

Weather and Air Quality: Reflection and Outlook During Smoke Conditions

Presenter: Megan Christiansen
Date: July 8, 2025

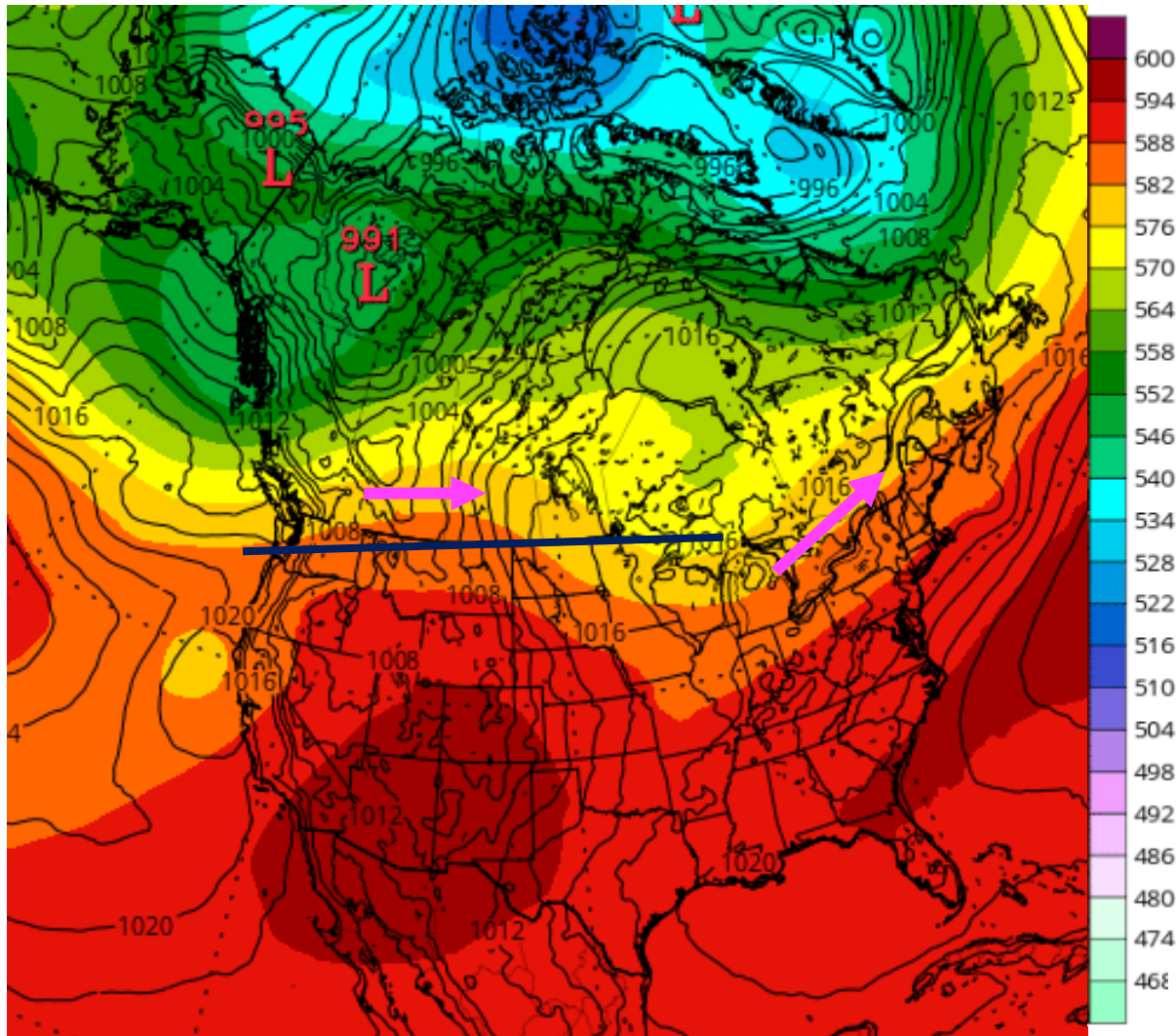


FireAQ is funded by NASA HAQ. We thank NASA GMAO and
NRL for the model data products.

EARTH SCIENCE
APPLIED SCIENCES

Current Status: July 8, 2025

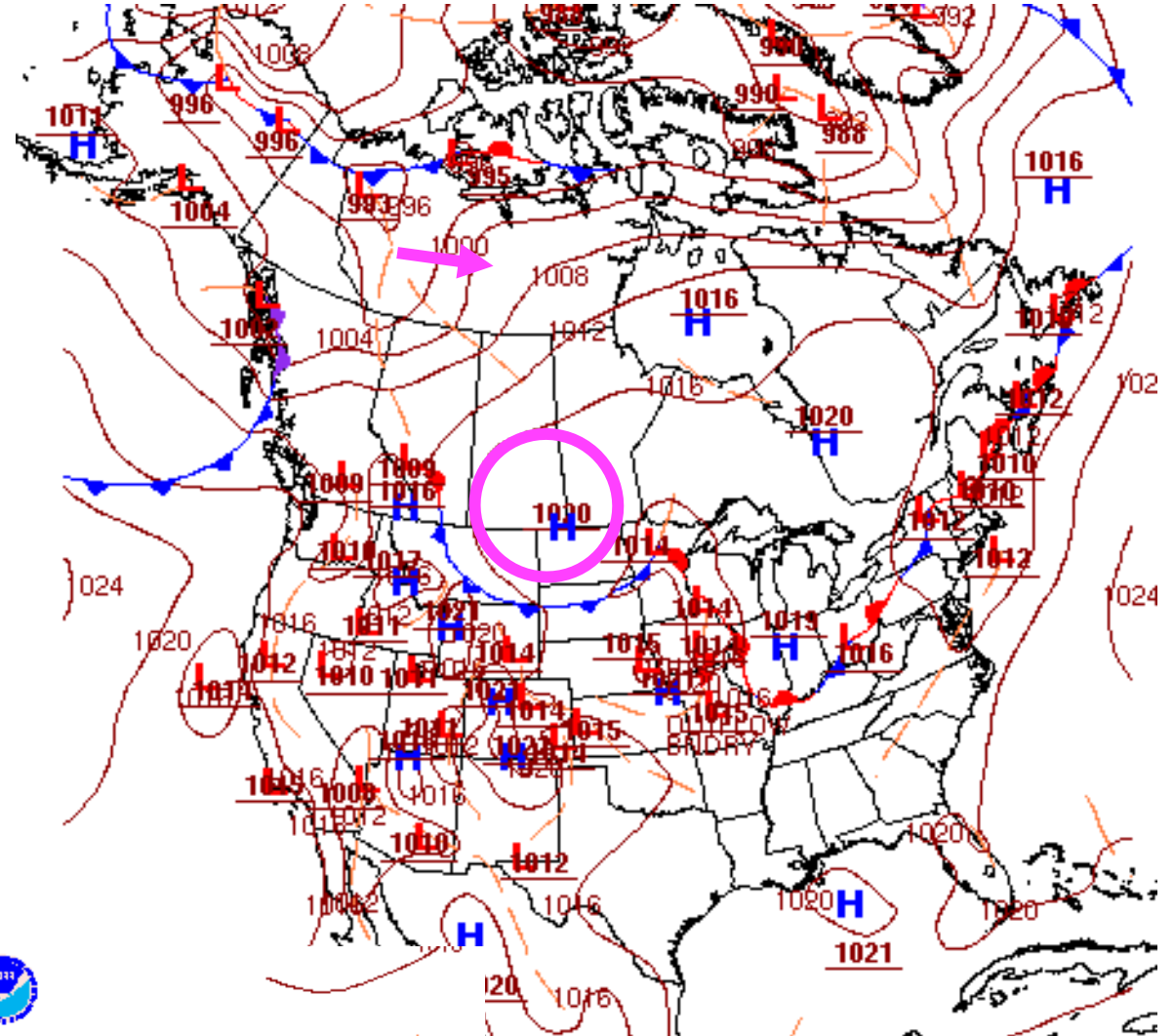
500 mb Contours



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

Init: 06z Jul 08 2025 Forecast Hour: [12] valid at 18z Tue, Jul 08 2025

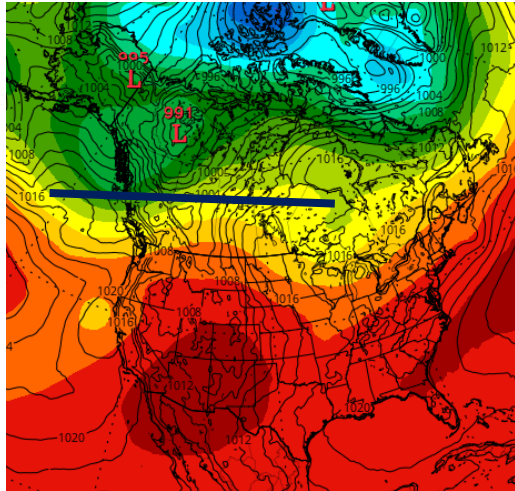
Surface Analysis



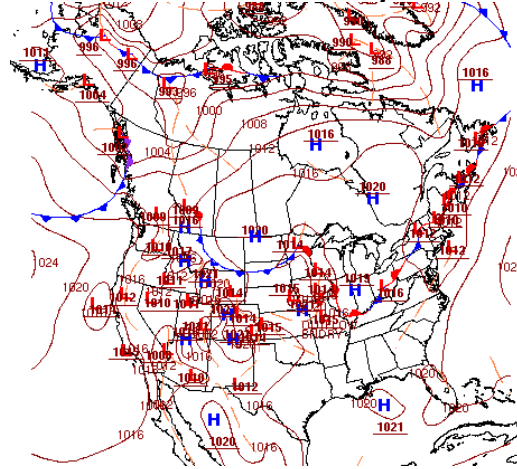
0900Z SURFACE ANALYSIS
DATE: TUE JUL 08 2025
ISSUED: 1030Z TUE JUL 08 2025
BY WPC ANALYST ASHERMAN
COLLABORATING CENTERS: WPC, NHC, OPC

Current Status: July 8, 2025

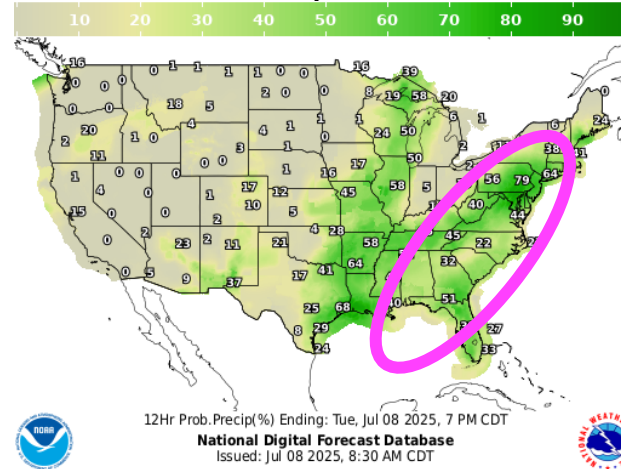
500 mb Contours



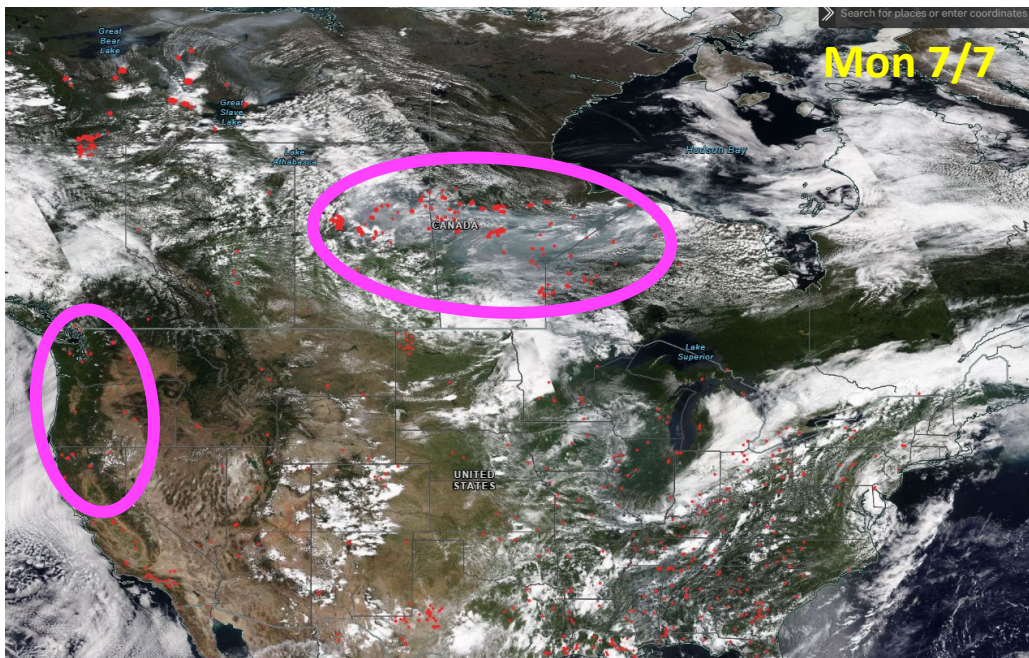
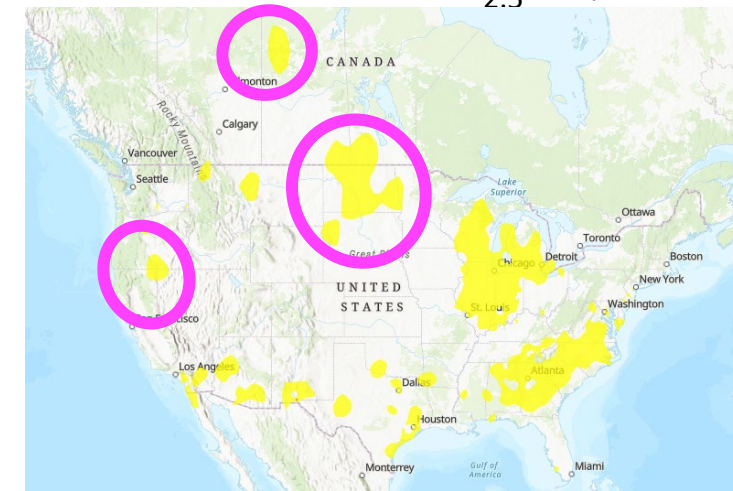
Surface Analysis



Precip. Prob.



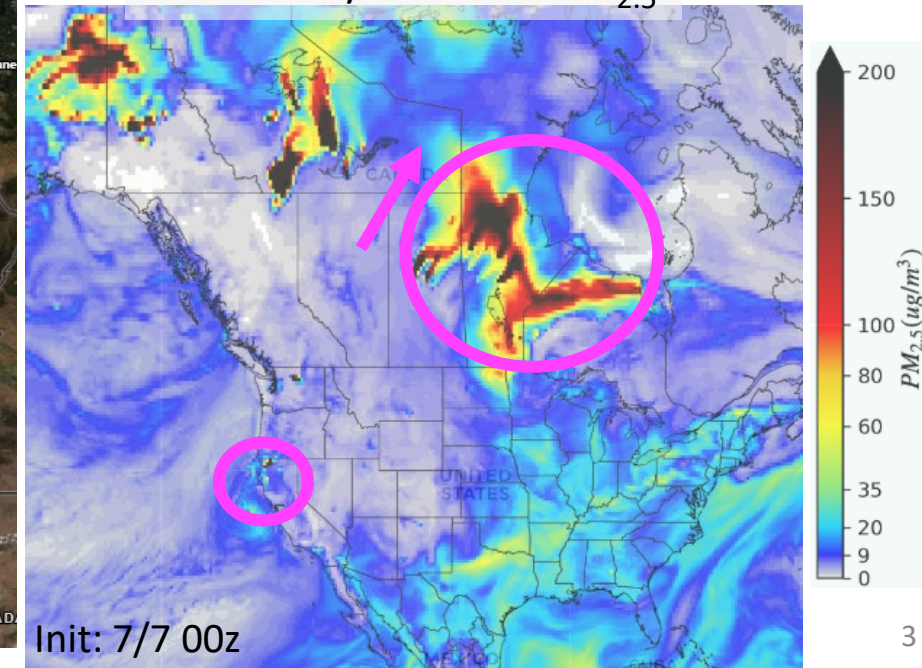
AirNow PM_{2.5} AQI



NASA worldview Fire/Thermal anomalies (NOAA-21 VIIRS)

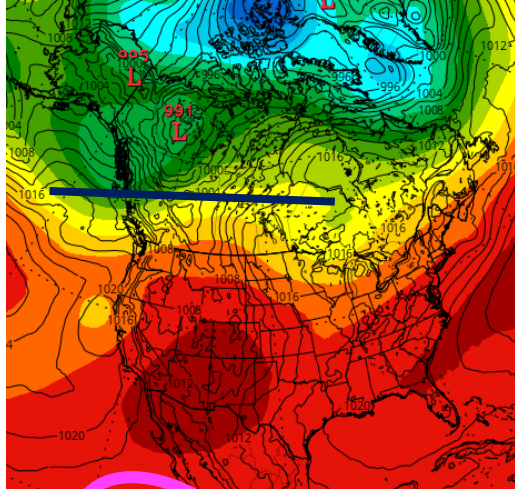


GEOS-FP 7/8 16 UTC PM_{2.5}

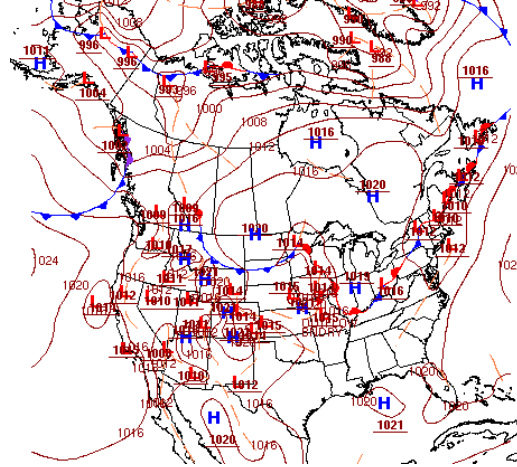


Current Status: July 8, 2025

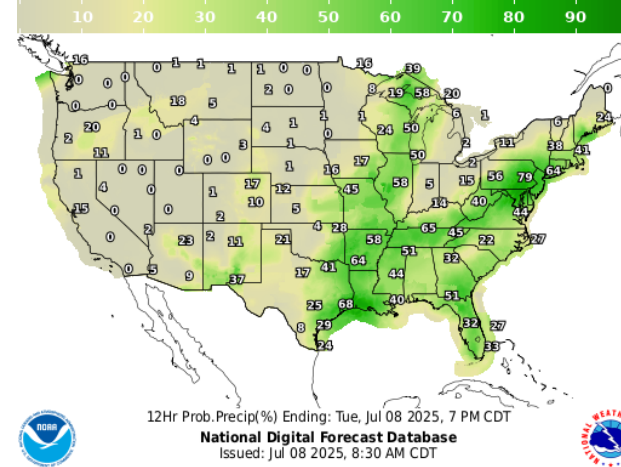
500 mb Contours



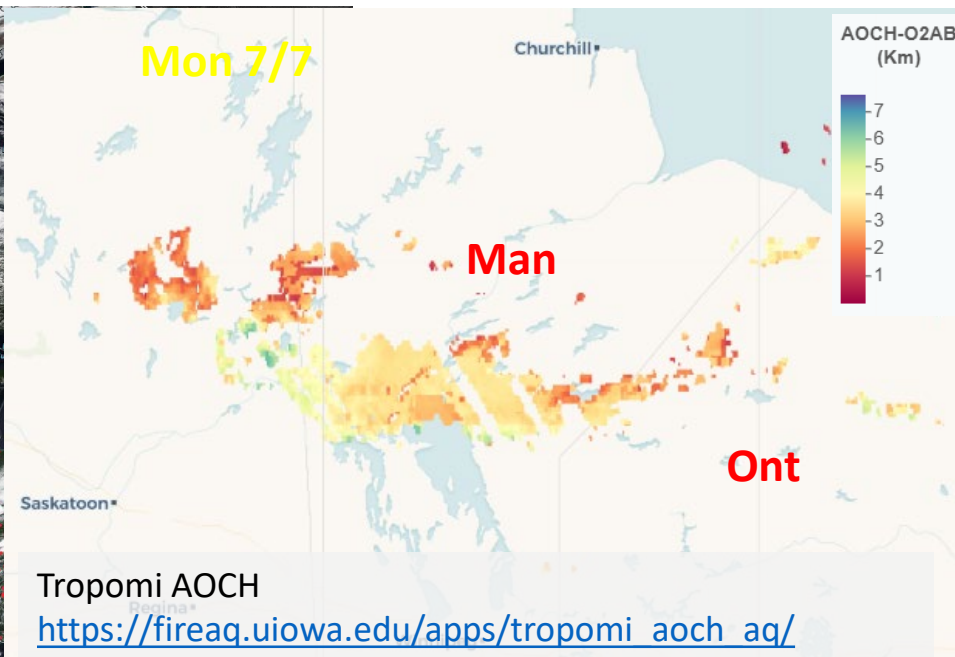
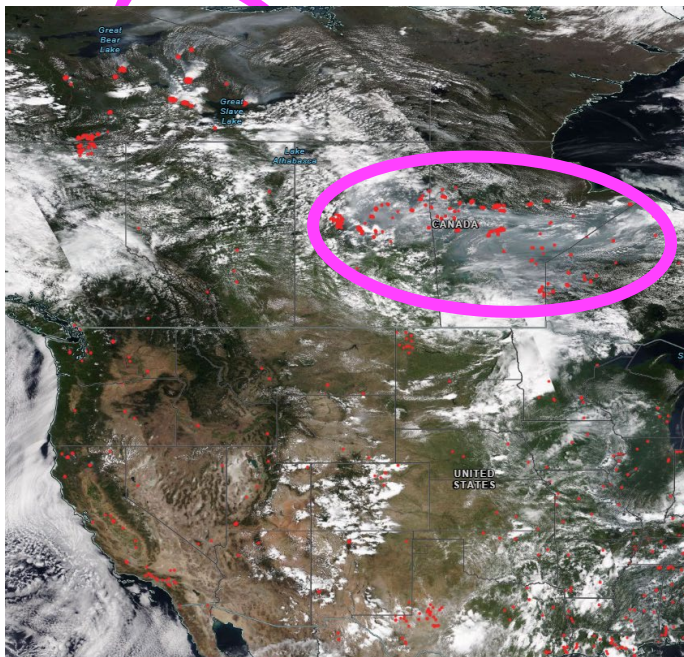
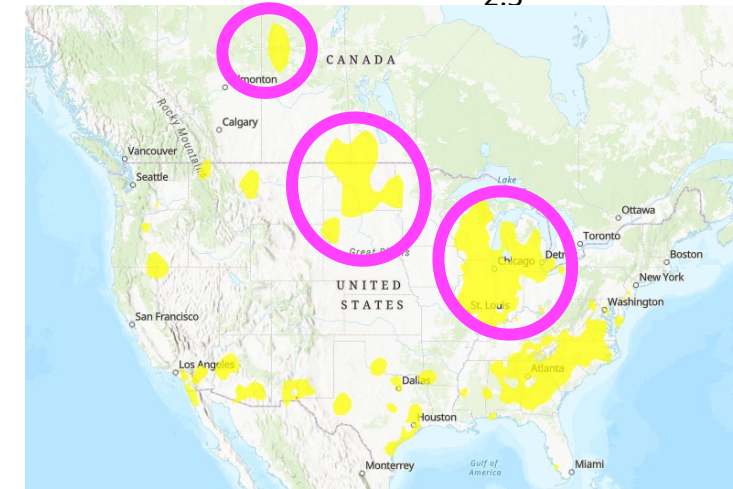
Surface Analysis



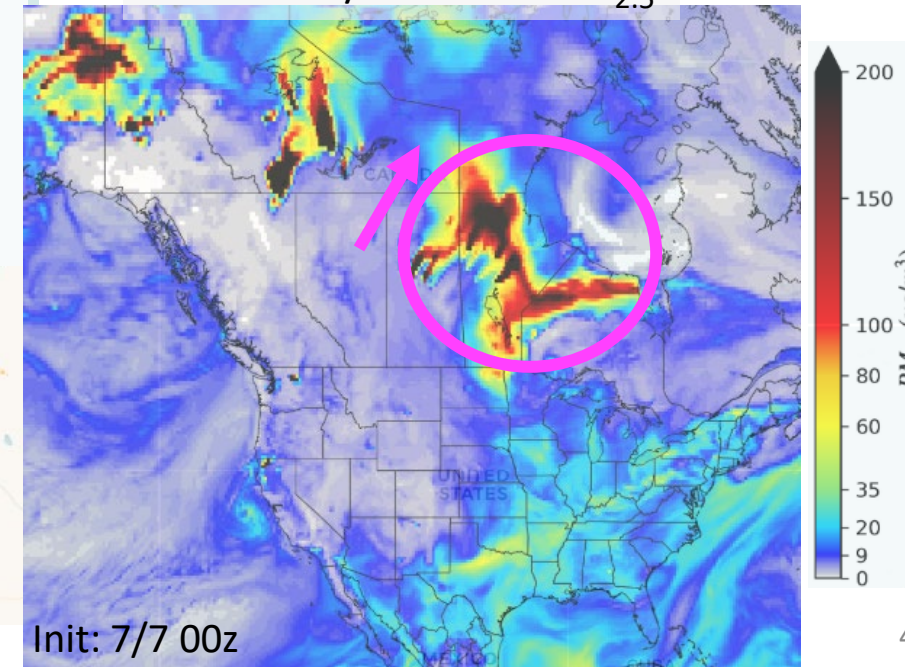
Precip. Prob.



AirNow PM_{2.5} AQI

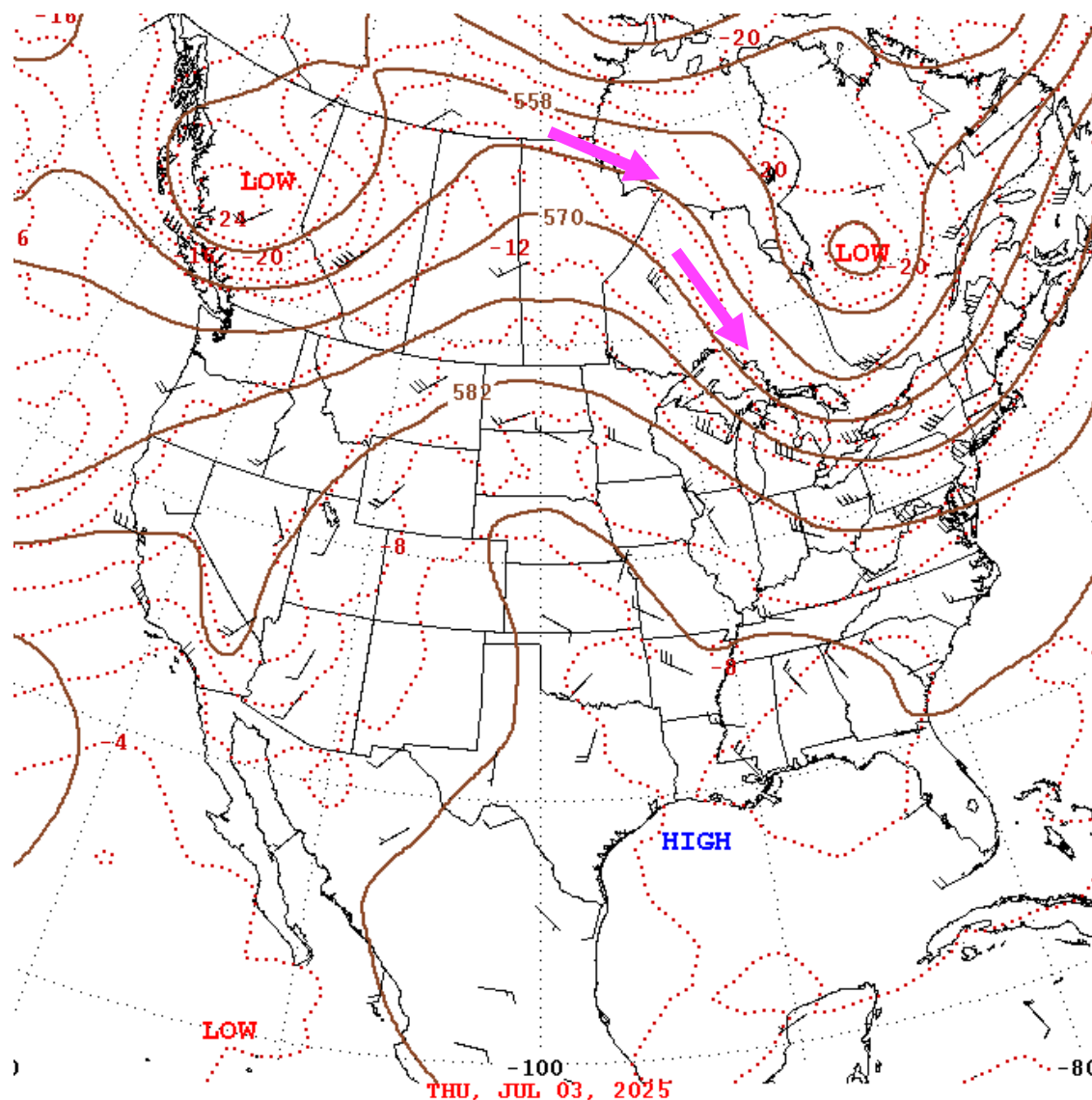


GEOS-FP 7/8 16 UTC PM_{2.5}



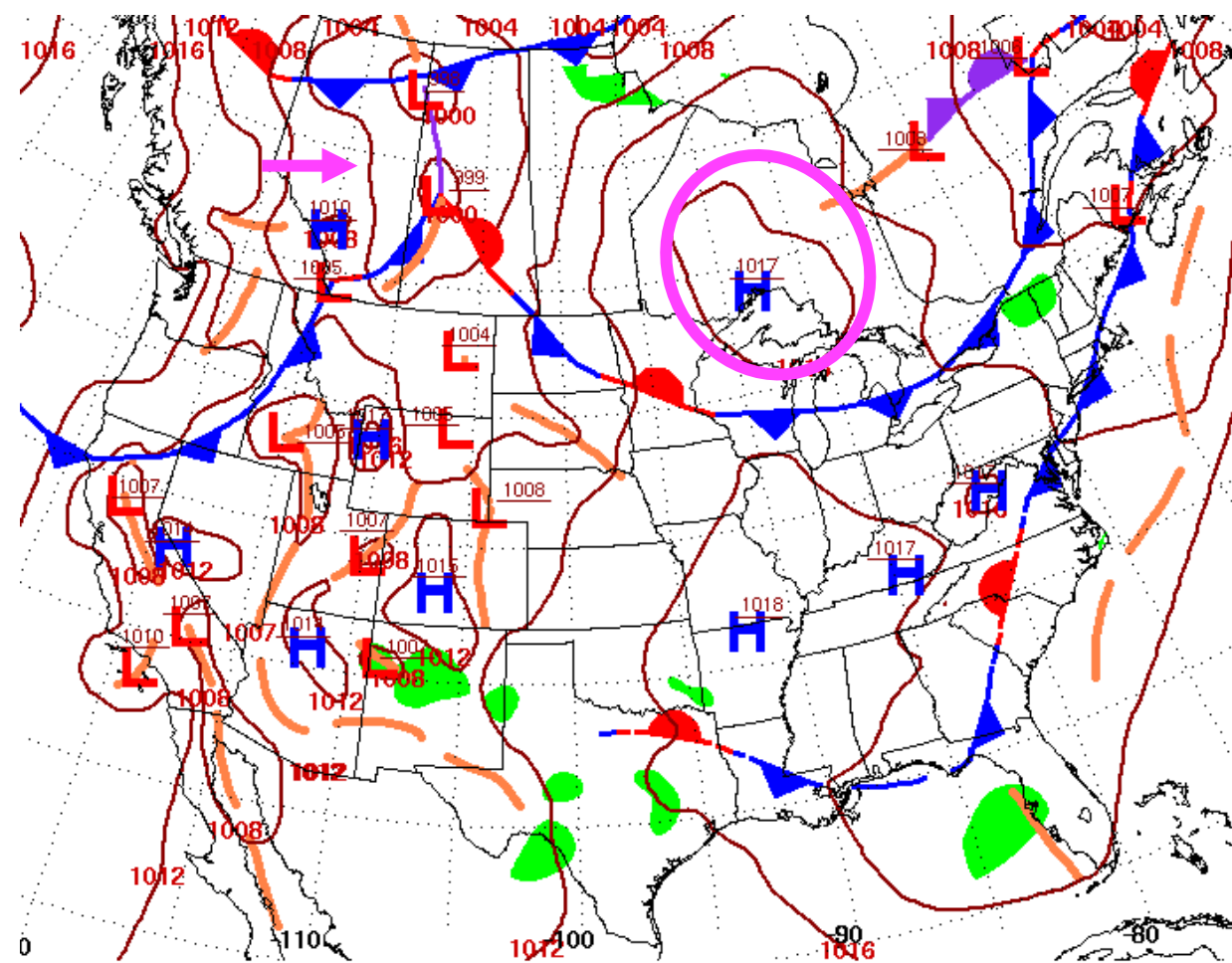
Air Quality Reflection: Thursday July 3, 2025

500 mb Contours



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

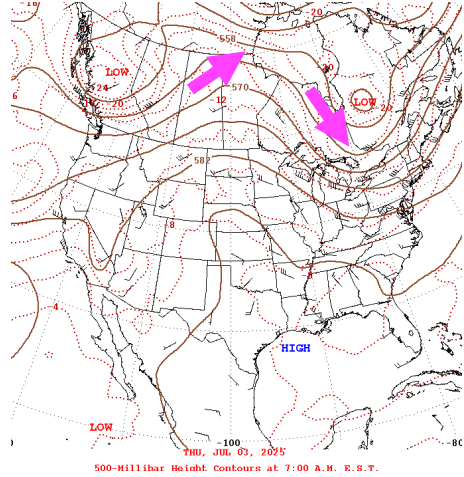
Surface Weather



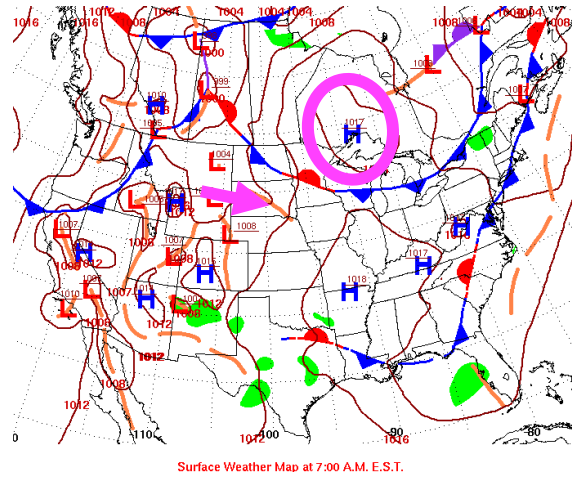
Surface Weather Map at 7:00 A.M. E.S.T.

Air Quality Reflection: Thursday July 3, 2025

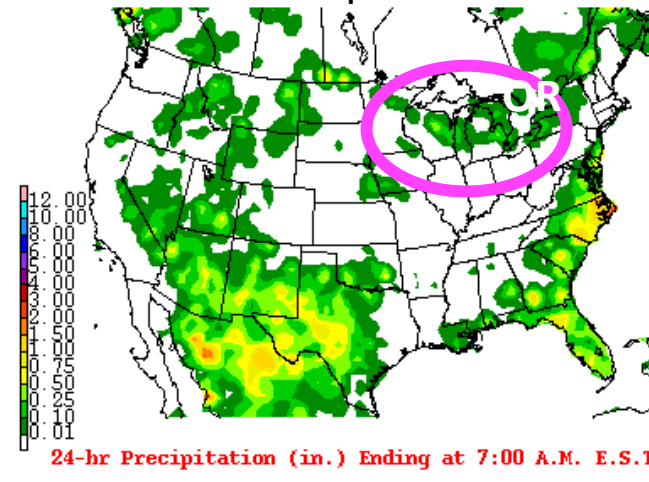
500 mb Contours



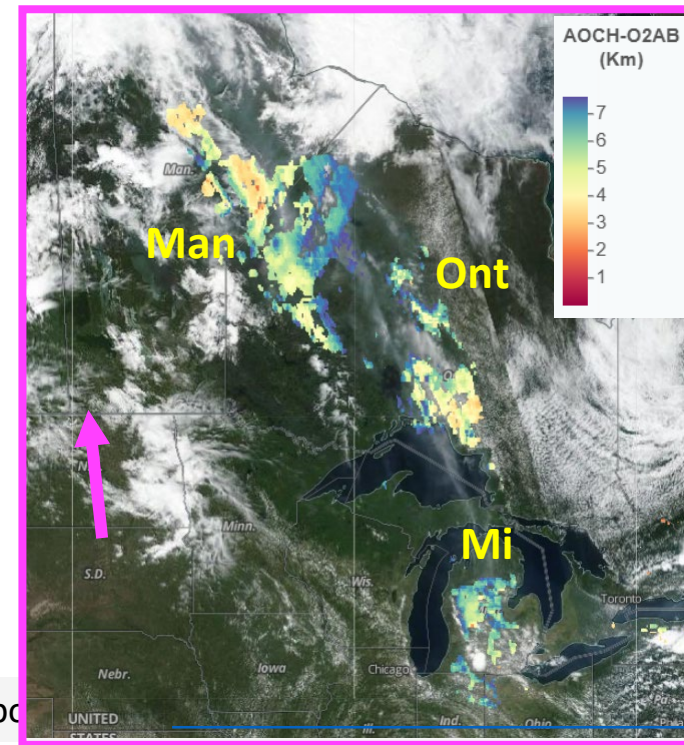
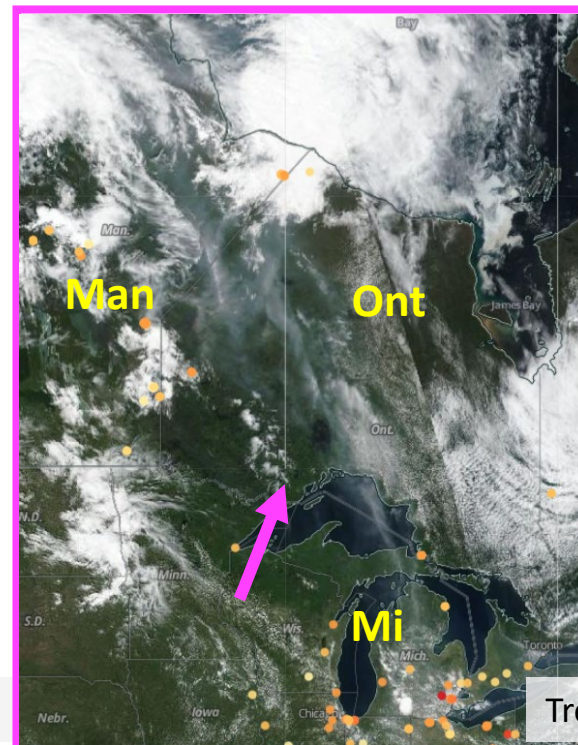
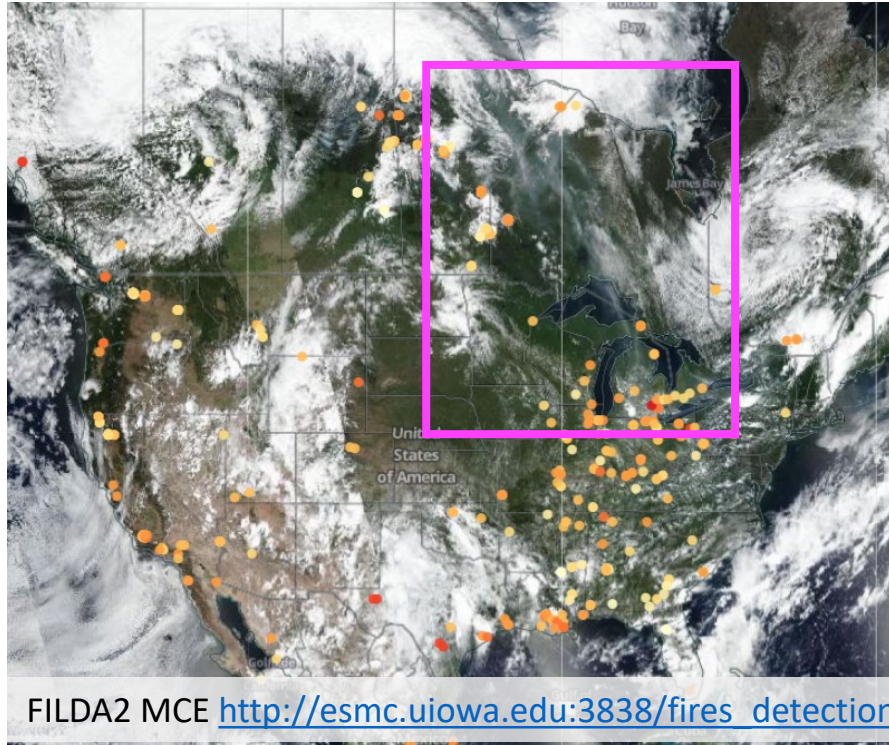
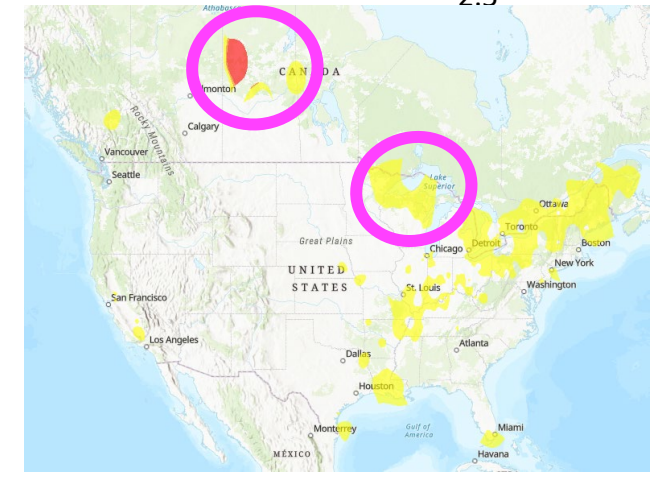
Surface Weather



Precipitation

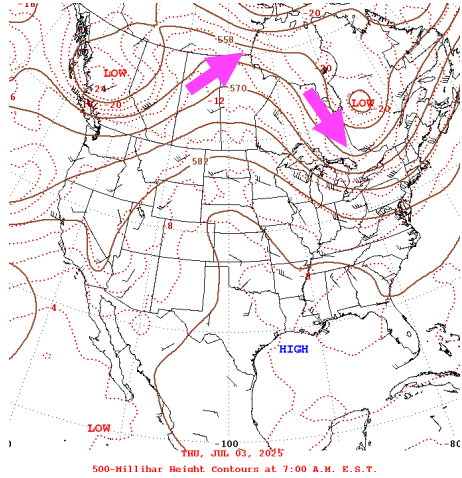


AirNow PM_{2.5} AQI

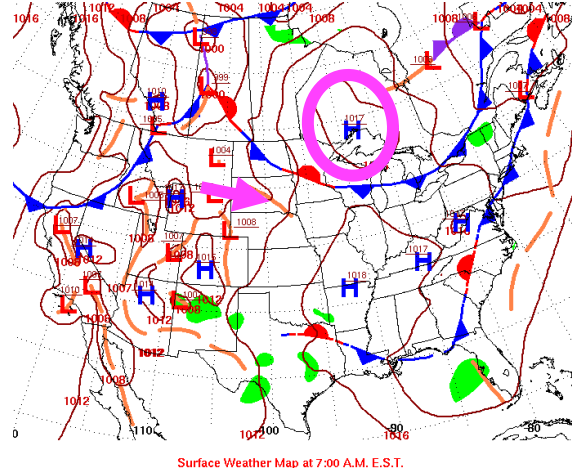


Air Quality Reflection: Thursday July 3, 2025

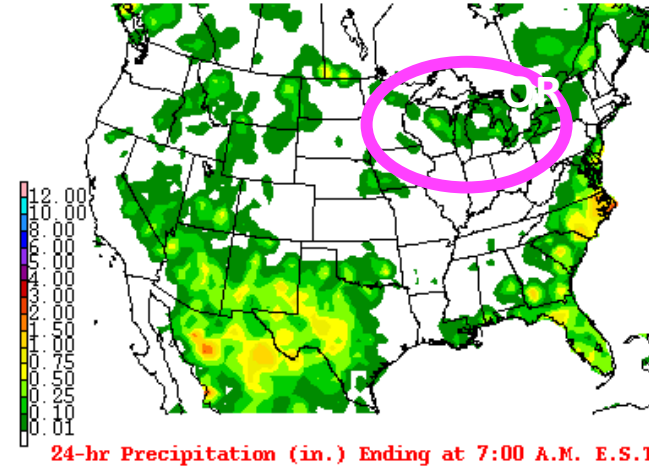
500 mb Contours



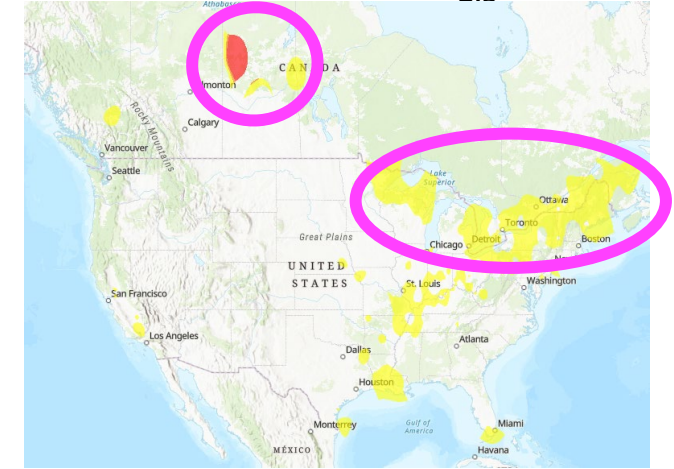
Surface Weather



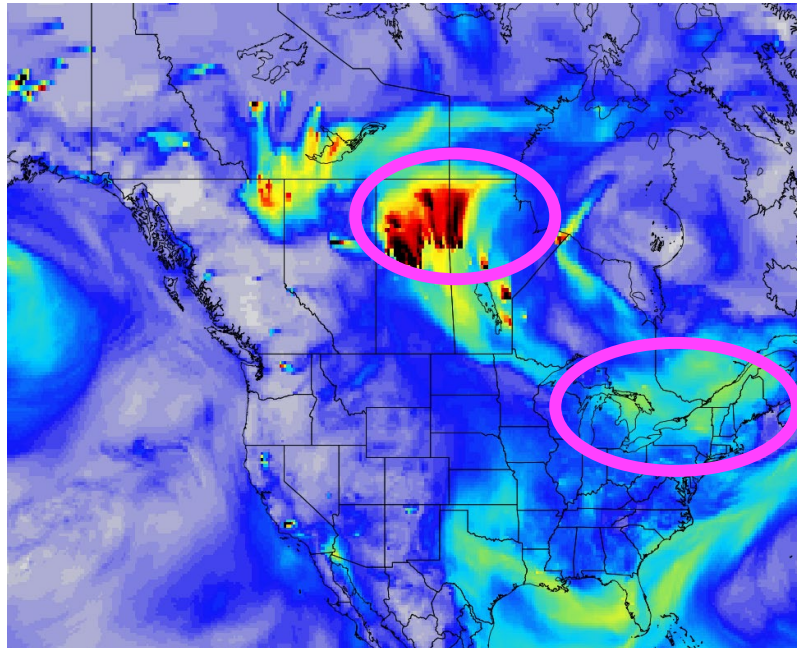
Precipitation



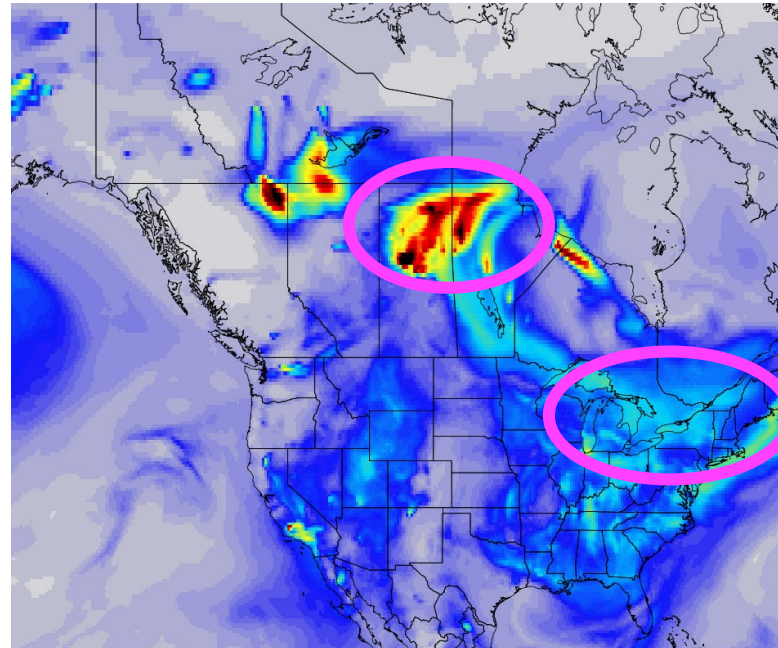
AirNow PM_{2.5} AQI



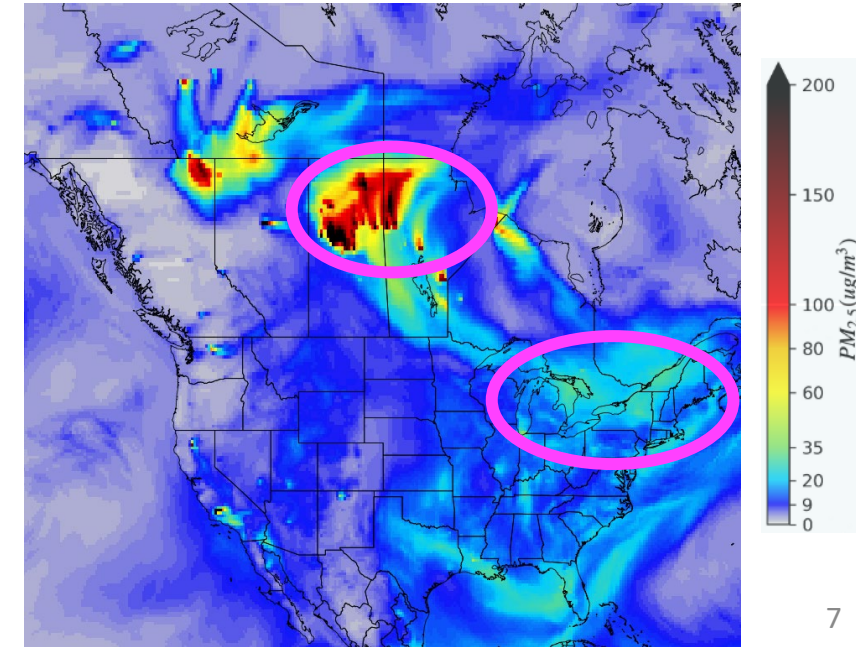
GEOS-FP



GEOS-CF

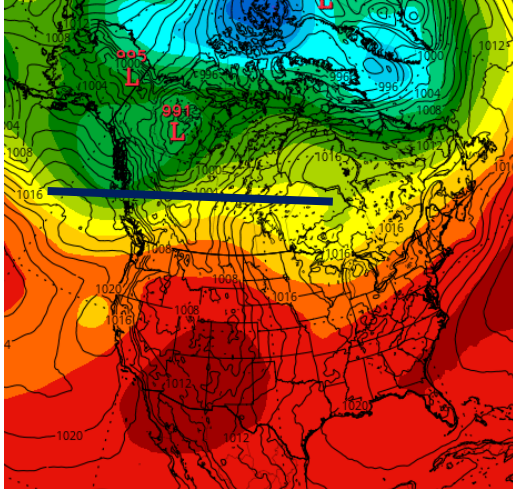


Ensemble

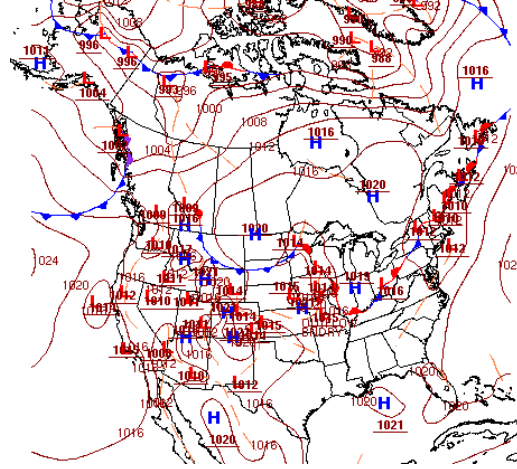


Current Status: July 8, 2025

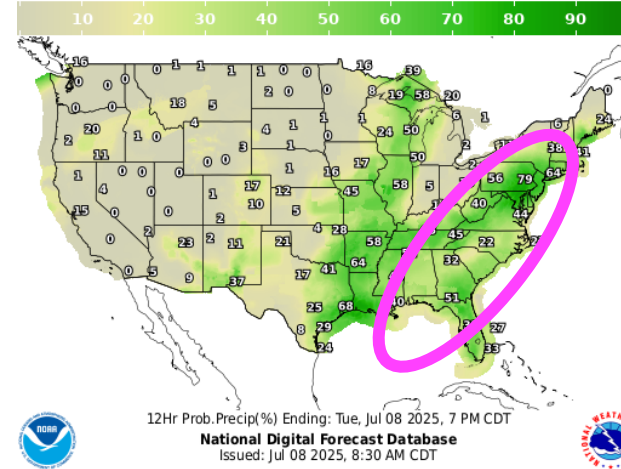
500 mb Contours



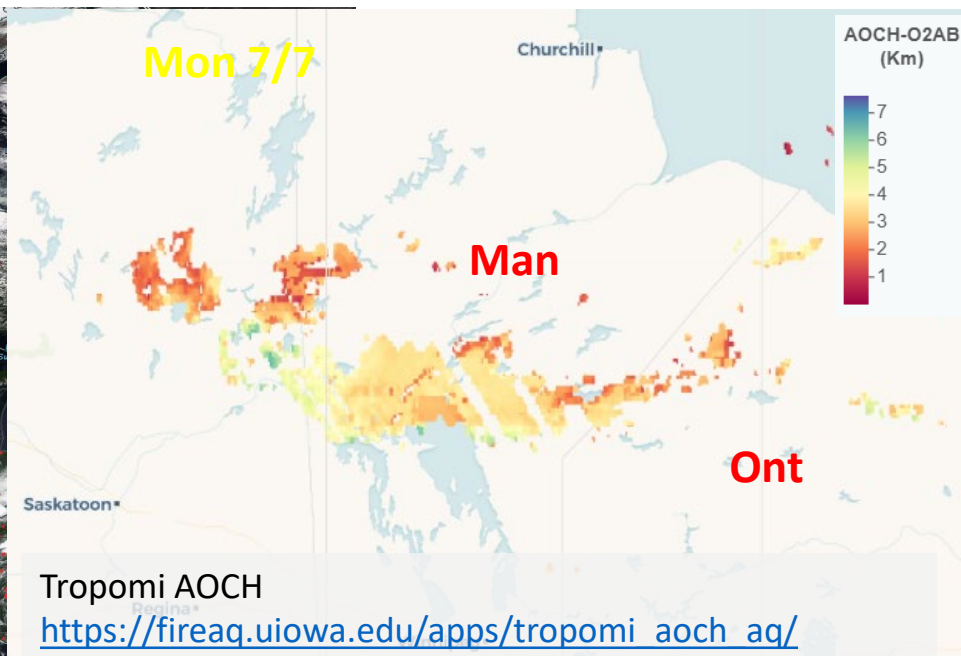
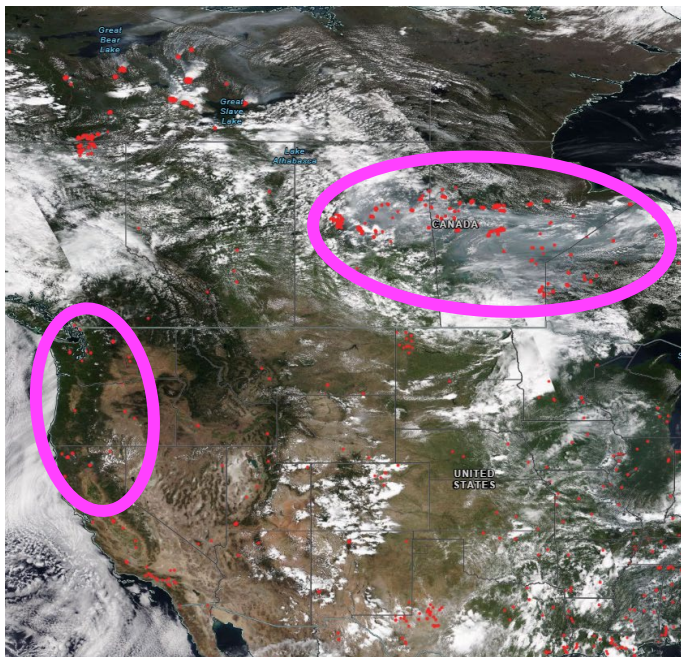
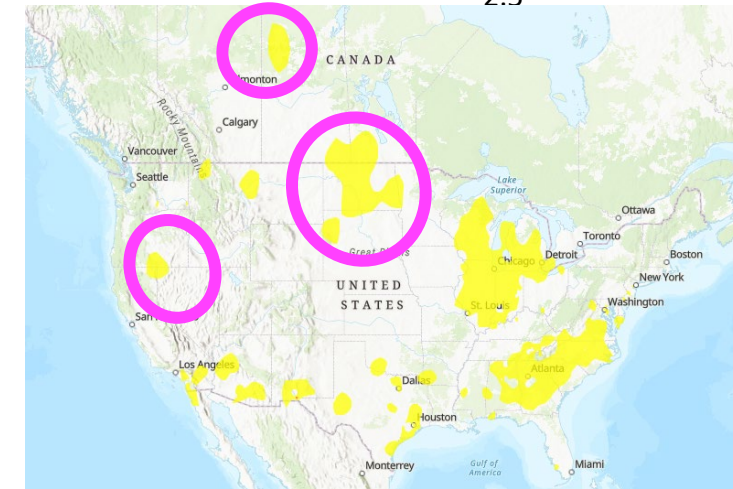
Surface Analysis



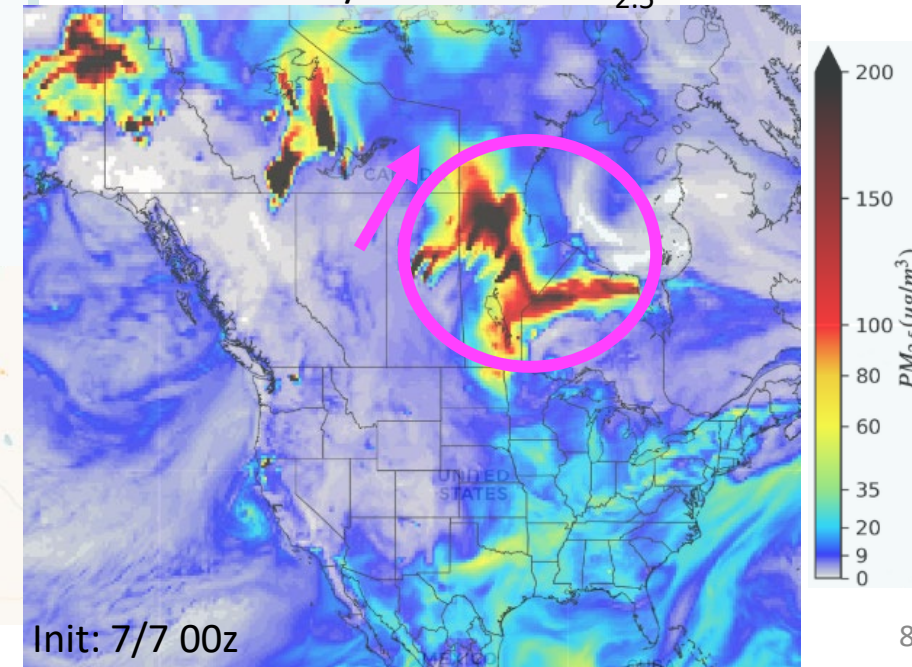
Precip. Prob.



AirNow PM_{2.5} AQI



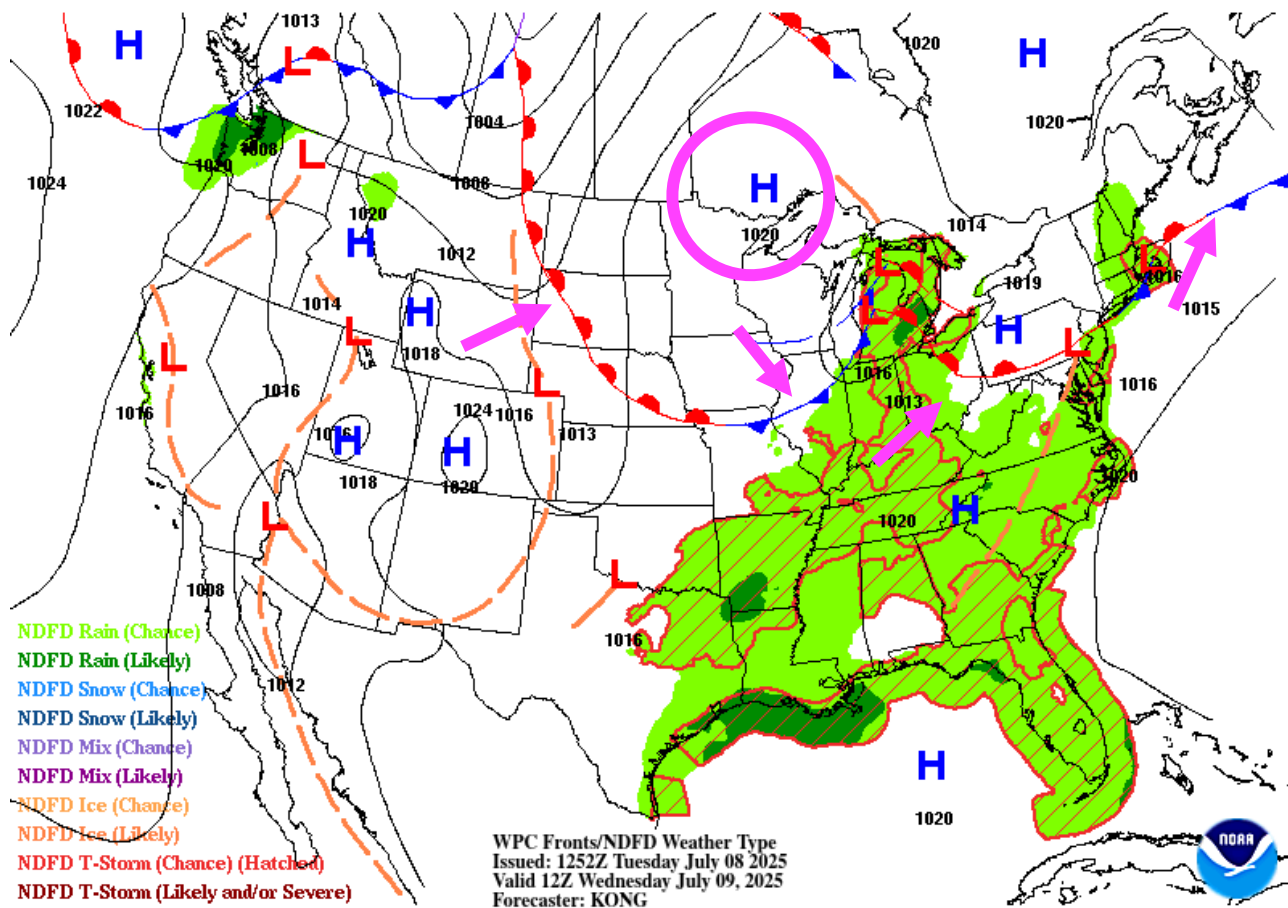
GEOS-FP 7/8 16 UTC PM_{2.5}



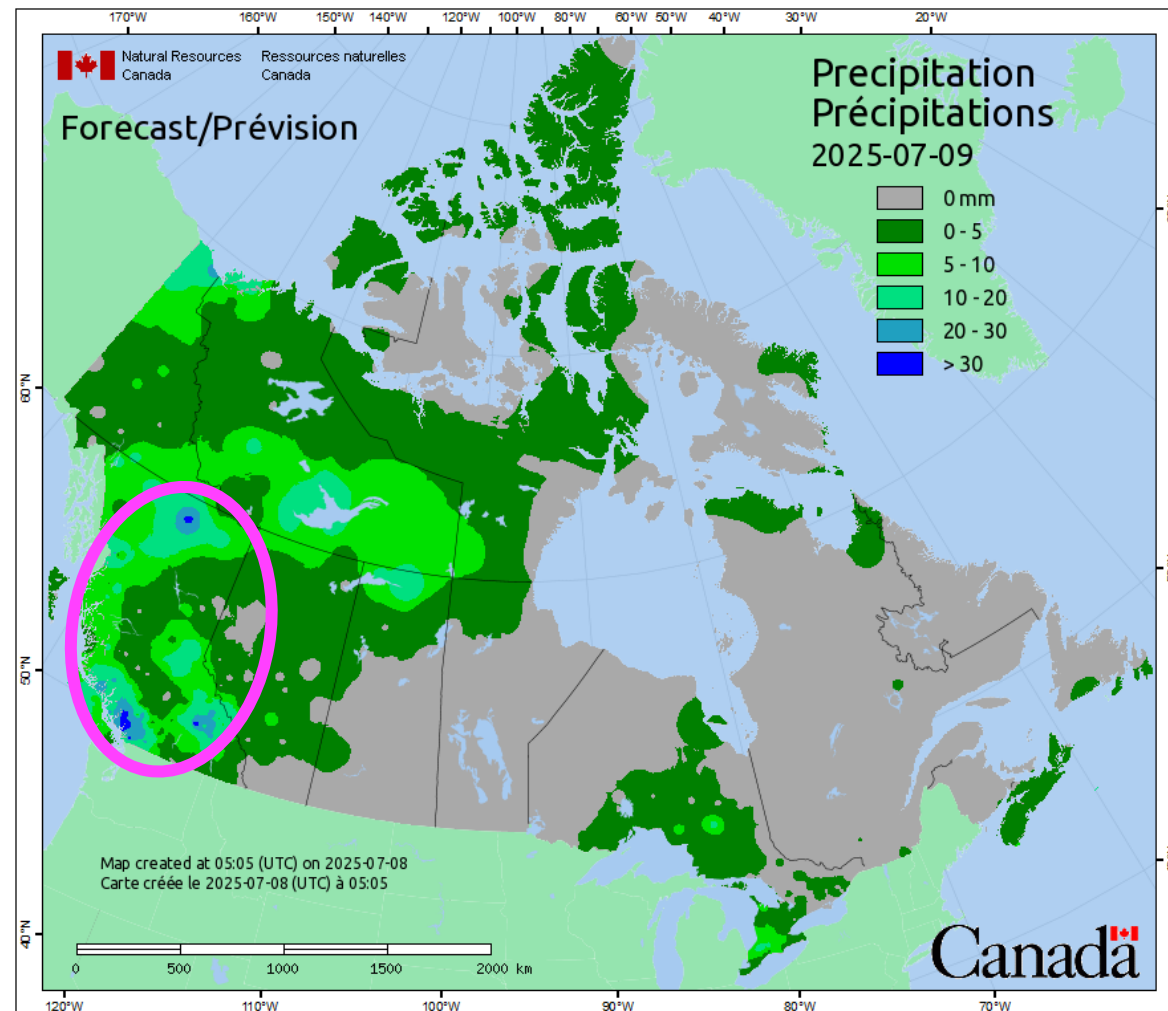
Outlook: Short Range (1–3 days)

Surface Forecast (**Wednesday 7/9**)

US NWS Forecast

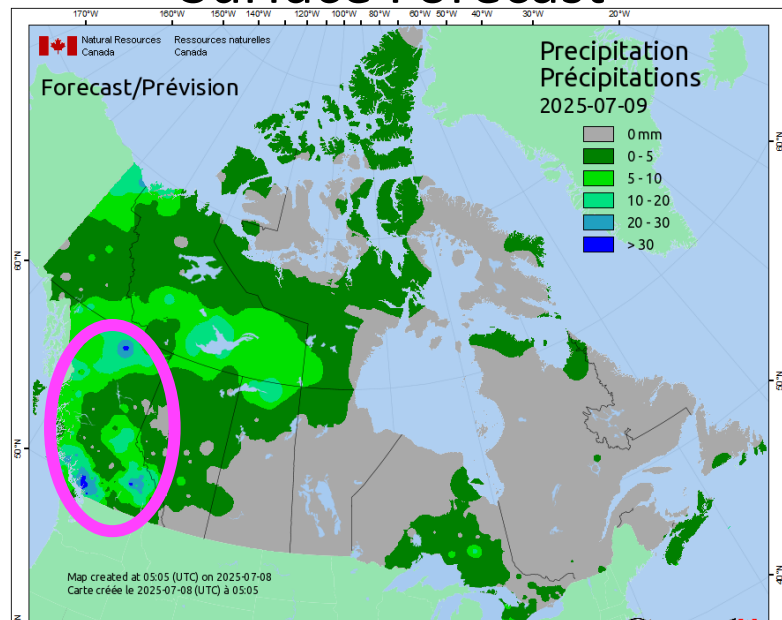


Environment Canada Forecast



Outlook: Short Range (1–3 days)

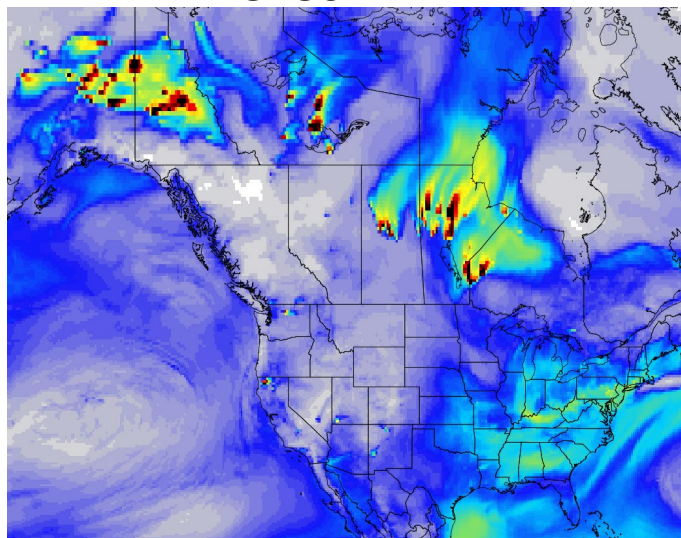
Surface Forecast



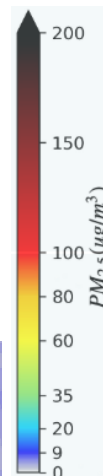
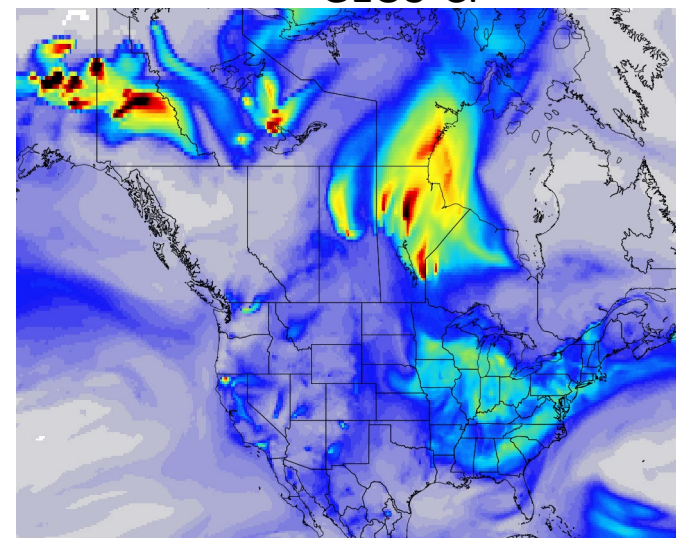
(Wednesday 7/9)

Model Means $PM_{2.5}$

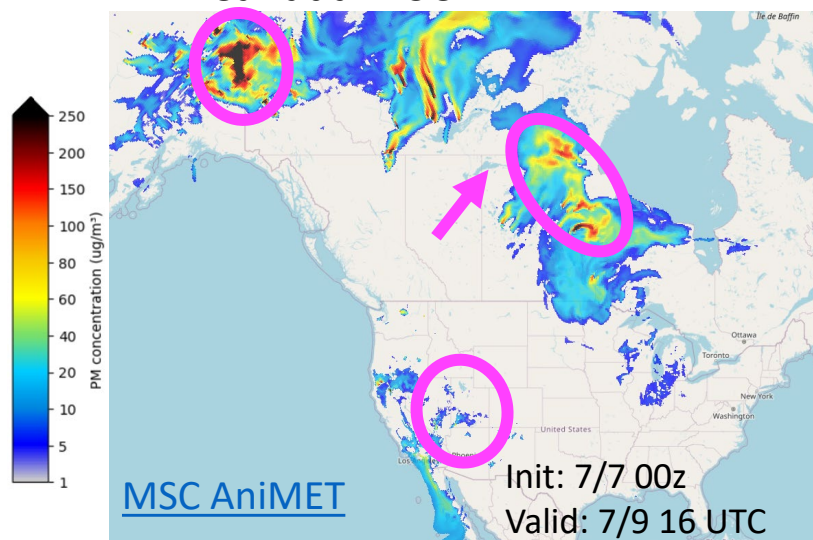
GEOS-FP



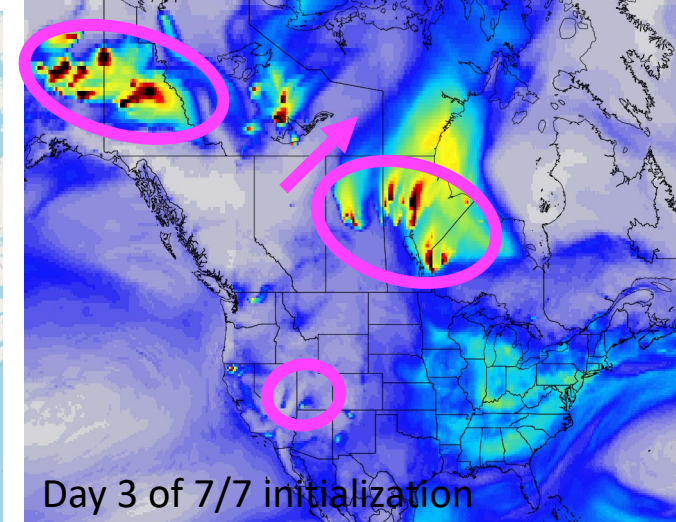
GEOS-CF



Canada MSC AniMET



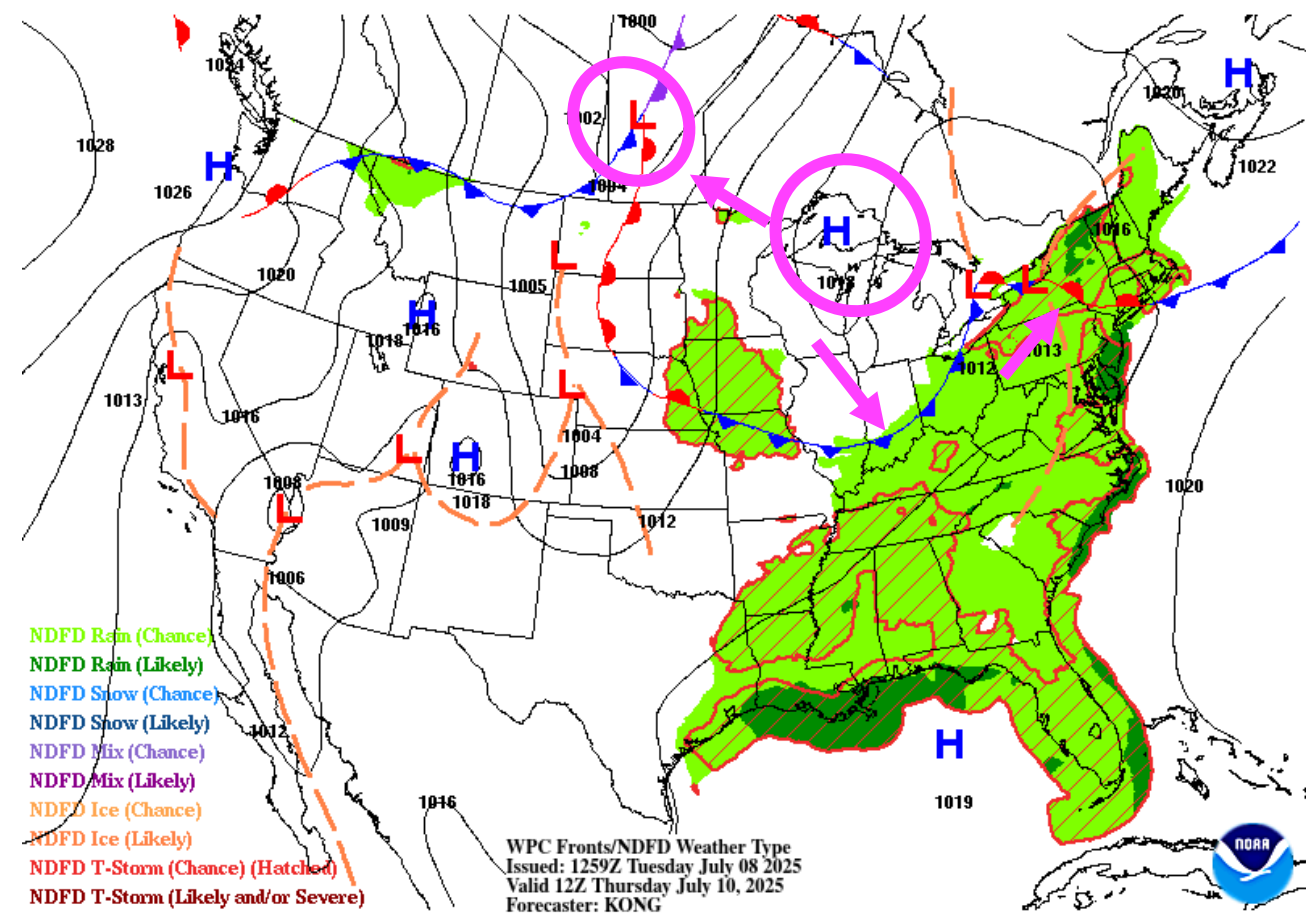
Ensemble



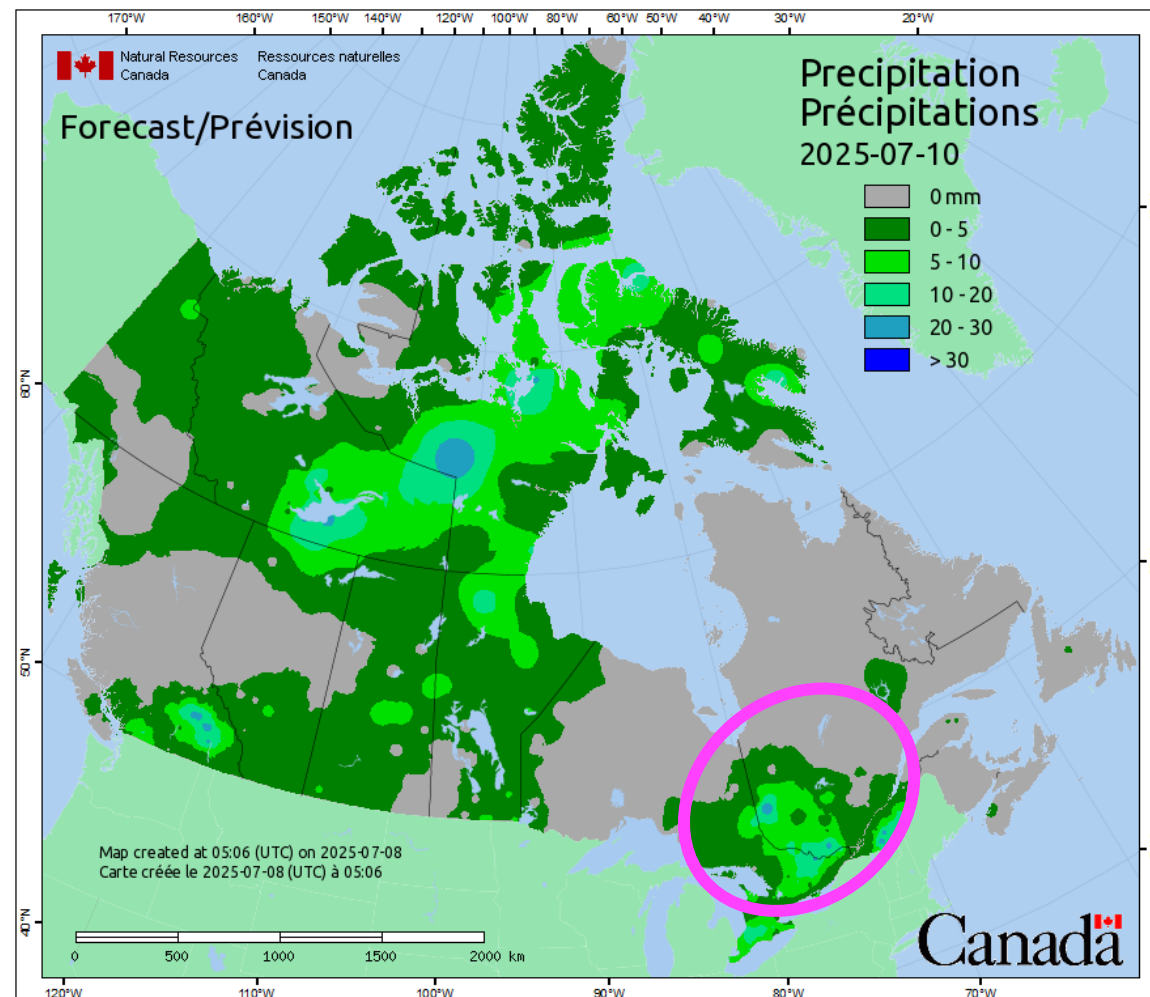
Outlook: Short Range (1–3 days)

Surface Forecast (**Thursday 7/10**)

US NWS Forecast



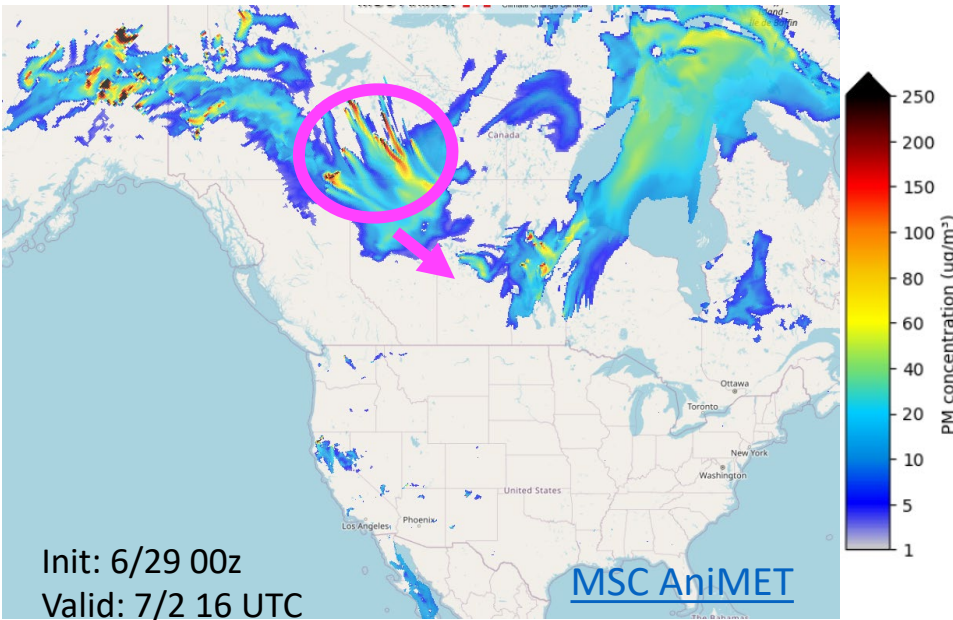
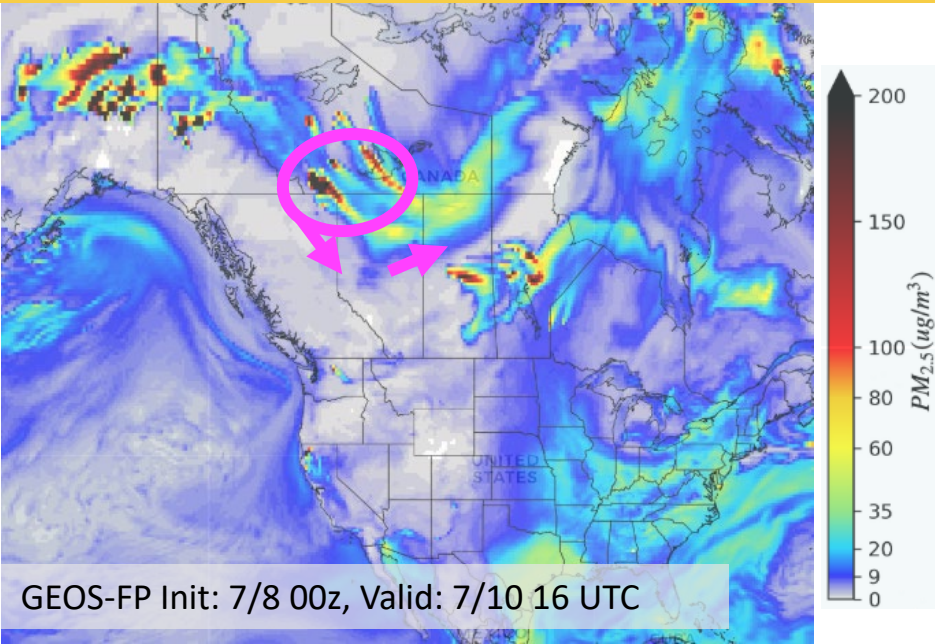
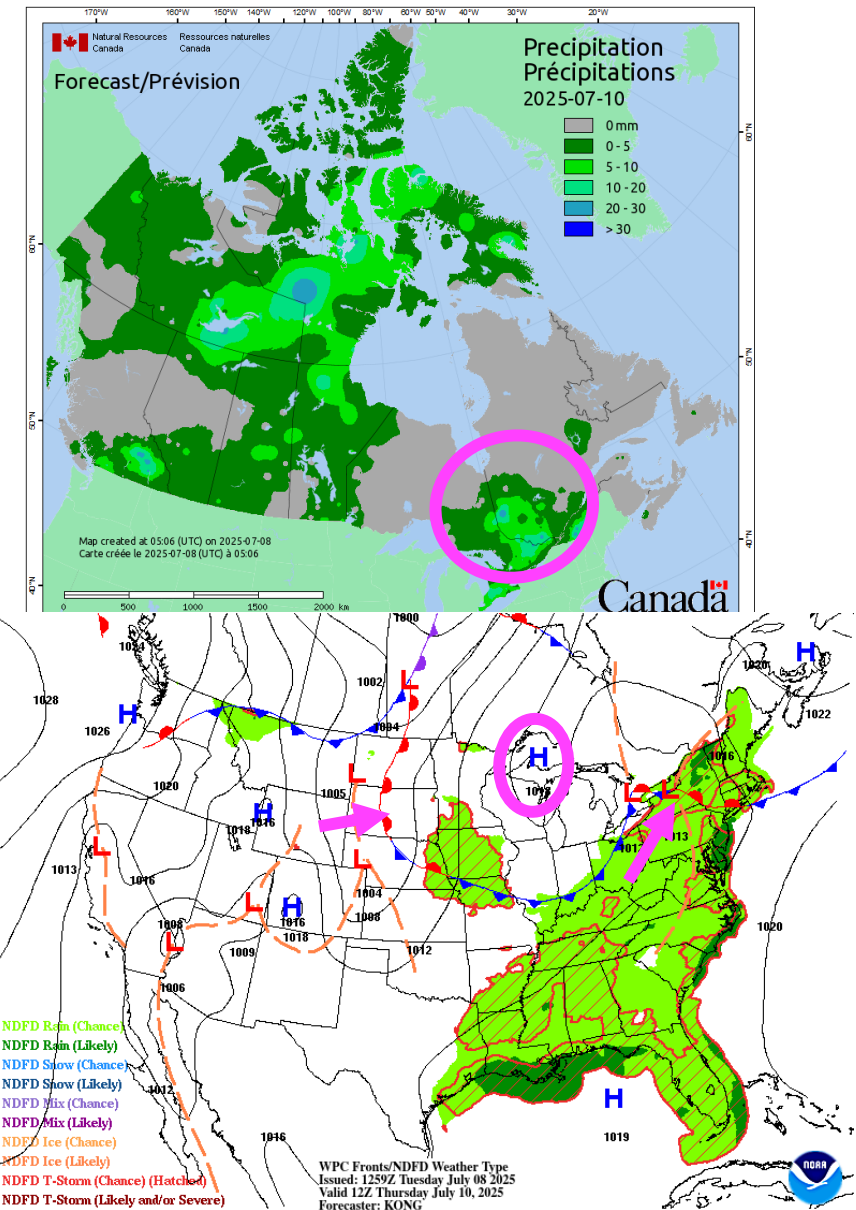
Environment Canada Forecast



Outlook: Short Range (1-3 days)

Surface Forecast

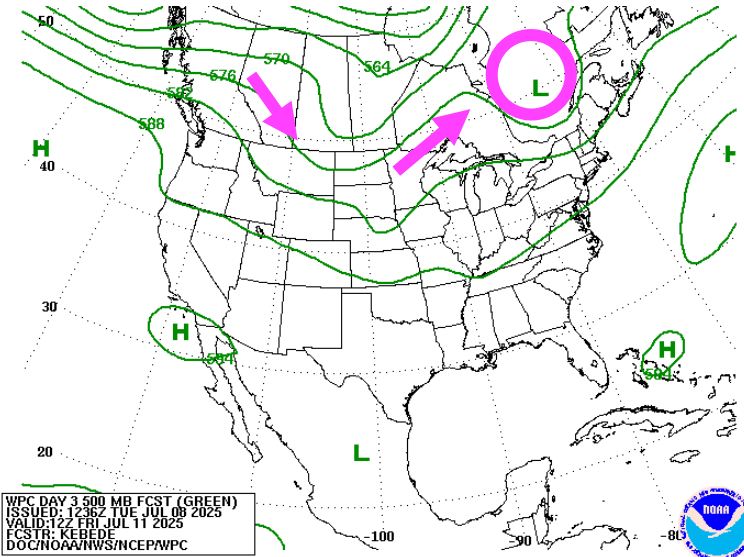
(Thursday 7/10)



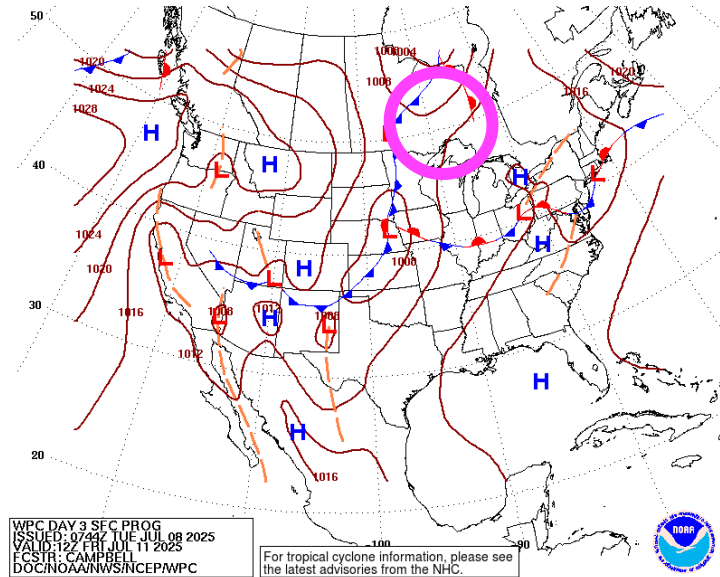
Outlook: Medium Range

Friday
7/11

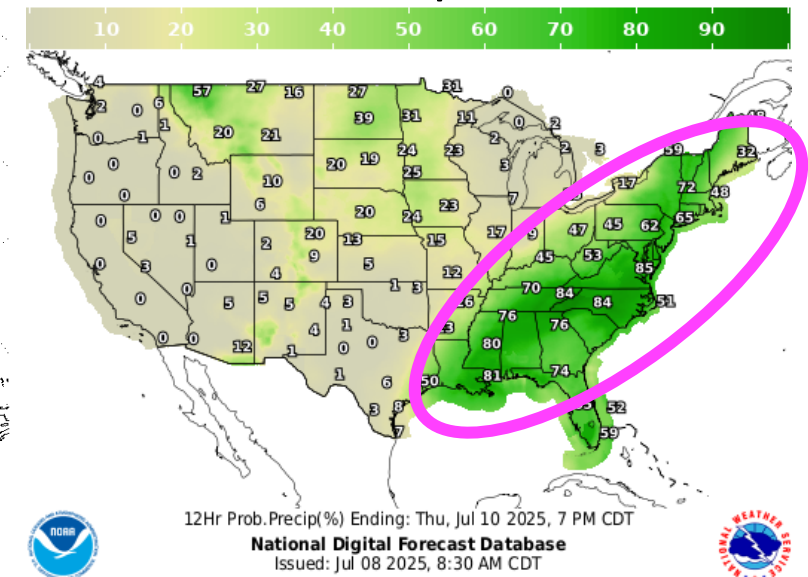
500 mb Contours



Sea Level

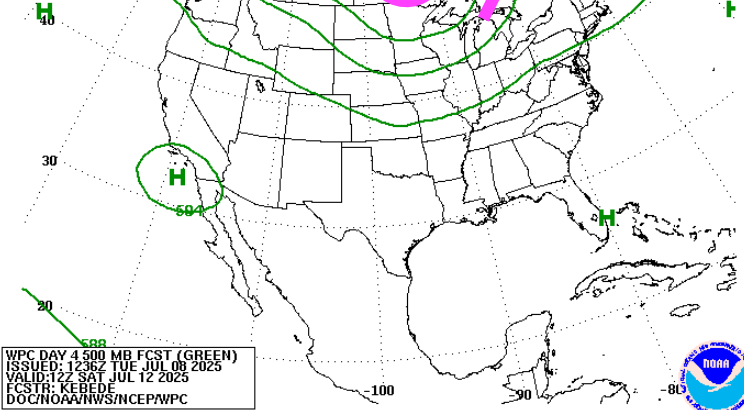


Precip Prob.

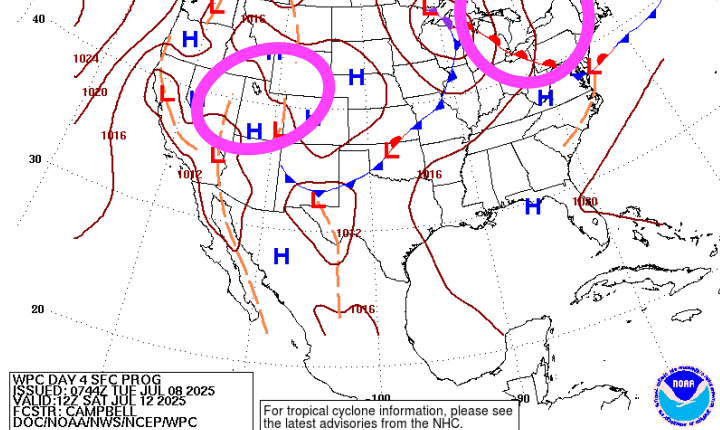


Sat
7/12

500 mb Contours



Sea Level



Precip Prob.

