FIRE ENVIRONMENT FORECAST

FORECAST NUMBER: 45	**TYPE OF FIRE: Initial Attack**
FIRE NAME: MNICS Statewide Forecast	**OPERATIONAL PERIOD: 09/03 – 09/05**
DATE ISSUED: 07/16	**TIME ISSUED:** 0900
UNIT: MN-MNCC	**SIGNED:** Travis Verdegan **Typed/printed: Travis Verdegan**

INPUTS

WEATHER SUMMARY:

Precip over the last week has been widespread and heavy in some locations however the last few days have been almost entirely dry.

Mostly sunny and clear skies are expected today and into tomorrow before widespread light precip looks to move into the state.

Temps in the 70s and 80s are expected today and tomorrow before cooling off significantly by Thursday.

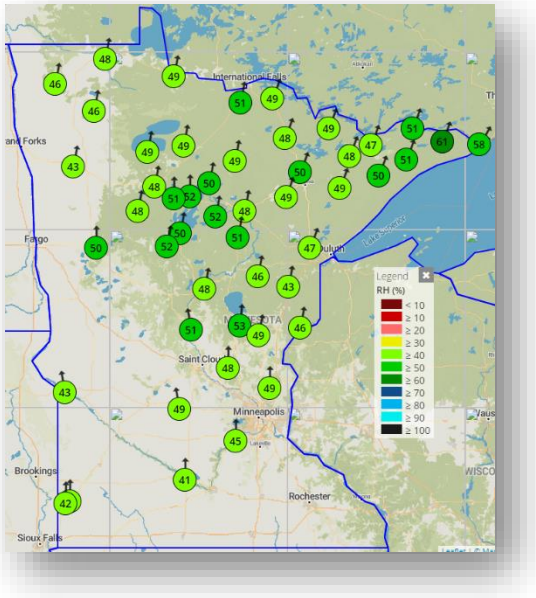
Strong southerly winds are forecast for the next two days, 15 - 20 mph, before they switch to the NW and lighten up some.

RH minimum look to be the biggest limiting fire weather factor for the next few days as forecast values look to stay in the 40s and 50s. Any further mixing out of the atmosphere may bring lower than forecast minimum values, easily bringing some potential to see some 30s the next couple days.

After precip moves out later in the week an extended dry period appears setting up for the weekend and beyond.

Hot-Dry-Windy Index – Near Normal

Figure 1 - Forecasted 1700 RH 09/03/24.



OUTPUTS

FIRE ENVIROMENT GENERAL:

With very little observed fire behavior to substantiate fire potential assessments focusing on what we know is the best plan.

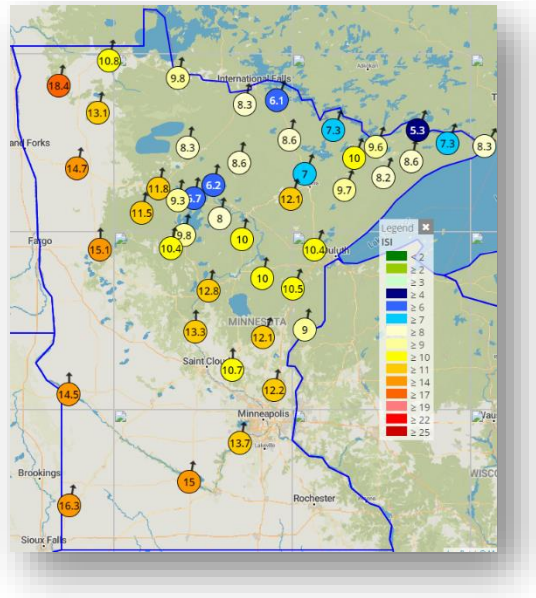
A sustained dry period along with favorable fire weather conditions are bringing CFFDRS values to levels not seen since early summer.

Significant ISI values indicate potential for fires to challenge IA resources where fuels are available. Availability across the landscape is highly variable and the most likely scenario for challenging fires are in cured agricultural fuels such as wheat and cut hay. Undetected lightning fires in conifer fuels may present the next likely scenarios for challenging fires although rates of spread may not be the biggest challenge in those cases.

DC values indicate some potential for deeply seated fires in organic soils and heavy fuels. This type of behavior has not been reported yet and I'll be looking for any pertinent reports from the field if/when they occur.

Fine Dead Fuel Moisture: 6% Unshaded – 9% Shaded
Prob. of Ignition: 55% Unshaded – 35% Shaded

Figure 2 - Forecasted Daily ISI 09/03/24.



SPECIFIC FIRE BEHAVIOR:

MN FFMC:89 BUI:35 WS:15 Effective ISI: 12.5	Flame Length	Rate of Spread (ft/min ≈ ch/hr)	Fire Type	60 Minute Spread Size (acres)
Grass (60% cured – 3 tons/acre)	7 – 8	25 – 30	surface	8
Lowland Grass (70% cured – 5 tons/acre)	9 – 10	25 – 30	surface	8
Young Jack Pine & Boreal Spruce (115% FMC)	16 – 17	45 - 50	Torching	15
Pine Plntn. & Mat. JP	7 – 8	20 - 25	surface	8
Mixdwood (25% Fir) & Red & White Pine Timber	6 – 7	12 – 14	surface	3
Hardwood/Aspen	2 – 3	< 5	surface	< 1

Outlook:

Conducive fire weather conditions are instore for the next couple days followed by some light albeit widespread precip and then another round of conducive fire weather that looks to have the potential to sustain itself for a significant period of time

CPC 6 – 10 and 8 – 14 day outlooks are showing better chances for a sustained period of warm and dry conditions into the middle of the month and beyond.

The latest drought monitor shows some expansion of abnormally dry conditions in the state and this trend of expansion looks to be the norm for the coming weeks.

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

Goodridge, MN Weekly Summary	Tue Sep 3	Wed Sep 4	Thu Sep 5	Fri Sep 6	Sat Sep 7	Sun Sep 8	Mon Sep 9	Tue Sep 10
Max Temp, °F	83	78	65	61	63	70	74	77
Min Temp, °F	56	63	50	43	39	43	47	51
Max RH, %	96	88	94	99	100	90	97	95
Min RH, %	46	53	54	50	45	44	45	47
Max Dewpoint, °F	61	62	59	45	43	48	53	56
Min Dewpoint, °F	55	52	45	40	39	40	46	50
Max Wind, mph	23	21	18	12	7	9	8	9
Min Wind, mph	6	8	7	5	3	6	5	6
Max Wind Gust, time/dir.	4 PM ↑	12 AM ↑	11 AM ↘	12 PM ↓	11 AM ↑	11 AM ↗	12 PM ↑	1 PM ↑
Max Wind Gust, mph	33	30	25	17	12	15	13	15
Min Wind Gust, mph	8	13	13	9	7	9	10	10
Max Cloud Cover, %	65	75	58	40	36	35	25	37
Min Cloud Cover, %	30	46	18	7	8	1	5	20
Max Prob. of Precip., %	1	22	22	13	0	0	1	3

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

Nett Lake, MN Weekly Summary	Tue Sep 3	Wed Sep 4	Thu Sep 5	Fri Sep 6	Sat Sep 7	Sun Sep 8	Mon Sep 9	Tue Sep 10
Max Temp, °F	80	79	65	57	60	65	71	74
Min Temp, °F	53	58	50	42	36	38	42	46
Max RH, %	89	87	100	100	100	96	100	100
Min RH, %	45	50	65	53	42	43	47	48
Max Dewpoint, °F	58	61	60	47	39	45	51	54
Min Dewpoint, °F	50	50	47	39	36	36	42	46
Max Wind, mph	14	12	10	8	6	6	5	5
Min Wind, mph	8	3	2	1	1	2	2	2
Max Wind Gust, time/dir.	4 PM ↑	12 AM ↑	3 PM ↘	3 PM ↓	2 PM ↘	1 PM ↘	1 PM ↗	1 PM ↑
Max Wind Gust, mph	23	20	17	17	13	15	12	13
Min Wind Gust, mph	14	7	7	7	6	7	7	6
Max Cloud Cover, %	37	84	80	68	29	38	21	42
Min Cloud Cover, %	16	20	42	19	20	17	14	15
Max Prob. of Precip., %	16	63	58	23	3	4	3	3

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

Albany, MN Weekly Summary	Tue Sep 3	Wed Sep 4	Thu Sep 5	Fri Sep 6	Sat Sep 7	Sun Sep 8	Mon Sep 9	Tue Sep 10
Max Temp, °F	77	81	72	63	63	67	72	74
Min Temp, °F	60	60	56	47	41	44	47	51
Max RH, %	73	77	97	95	100	94	95	95
Min RH, %	54	54	55	53	49	50	55	55
Max Dewpoint, °F	60	64	61	48	44	50	56	57
Min Dewpoint, °F	51	53	48	43	41	42	45	50
Max Wind, mph	18	16	14	10	6	8	7	7
Min Wind, mph	10	7	6	3	2	2	2	3
Max Wind Gust, time/dir.	3 PM ↑	12 PM ↑	3 PM ↘	2 PM ↓	2 PM ↘	1 PM ↗	12 PM ↑	12 PM ↖
Max Wind Gust, mph	29	24	22	20	13	15	13	14
Min Wind Gust, mph	18	15	13	9	6	7	7	8
Max Cloud Cover, %	43	77	82	36	26	35	25	42
Min Cloud Cover, %	27	20	6	7	8	6	7	24
Max Prob. of Precip., %	1	23	53	14	1	1	1	6

AIR OPERATIONS: https://www.aviationweather.gov/data/products/turbulence/F12_gtg_max_total-lgt.gif

Safety: https://www.nwcg.gov/committees/6-Minutes-for-safety

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