

Weather and Air Quality: Reflection and Outlook During Smoke Conditions

Presenter: Megan Christiansen
Date: June 30, 2025

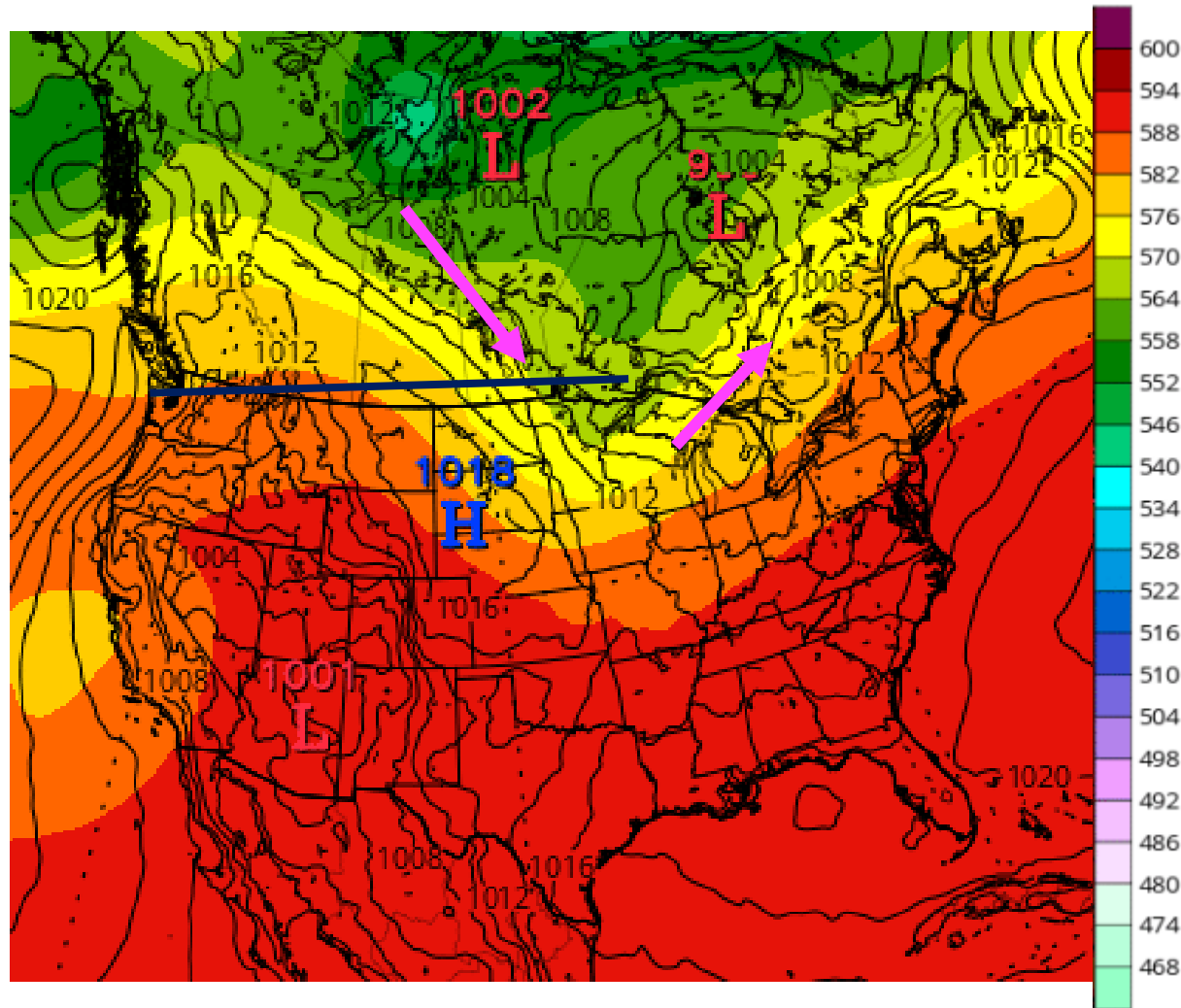


FireAQ is funded by NASA HAQ. We thank NASA GMAO and
NRL for the model data products.

EARTH SCIENCE
APPLIED SCIENCES

Current Status: June 30 , 2025

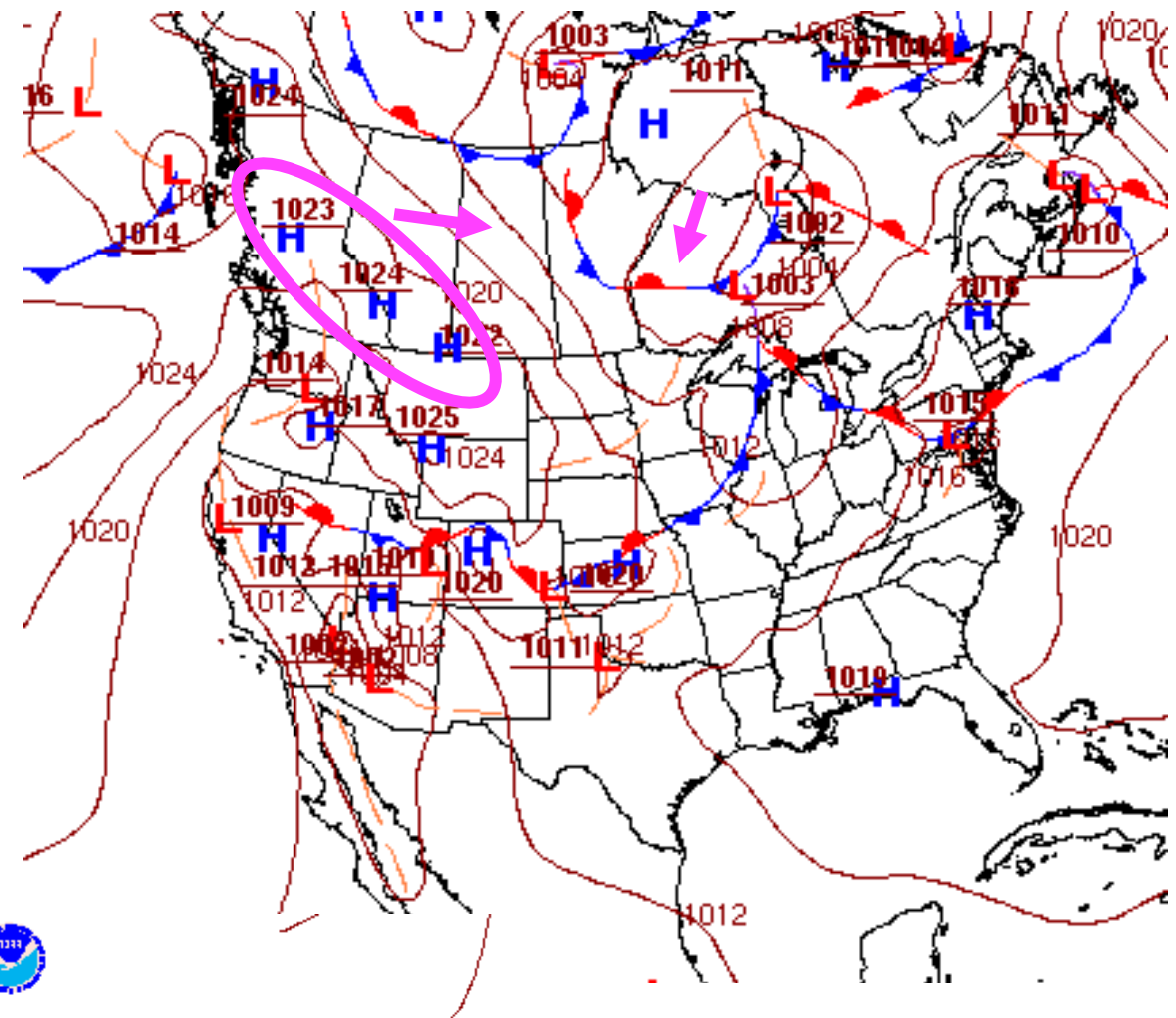
500 mb Contours



GFS 500mb Geopotential Height (dam) & MSLP (mb)

Init: 06z Jun 30 2025 Forecast Hour: [12] valid at 18z Mon, Jun 30 2025

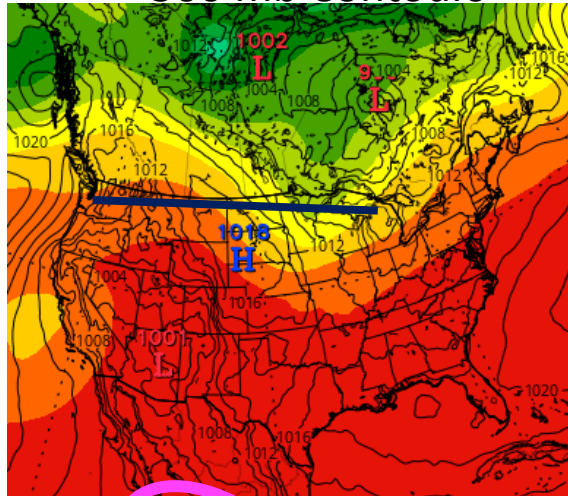
Surface Analysis



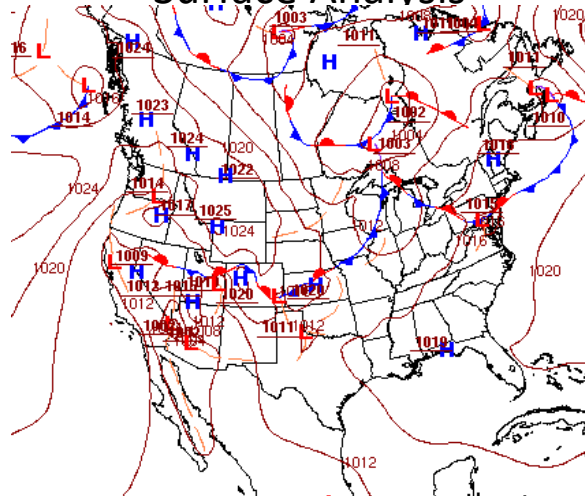
1200Z SURFACE ANALYSIS
DATE: MON JUN 30 2025
ISSUED: 1327Z MON JUN 30 2025
BY WPC ANALYST ORAVEC
COLLABORATING CENTERS: WPC, NHC, OPC

Current Status: June 30 , 2025

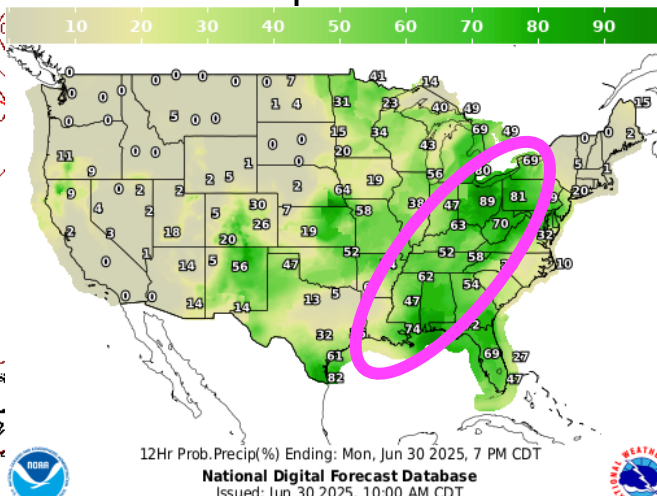
500 mb Contours



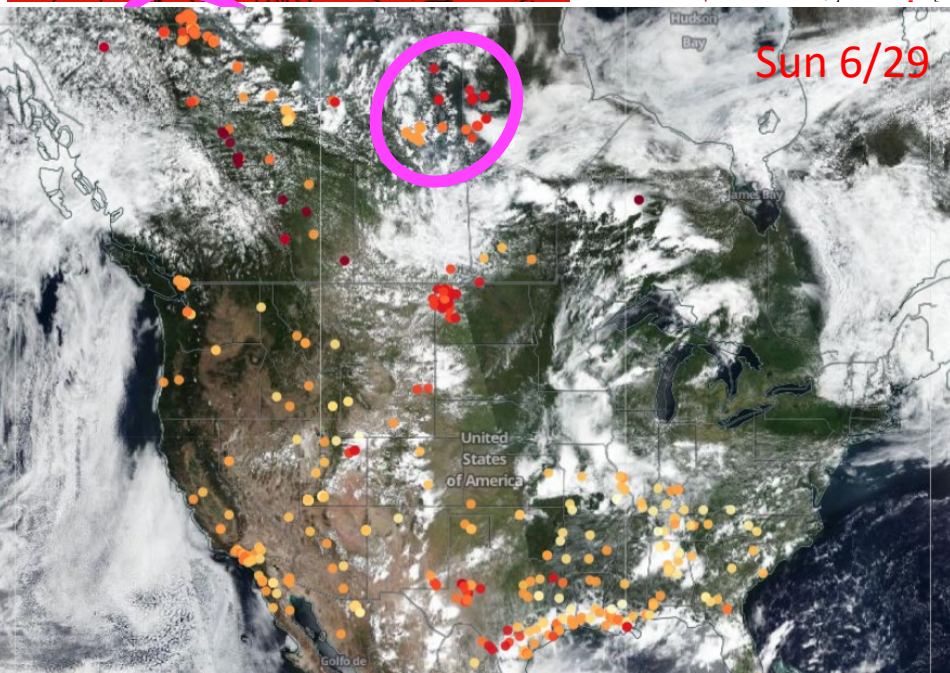
Surface Analysis



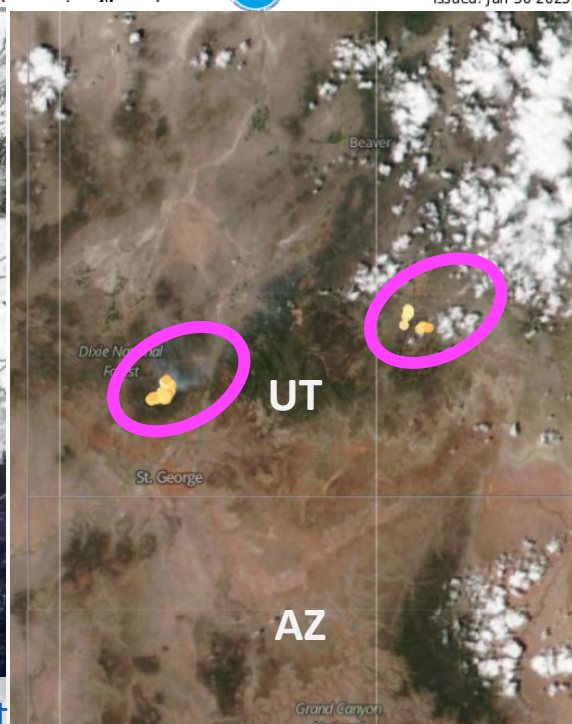
Precip. Prob.



AirNow PM_{2.5} AQI



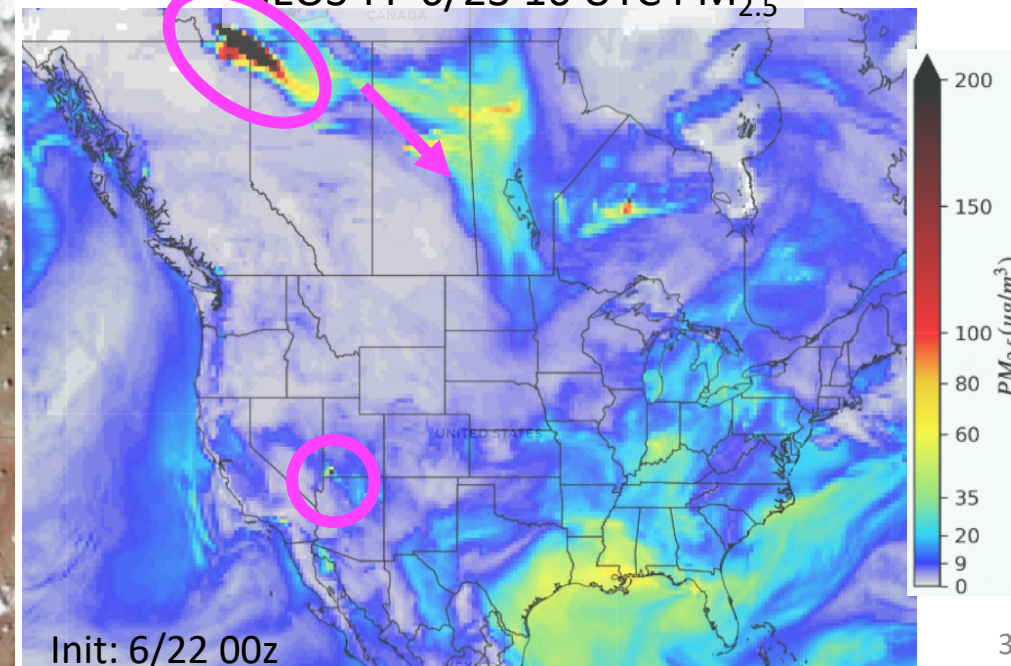
Sun 6/29



UT

AZ

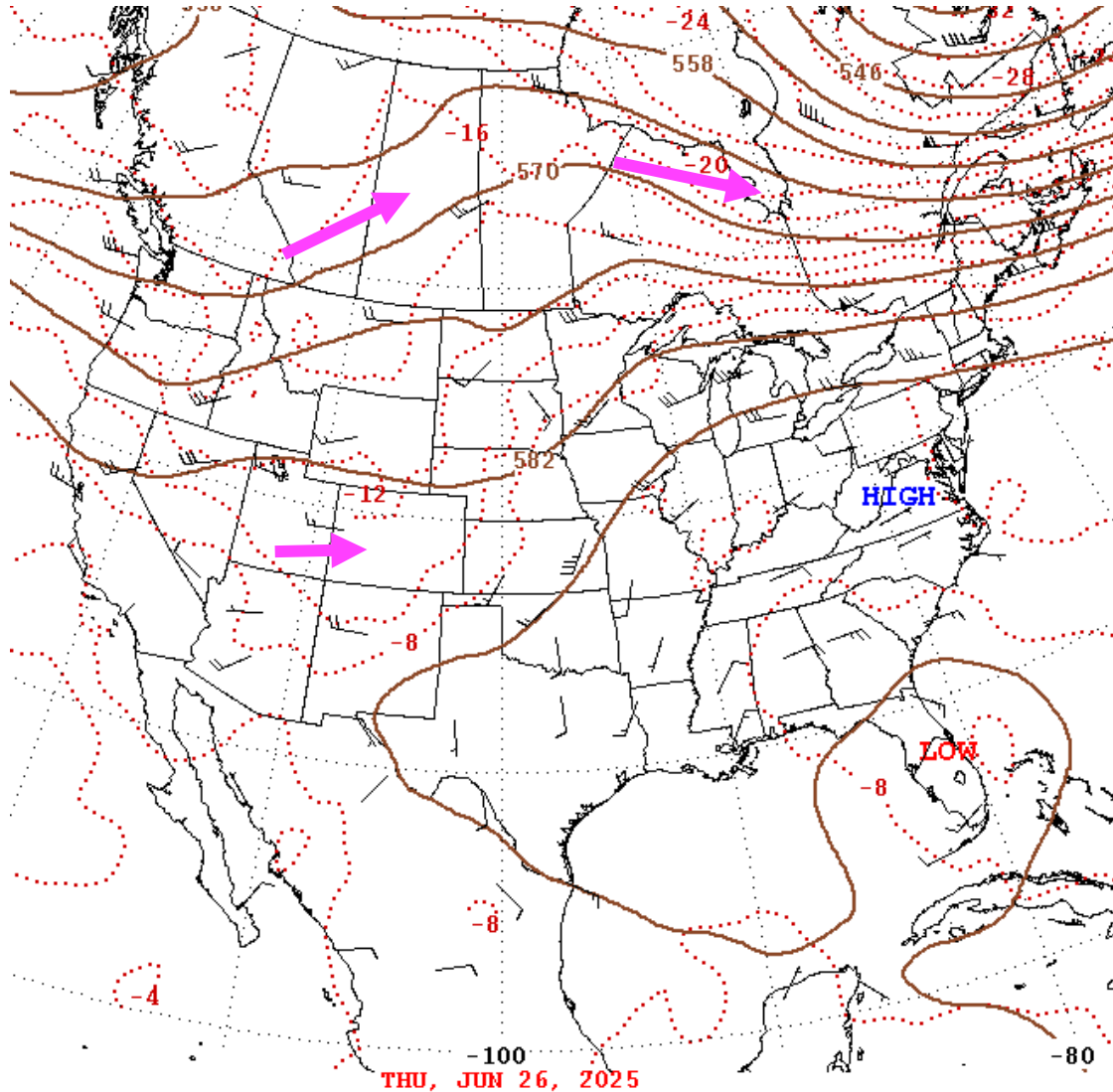
GEOS-FP 6/23 16 UTC PM_{2.5}



Init: 6/22 00z

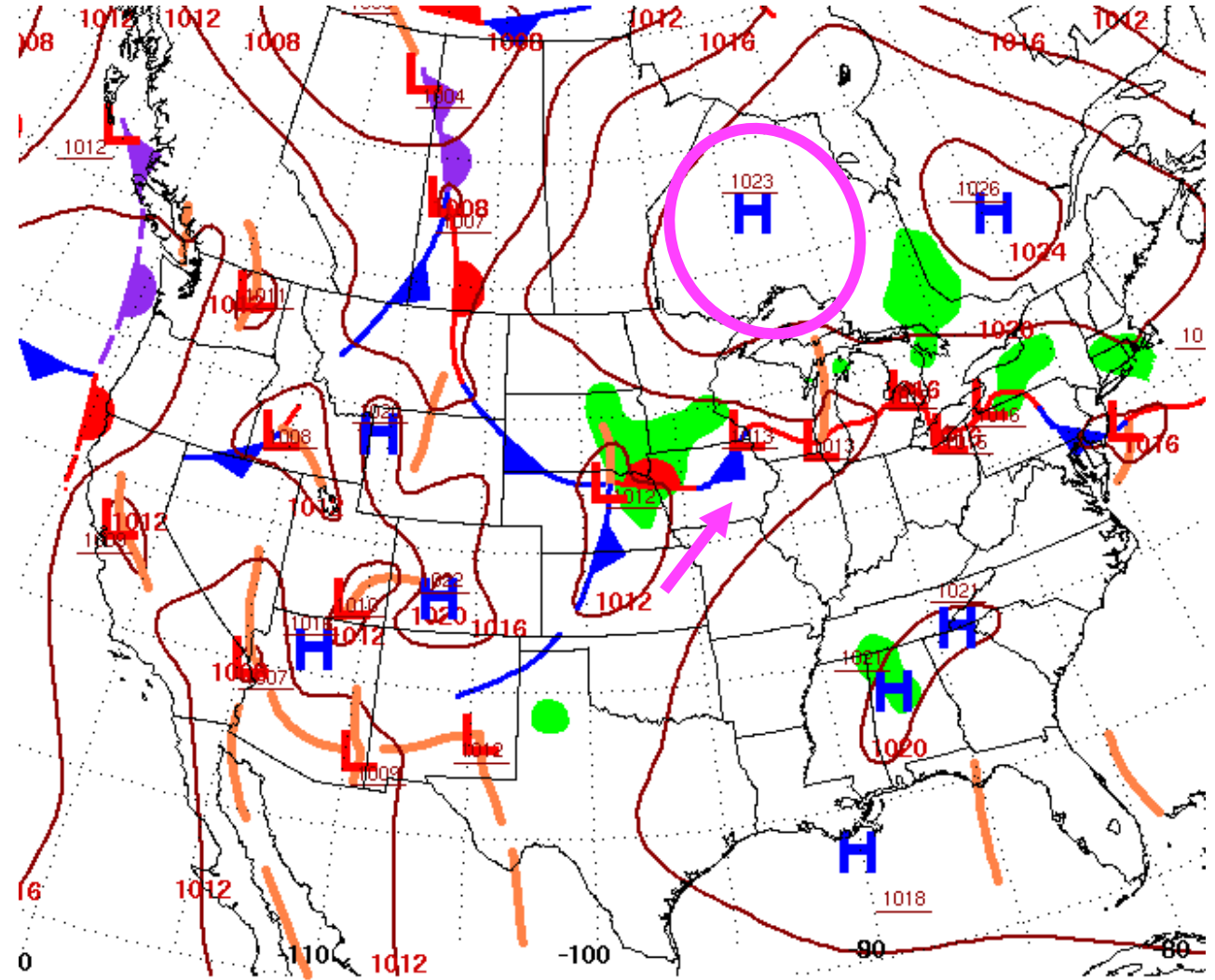
Air Quality Reflection: Thursday June 26, 2025

500 mb Contours



500-Millibar Height Contours at 7:00 A.M. E.S.T.

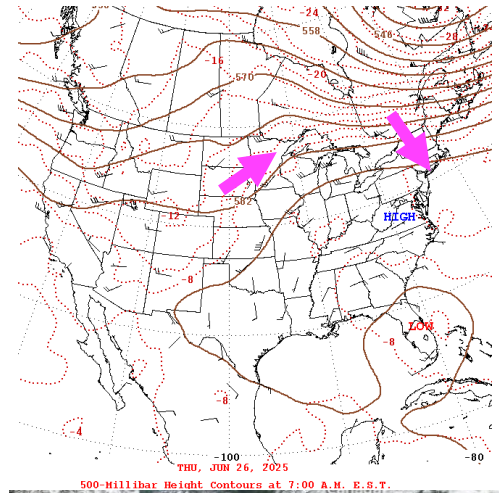
Surface Weather



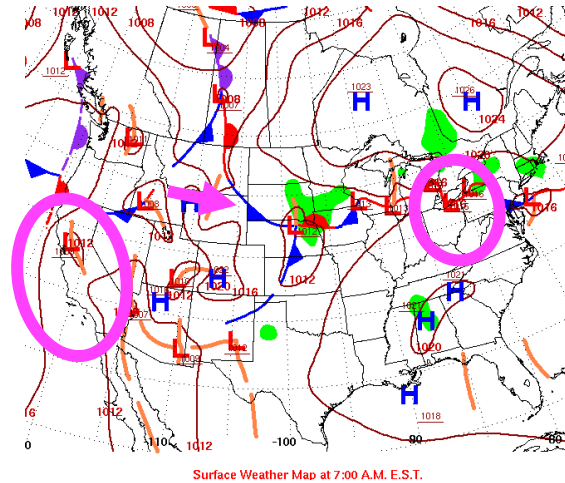
Surface Weather Map at 7:00 A.M. E.S.T.

Air Quality Reflection: Thursday June 26, 2025

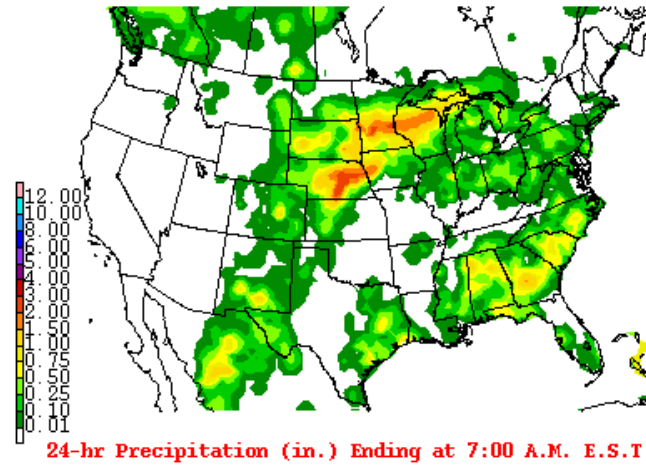
500 mb Contours



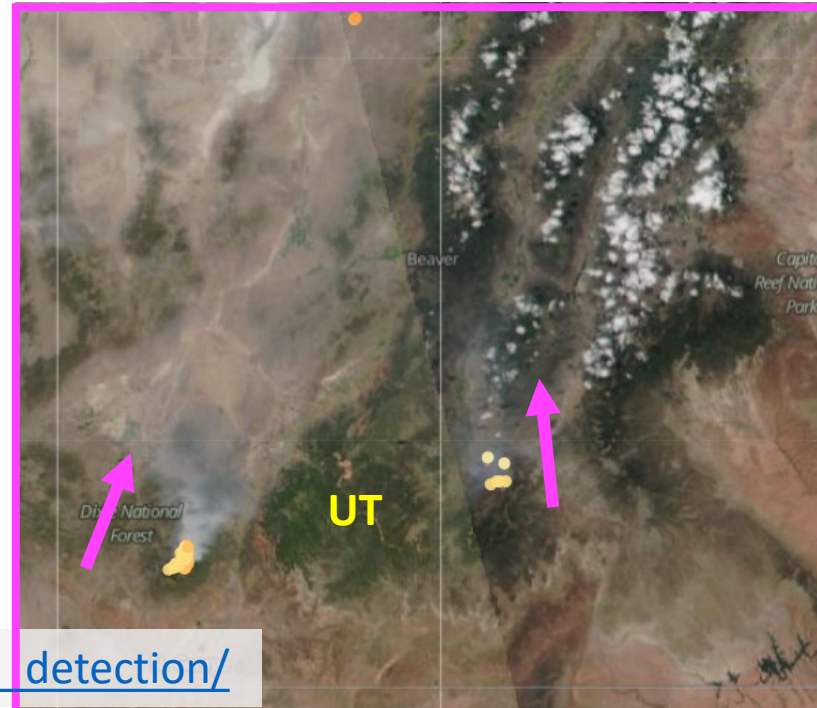
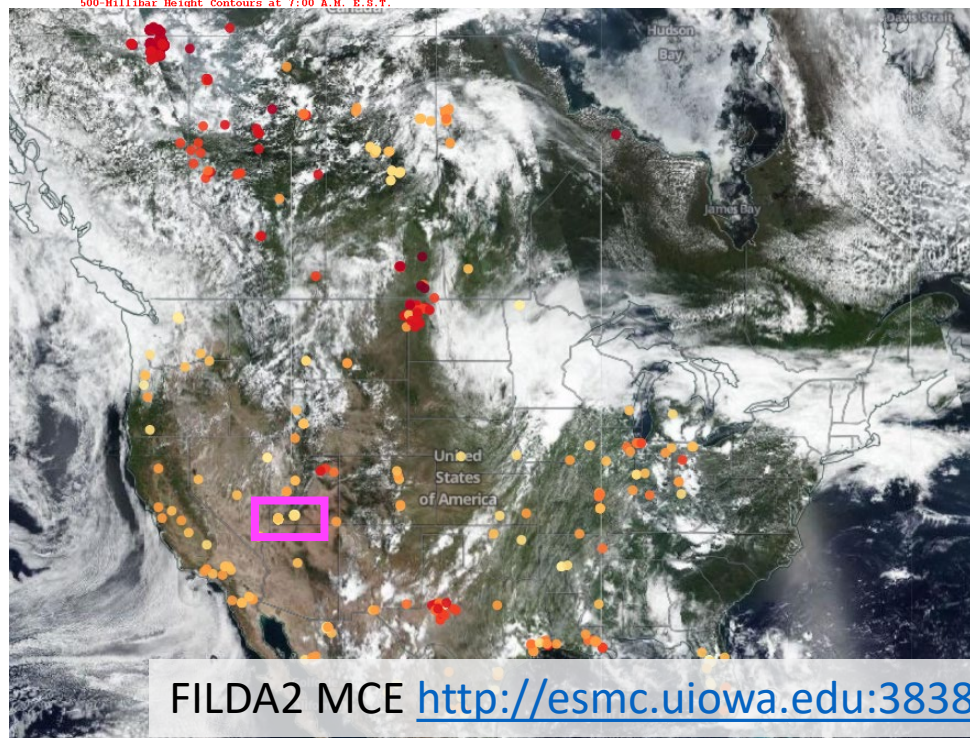
Surface Weather



Precipitation



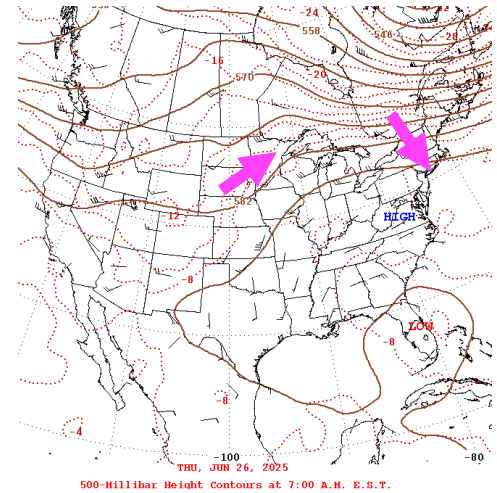
AirNow PM_{2.5} AQI



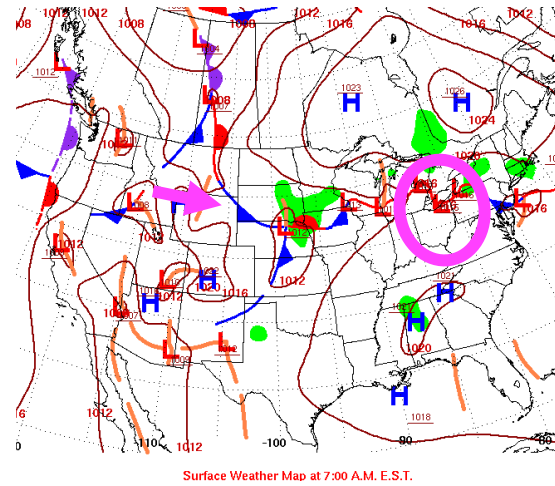
FILDA2 MCE http://esmc.uiowa.edu:3838/fires_detection/

Air Quality Reflection: Thursday June 26, 2025

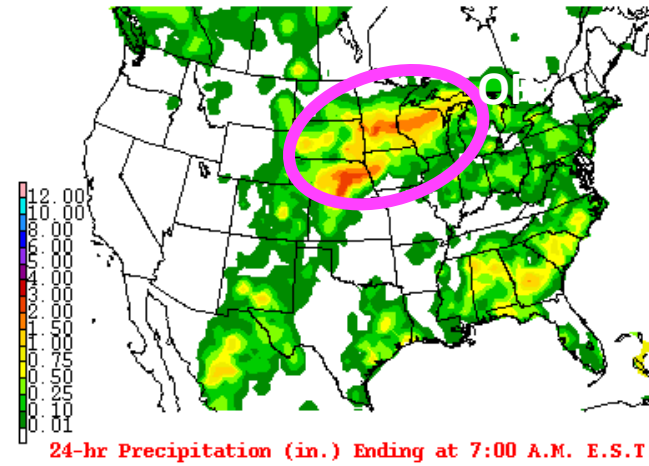
500 mb Contours



Surface Weather



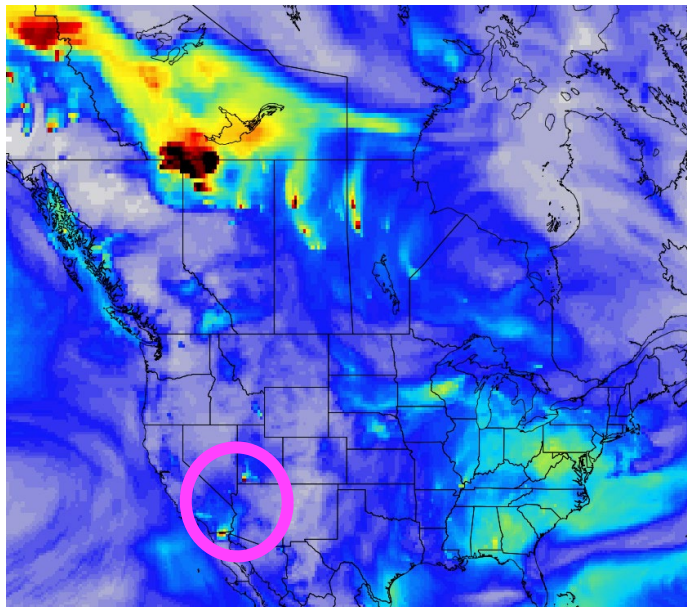
Precipitation



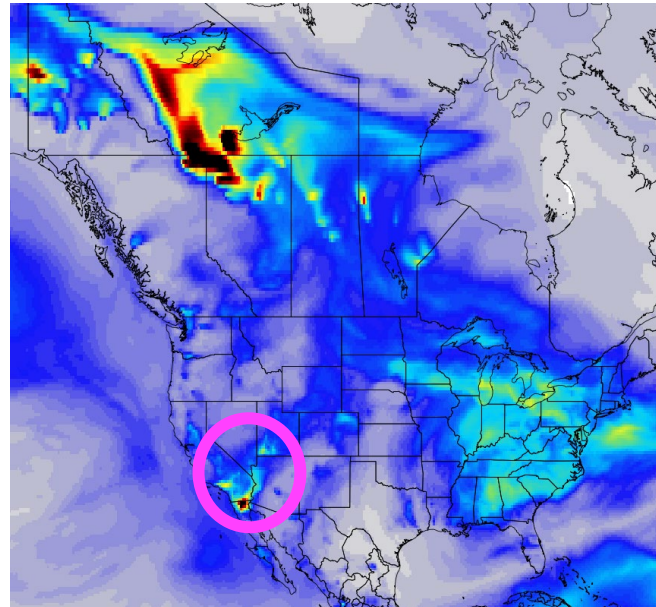
AirNow PM_{2.5} AQI



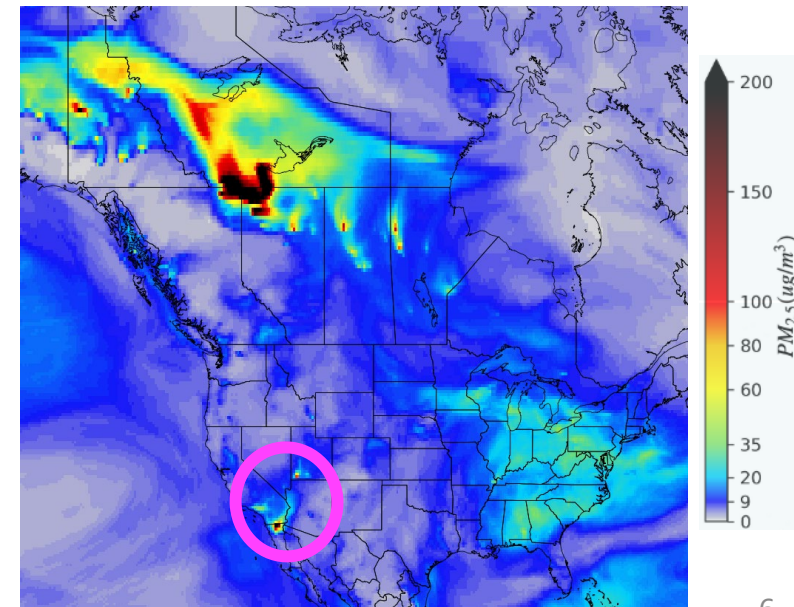
GEOS-FP



GEOS-CF

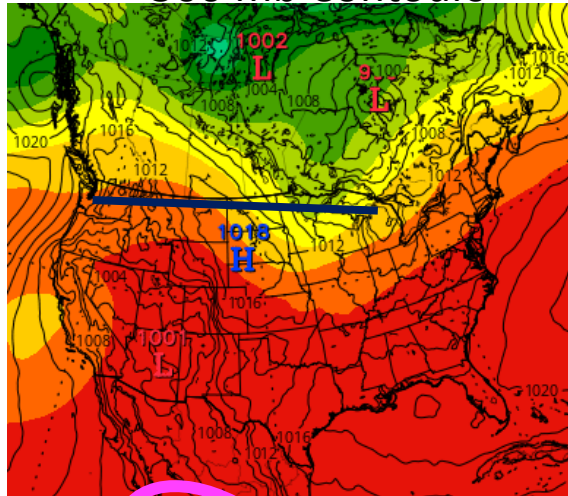


Ensemble

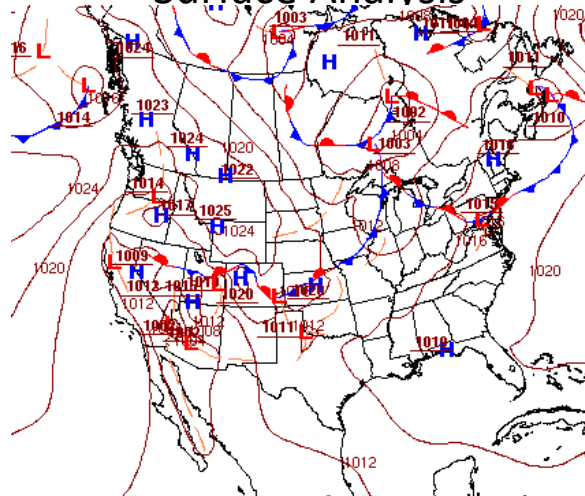


Current Status: June 30 , 2025

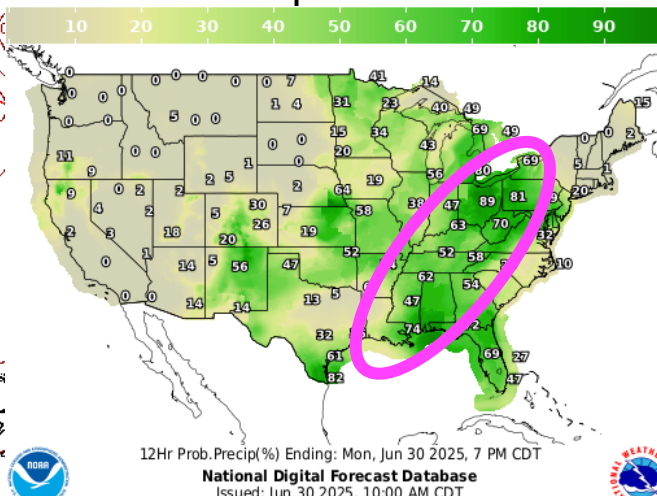
500 mb Contours



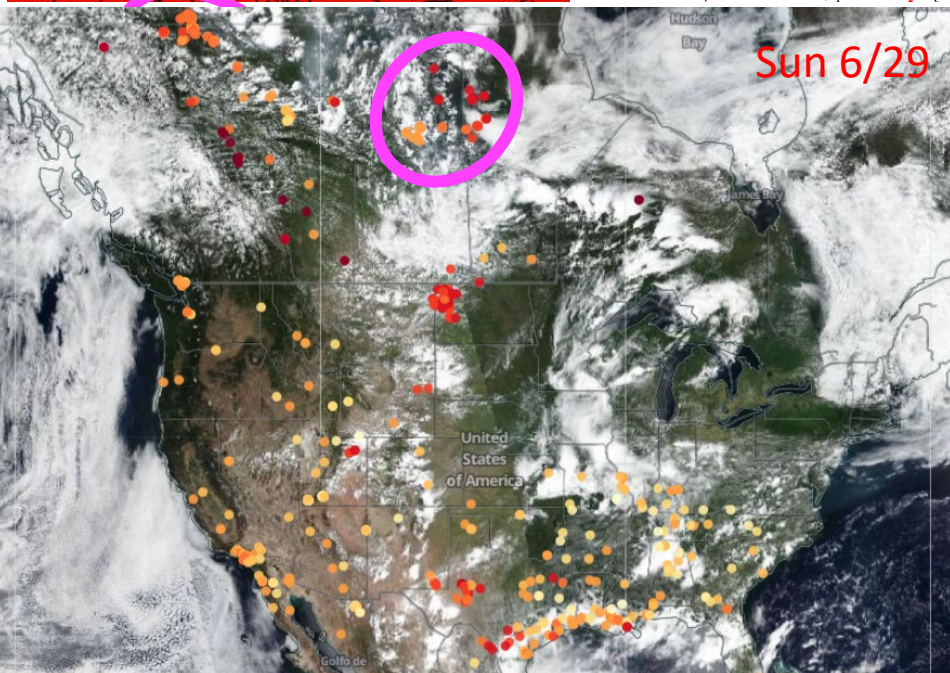
Surface Analysis



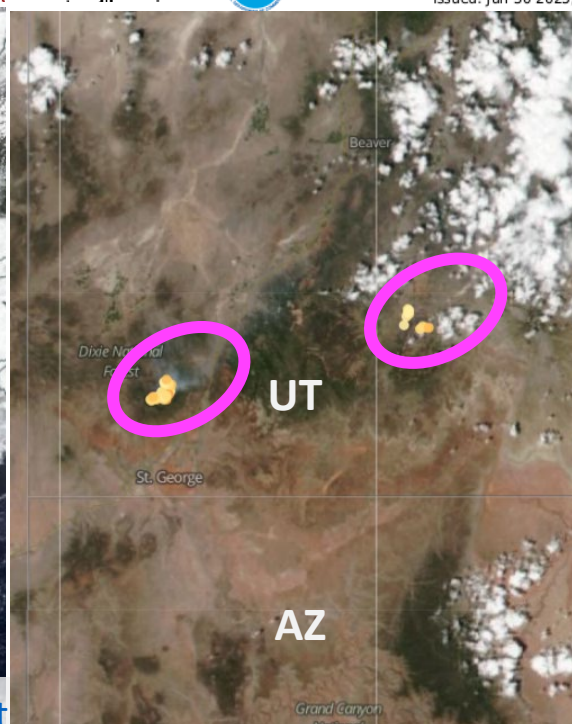
Precip. Prob.



AirNow PM_{2.5} AQI



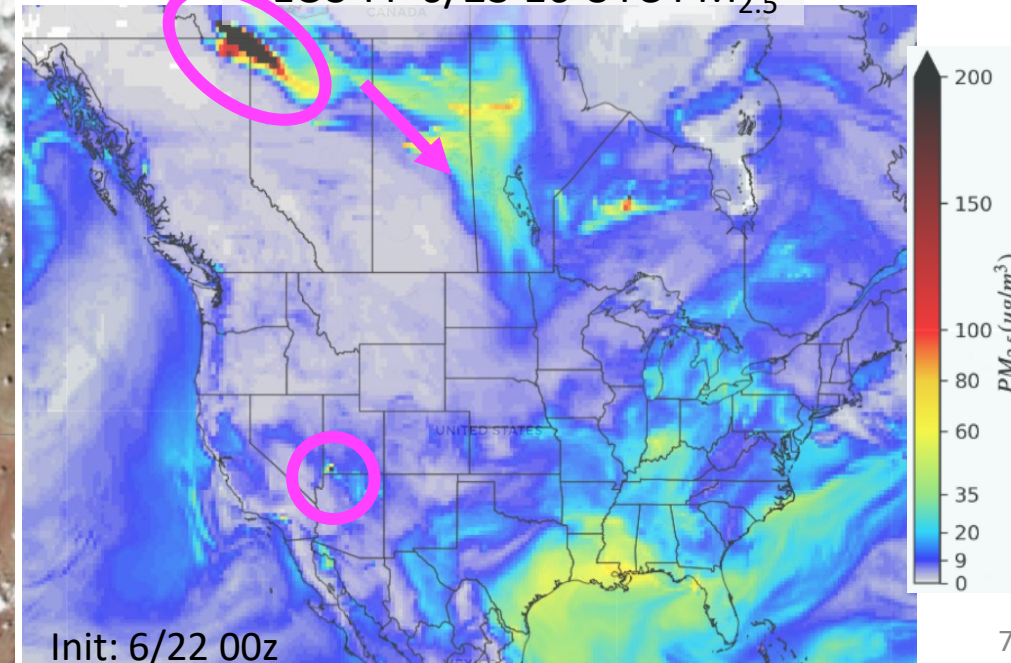
Sun 6/29



UT

AZ

GEOS-FP 6/23 16 UTC PM_{2.5}

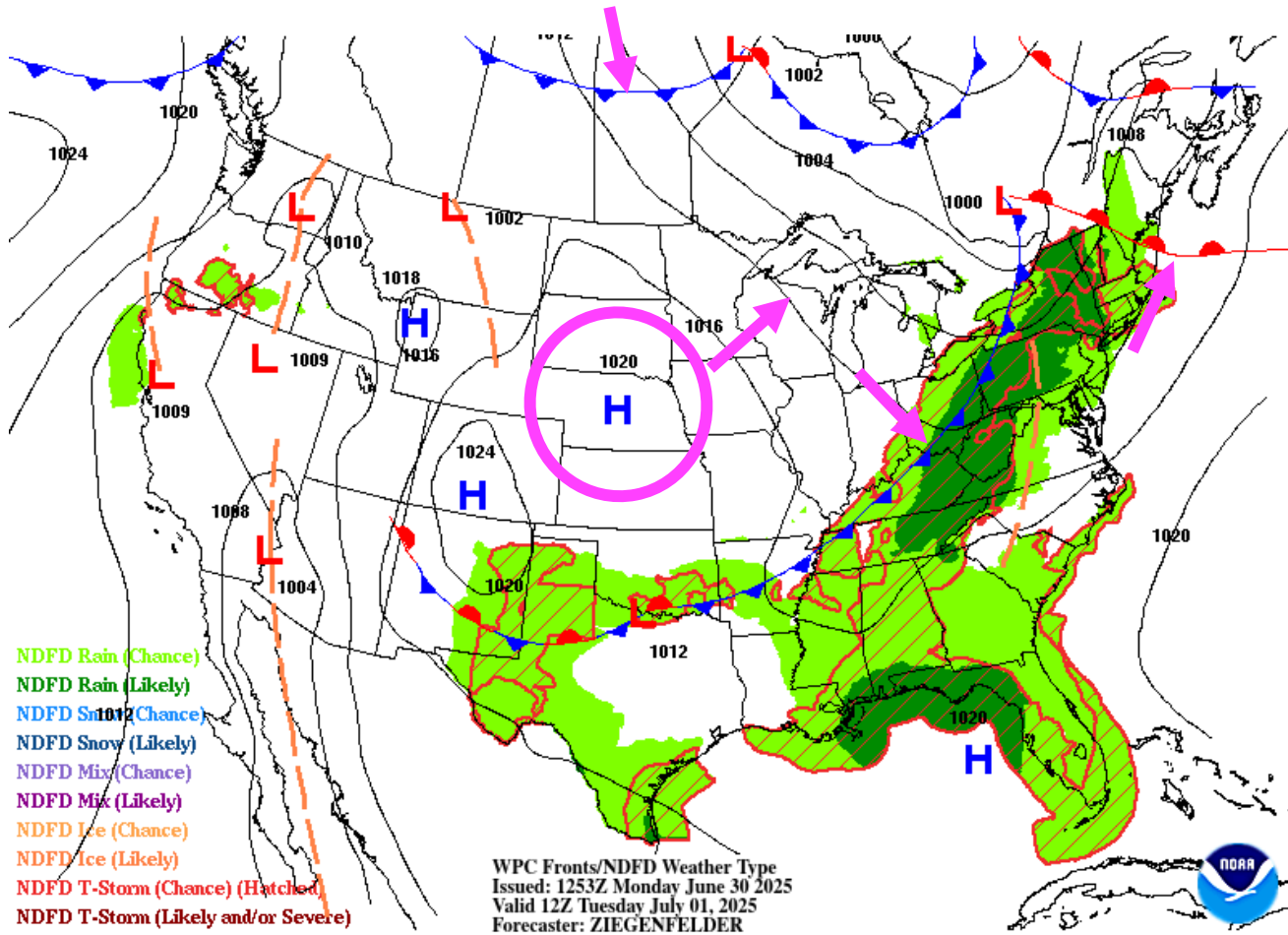


Init: 6/22 00z

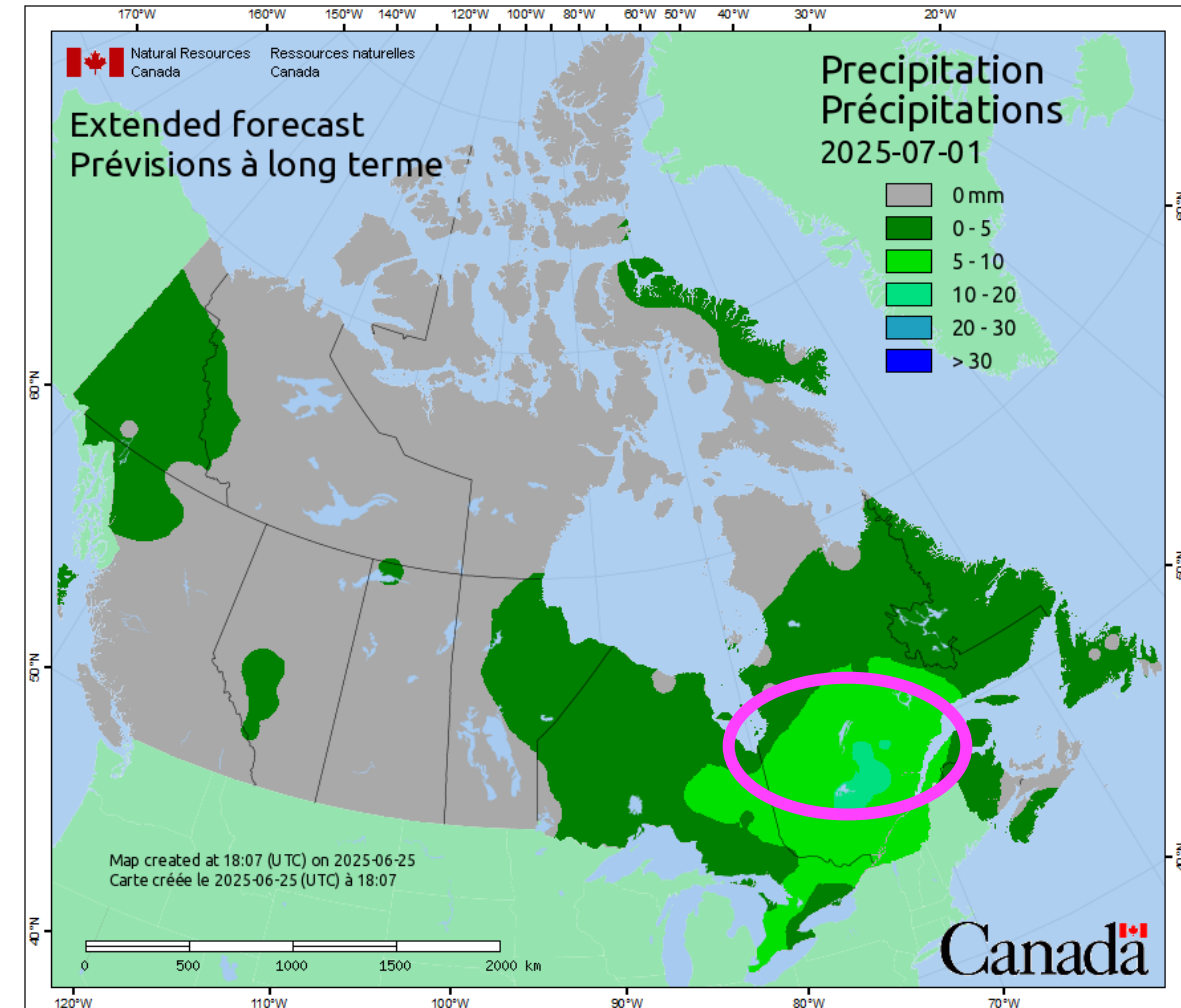
Outlook: Short Range (1–3 days)

Surface Forecast (Tuesday 7/1)

US NWS Forecast

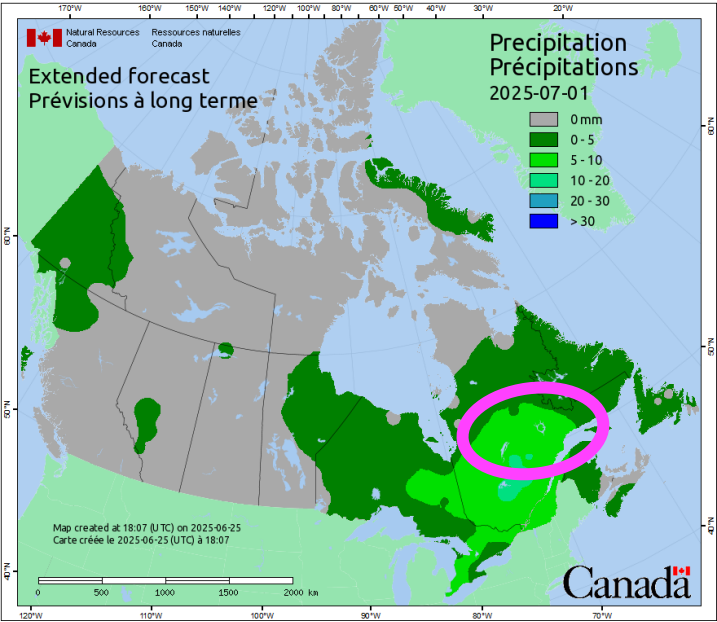


Environment Canada Forecast



Outlook: Short Range (1–3 days)

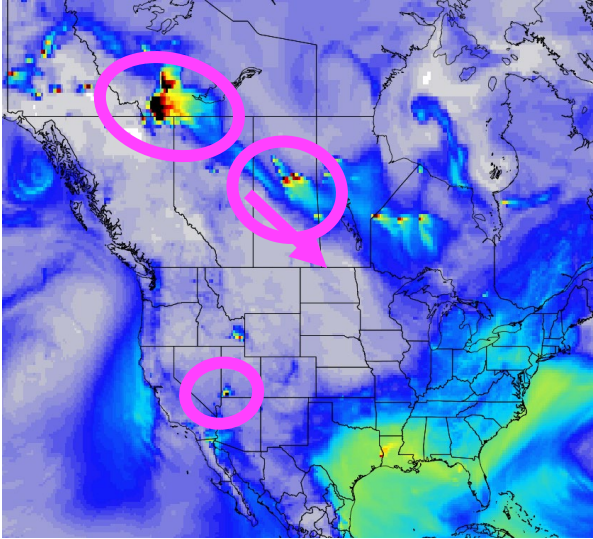
Surface Forecast



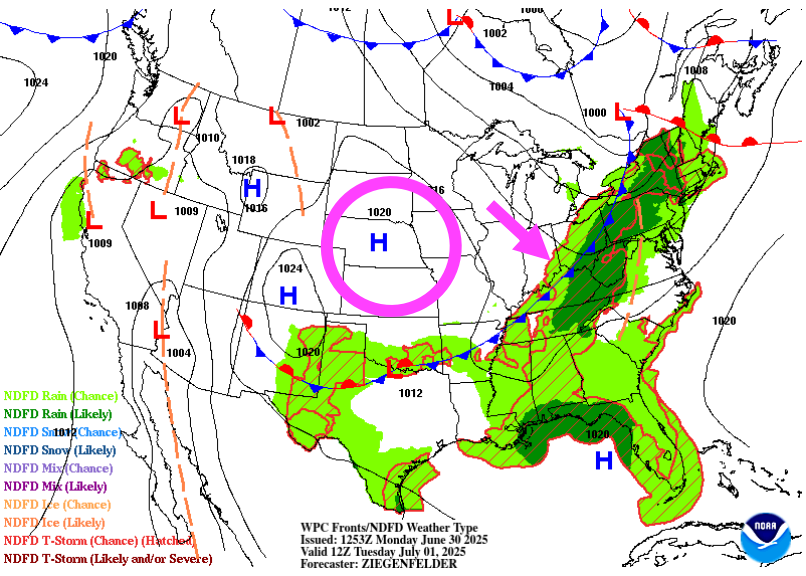
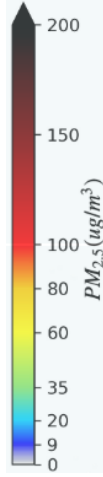
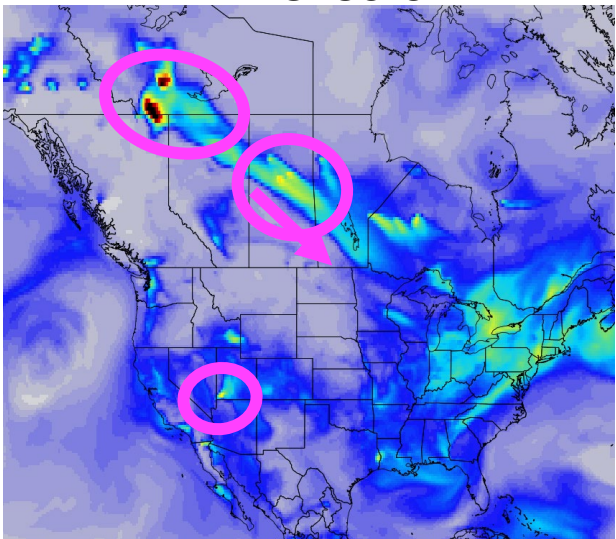
(Tuesday 7/1)

Model Means $PM_{2.5}$

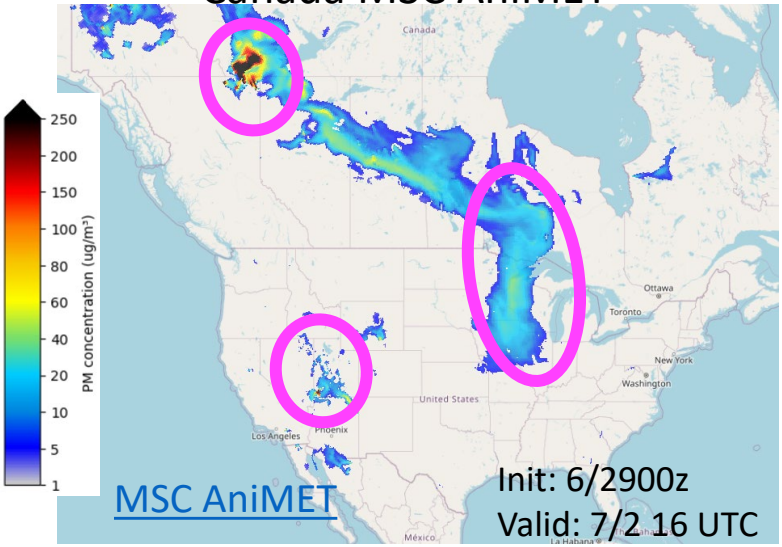
GEOS-FP



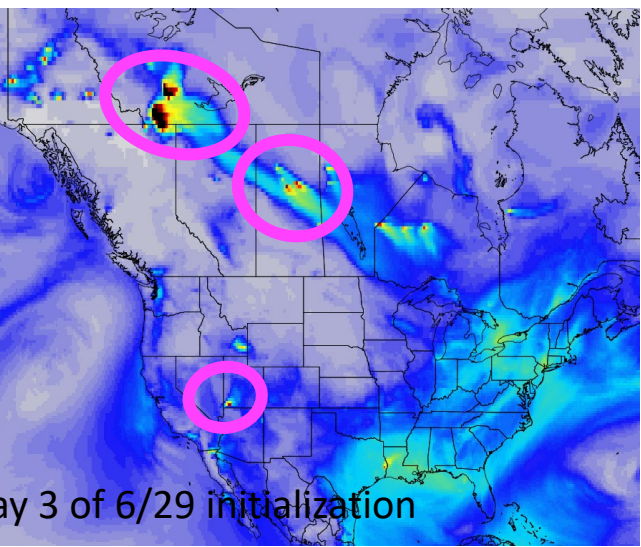
GEOS-CF



Canada MSC AniMET



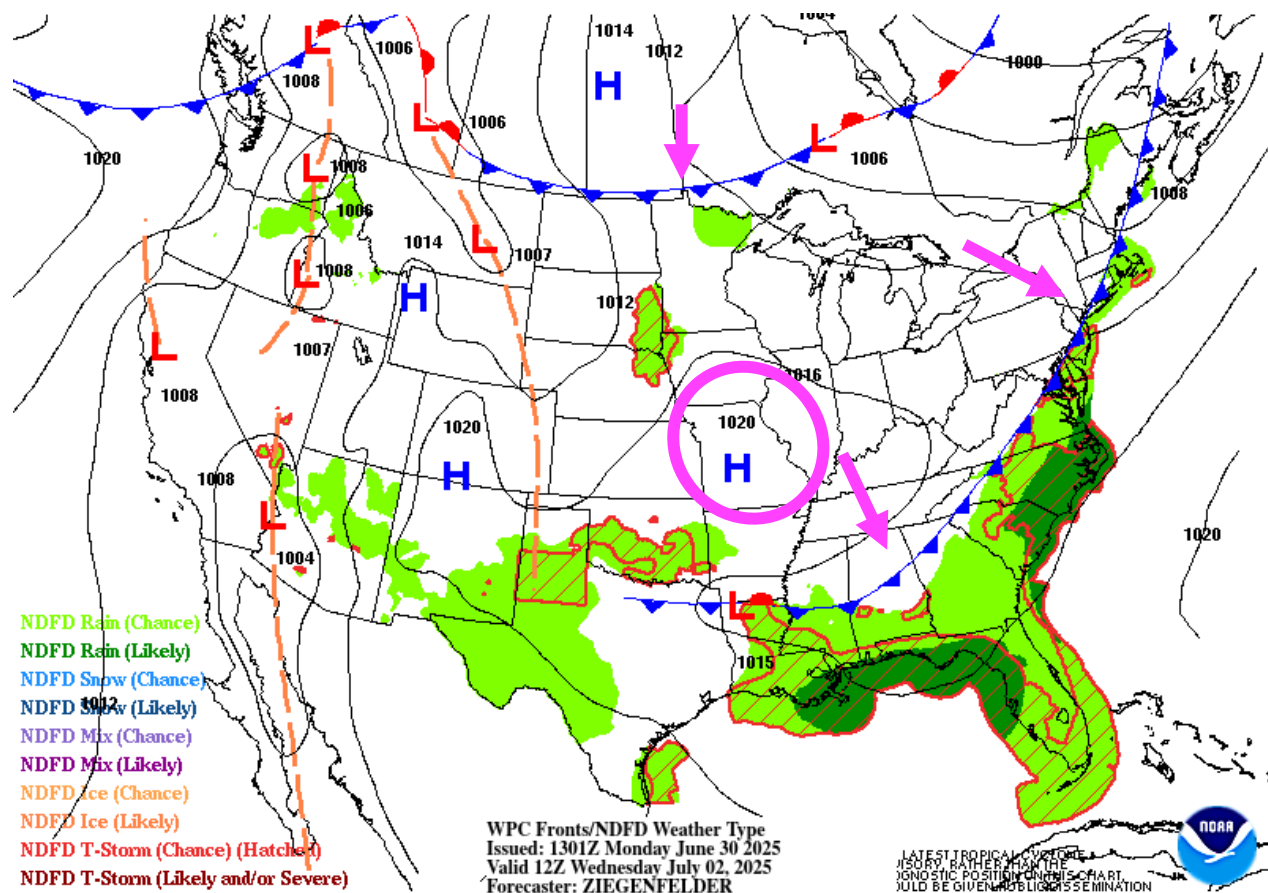
Ensemble



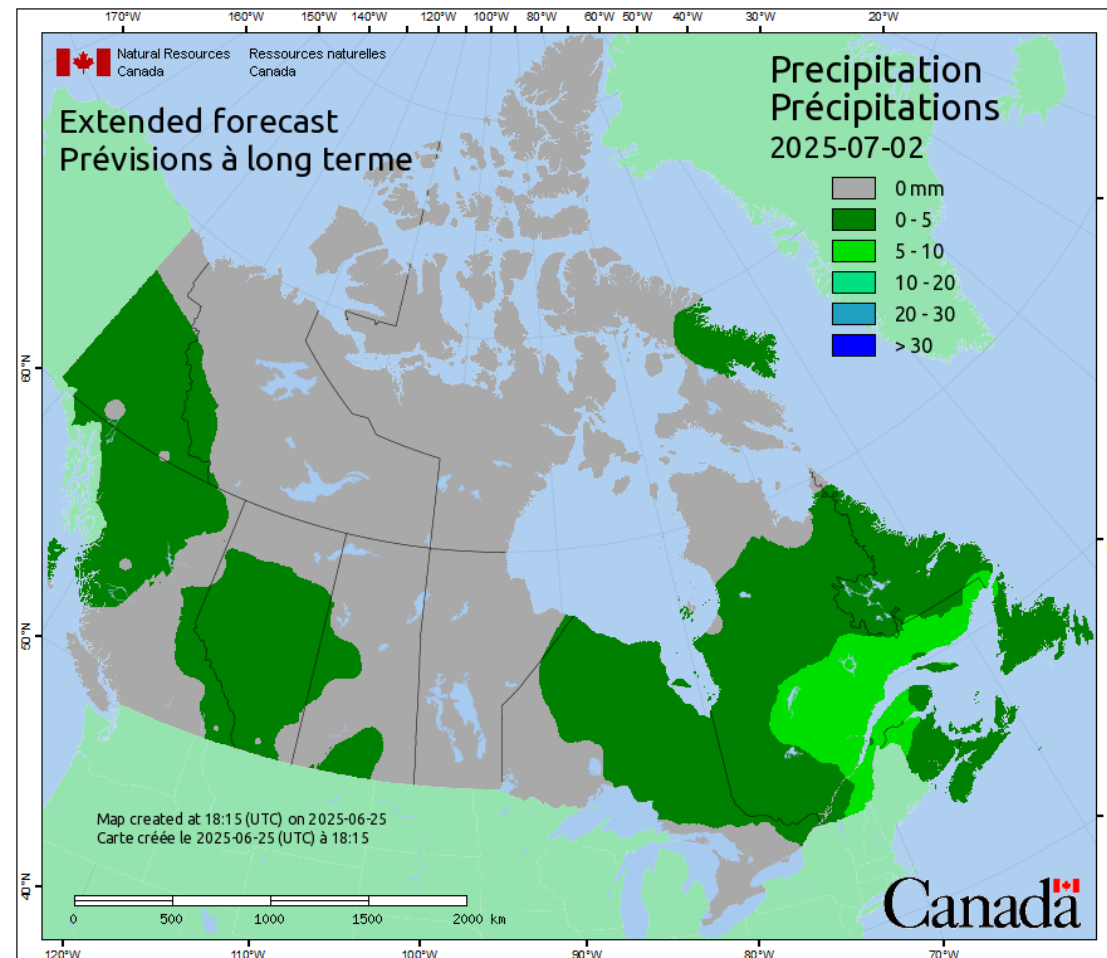
Outlook: Short Range (1-3 days)

Surface Forecast (**Wednesday 7/2**)

US NWS Forecast



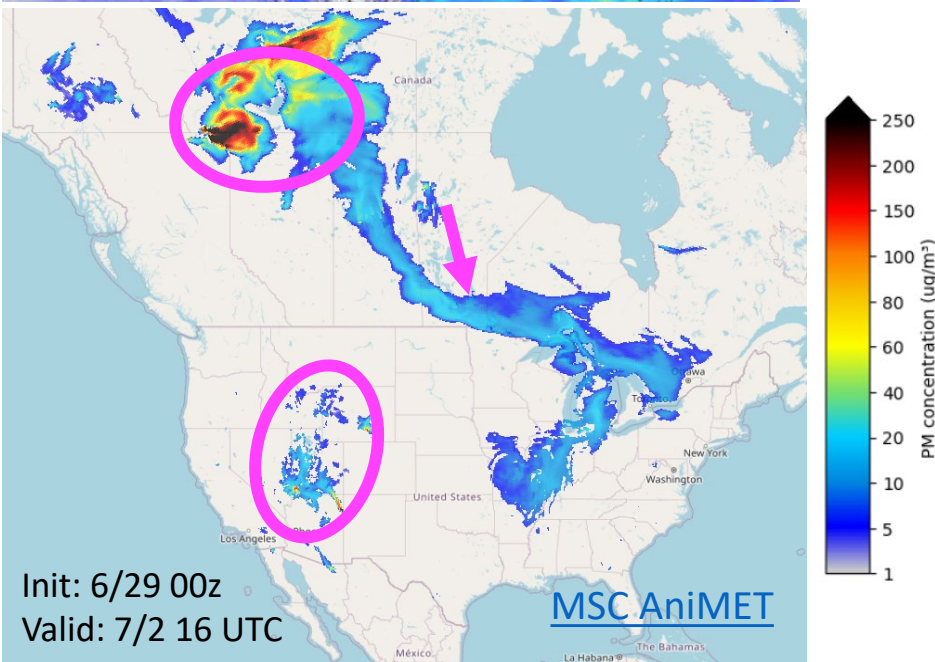
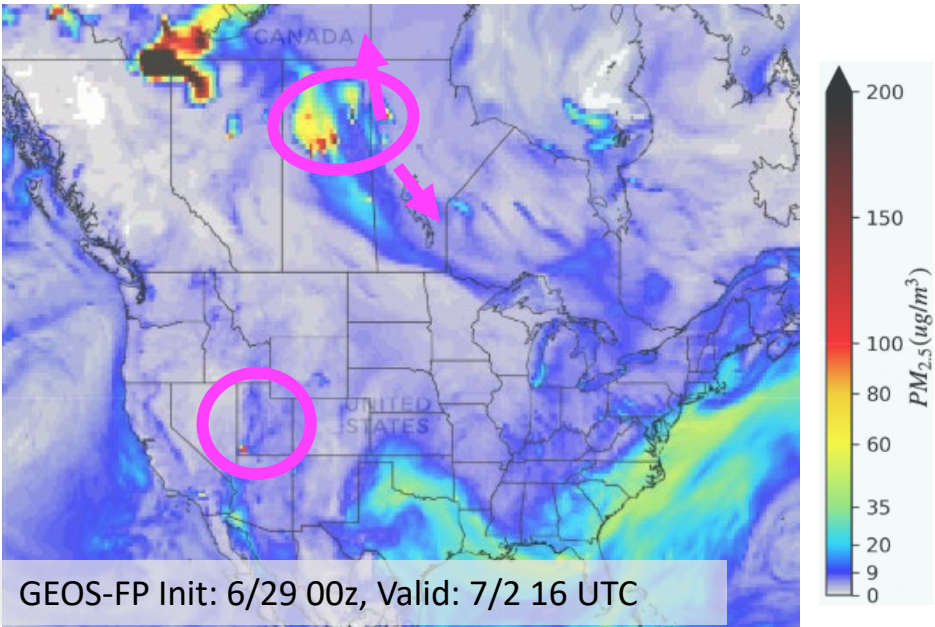
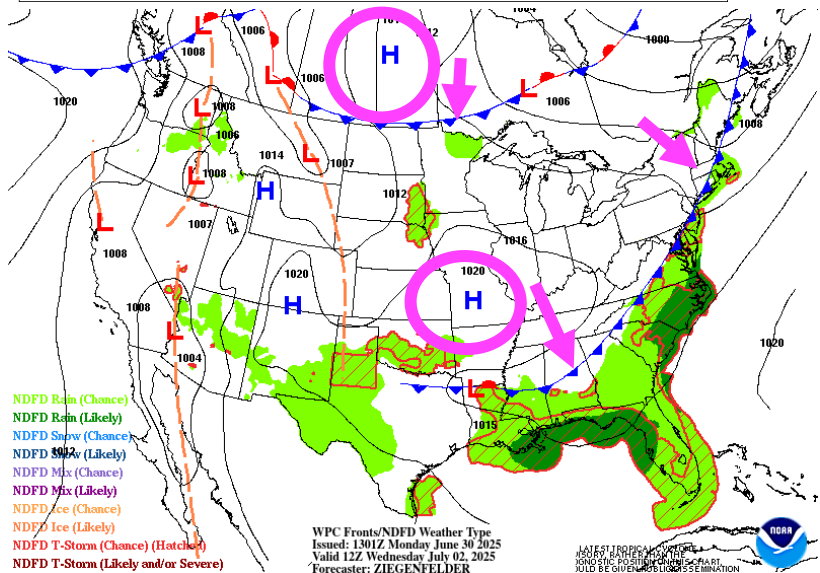
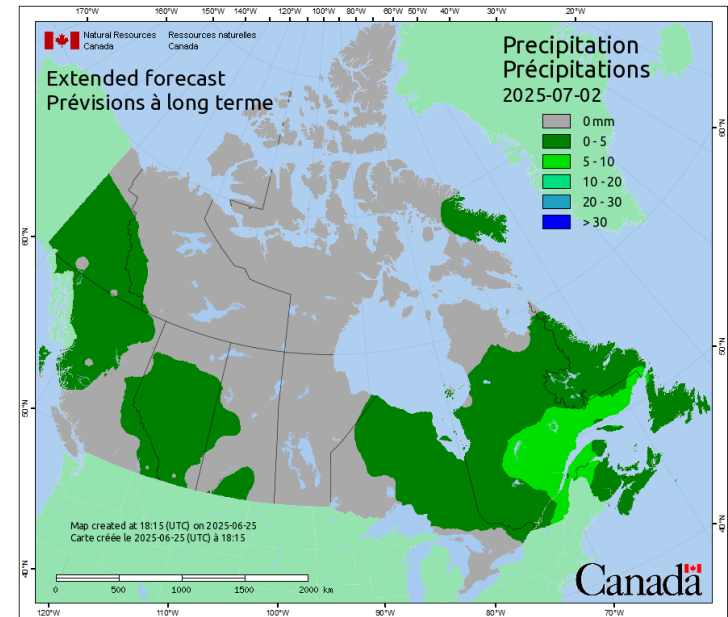
Environment Canada Forecast



Outlook: Short Range (1–3 days)

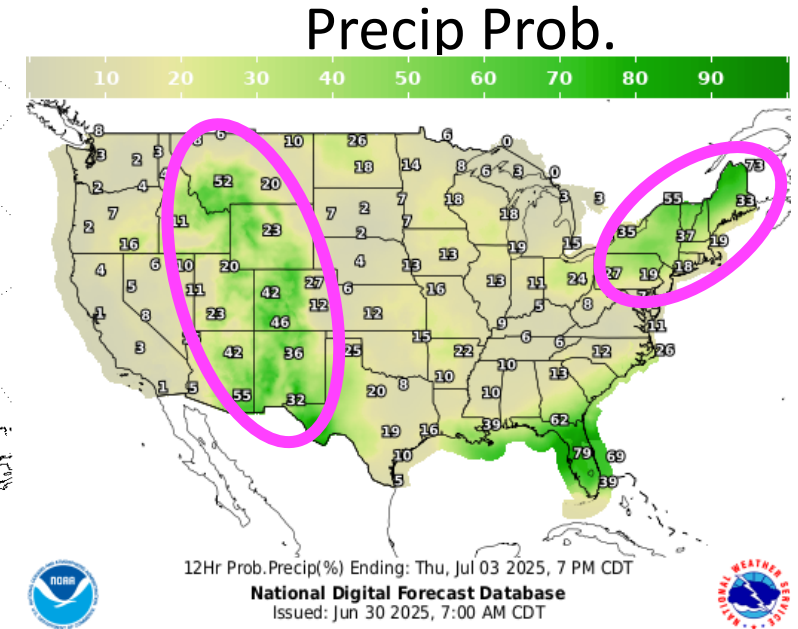
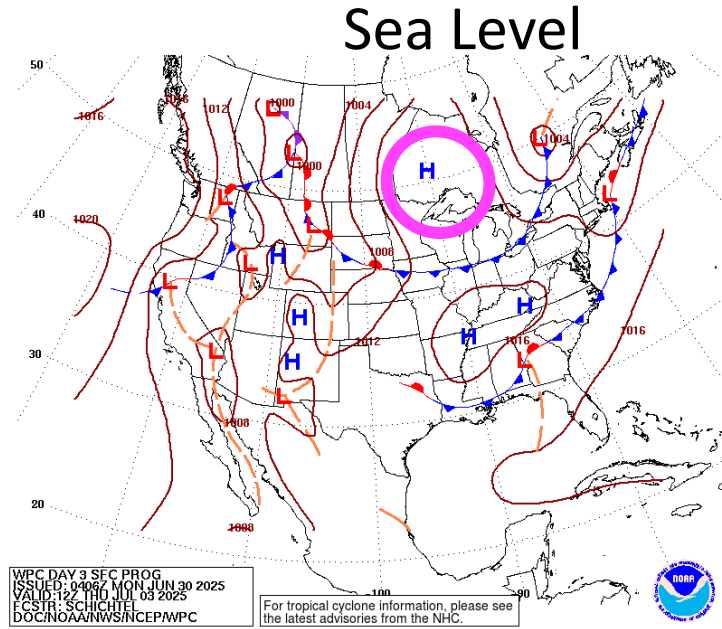
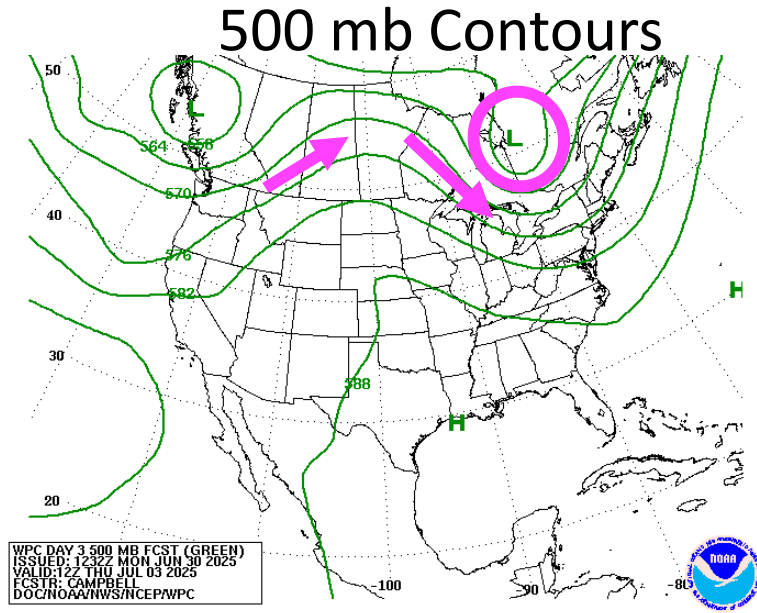
(Wednesday 7/2)

Surface Forecast

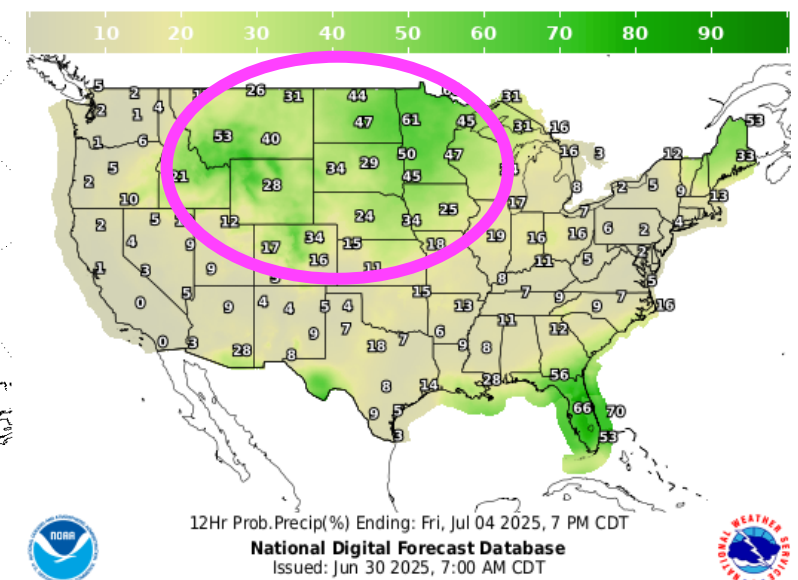
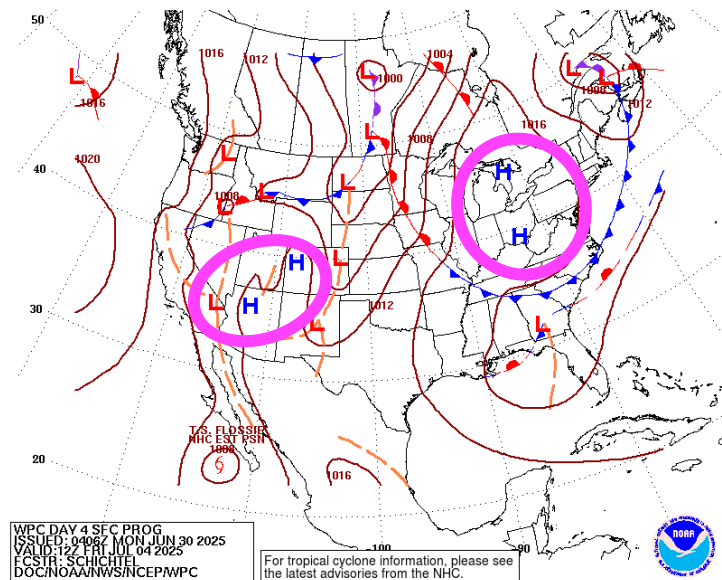
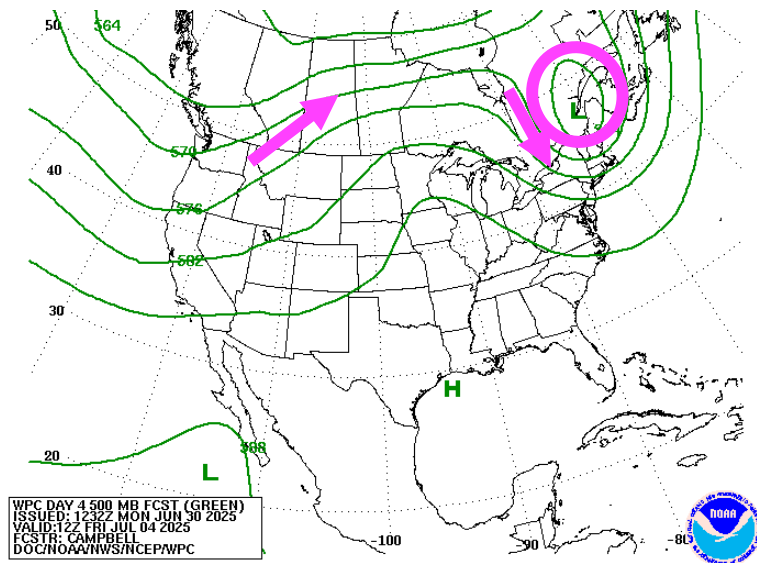


Outlook: Medium Range

Thurs
7/3



Friday
7/4



Summary

Monday :

T $\rightarrow$ W :

Th $\rightarrow$ F: