or early next week.

Haines Index: 5 – 6

Figure 1 - Forecasted 1500 RH 11/01/22



OUTPUTS

FIRE ENVIRONMENT

GENERAL:

A continuation of the dry pattern we've been in, albeit with some widespread light precip early last week, has kept fire activity steady and trending back upward over the last week.

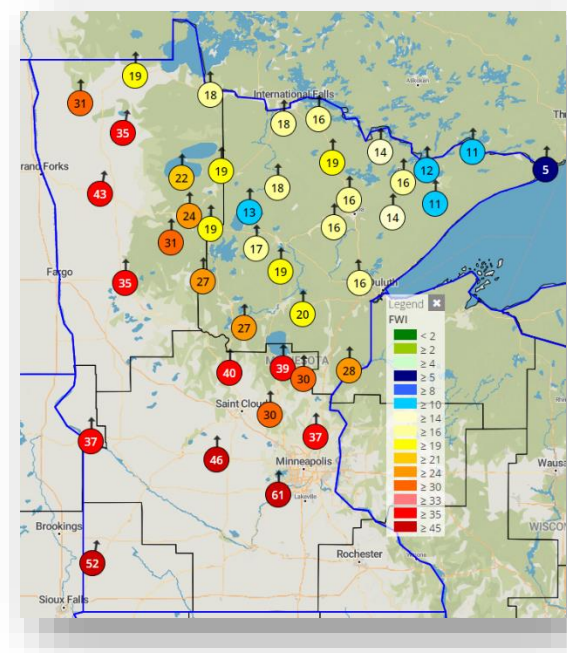
Significantly low RHs values have been observed across the state the last few days and will combine with low values today to provide some advanced drying of fine fuels. This combined with tomorrow's strong winds bring fire potential to a peak that may rival anything we've seen so far this year. Local suppression resources could see fires challenge initial attack.

Give extra consideration to freshly burned areas on the landscape today and tomorrow. Favorable fire weather, drought, and fresh leaf fall will align to increase the likelihood of fires escaping from their containment lines. Think about extra patrols on new and recent fires.

Fire behavior is most indicative of conditions across the state tomorrow.

Fine Dead Fuel Moisture: 4% Unshaded – 7% Shaded
Prob. of Ignition: 75% Unshaded – 45% Shaded

Figure 2 - Forecasted Daily FFM 11/02/22



SPECIFIC FIRE BEHAVIOR:**MN FFMC: 90 BUI: 60 WS: 16 Effective
ISI:15.7**

	Flame Length	Rate of Spread (ft/min \approx ch/hr)	Fire Type	60 Minute Spread Size (acres)
Grass (80% cured – 3 tons/acre)	14 – 15	100 – 105	Surface	128
Lowland Grass (90% cured – 5 tons/acre)	21 – 22	135 – 140	Surface	228
Young Jack Pine 110% FMC & Boreal Spruce	24 – 25	70 – 75	Crowning	94
Pine Plntn. & Mat. JP	18 – 19	40 – 45	Torching	27
Mixdwood Green (25% Fir) & Red & White Pine Timber	11 – 12	25 – 30	Torching	10
Hardwood/Aspen	7 – 8	14 – 16	Surface	4

Outlook:

We are approaching what has historically been the time when fire season activity dramatically drops off regardless of other condntions, but we still have a few weeks to go if we don't see a significant season ending event in the mean time. Chances for that look like they may be coming up by early next week, but at this point the favorability for that happening are much stronger on the eastern side of the state.

The CPC 6 – 10 and 8 – 14 day are indicating better chances for a cooler and wetter patter to set up over the state.

The latest drought monitor held in place with 79% of the state seeing some indication of established or developing drought.

*Figure 3 - Weekly
Summary Forecast for
Northwestern MN Issued
by NWS Grand Forks*

Goodridge, MN Weekly Summary		Tue Nov 1	Wed Nov 2	Thu Nov 3	Fri Nov 4	Sat Nov 5	Sun Nov 6	Mon Nov 7	Tue Nov 8
Max Temp, °F		65	71	57	39	48	40	33	31
Min Temp, °F		30	42	34	25	27	28	23	13
Max RH, %		100	69	83	82	78	100	91	100
Min RH, %		35	42	57	47	48	61	66	74
Max Wind, mph		13	23	16	13	16	16	14	17
Min Wind, mph		3	14	8	7	9	9	9	10
Max Wind Gust, time/dir.		10 PM \swarrow	11 AM \uparrow	12 AM \uparrow	12 AM \swarrow	1 PM \swarrow	2 PM \swarrow	5 PM \swarrow	11 AM \downarrow
Max Wind Gust, mph		18	31	24	20	22	26	22	25
Min Wind Gust, mph		5	22	13	8	13	14	14	20
Max Cloud Cover, %		48	71	89	78	63	75	85	86
Min Cloud Cover, %		23	19	22	17	16	63	60	77
Max Prob. of Precip., %		1	0	15	15	15	28	24	22

*Figure 4 – Weekly
Summary Forecast for
Northeastern MN Issued
by the NWS Duluth*

Nett Lake, MN Weekly Summary		Tue Nov 1	Wed Nov 2	Thu Nov 3	Fri Nov 4	Sat Nov 5	Sun Nov 6	Mon Nov 7	Tue Nov 8
Max Temp, °F		61	67	63	42	49	45	38	36
Min Temp, °F		31	44	44	31	28	31	26	17
Max RH, %		92	76	87	87	87	100	88	95
Min RH, %		35	46	53	51	56	56	54	70
Max Wind, mph		5	14	9	6	7	9	7	8
Min Wind, mph		0	6	3	1	2	2	2	5
Max Wind Gust, time/dir.		11 PM \swarrow	3 PM \uparrow	12 AM \uparrow	1 AM \swarrow	1 PM \swarrow	3 PM \swarrow	11 PM \swarrow	9 AM \swarrow
Max Wind Gust, mph		14	35	23	17	14	23	20	23
Min Wind Gust, mph		2	14	12	3	6	10	12	18
Max Cloud Cover, %		50	71	89	89	68	78	85	91
Min Cloud Cover, %		4	29	30	28	31	48	72	77
Max Prob. of Precip., %		2	1	40	40	29	43	28	26

*Figure 5 – Weekly
Summary Forecast for
Southern MN Issued by
NWS Chanhassen*

St. Martin, MN Weekly Summary		Tue Nov 1	Wed Nov 2	Thu Nov 3	Fri Nov 4	Sat Nov 5	Sun Nov 6	Mon Nov 7	Tue Nov 8
Max Temp, °F		70	73	65	45	48	47	44	36
Min Temp, °F		39	48	47	34	32	32	31	31
Max RH, %		73	89	90	82	96	96	89	100
Min RH, %		25	46	63	55	68	58	68	88
Max Wind, mph		8	22	12	10	8	10	9	13
Min Wind, mph		2	8	7	2	2	5	6	7
Max Wind Gust, time/dir.		10 PM \swarrow	1 PM \uparrow	12 AM \uparrow	1 AM \swarrow	2 PM \swarrow	1 PM \swarrow	2 PM \swarrow	1 PM \swarrow
Max Wind Gust, mph		15	39	20	17	14	24	18	25
Min Wind Gust, mph		5	14	13	5	6	9	12	18
Max Cloud Cover, %		33	67	84	83	52	67	76	82
Min Cloud Cover, %		10	6	16	34	38	45	63	68
Max Prob. of Precip., %		0	0	44	46	40	45	20	18

References

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7. NWS, Twin Cities: Routine Fire Wx Fcst. Available at: HYPERLINK "<https://forecast.weather.gov/product.php?site=mpx&product=FWF&issuedby=mpx>"
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