

Weather and Air Quality: Reflection and Outlook During Smoke Conditions

Presenter: Megan Christiansen
Date: July 14, 2025

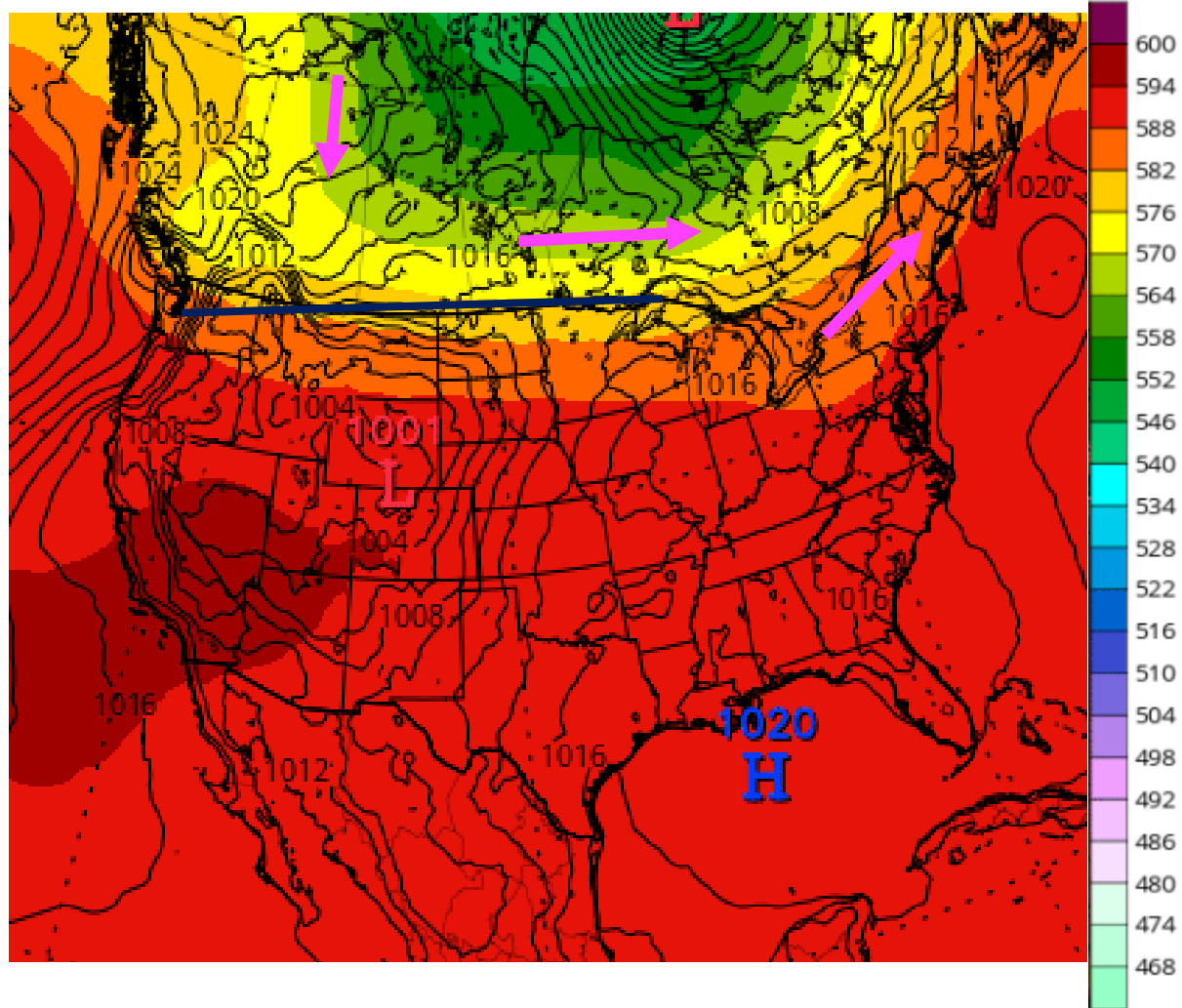


FireAQ is funded by NASA HAQ. We thank NASA GMAO and
NRL for the model data products.

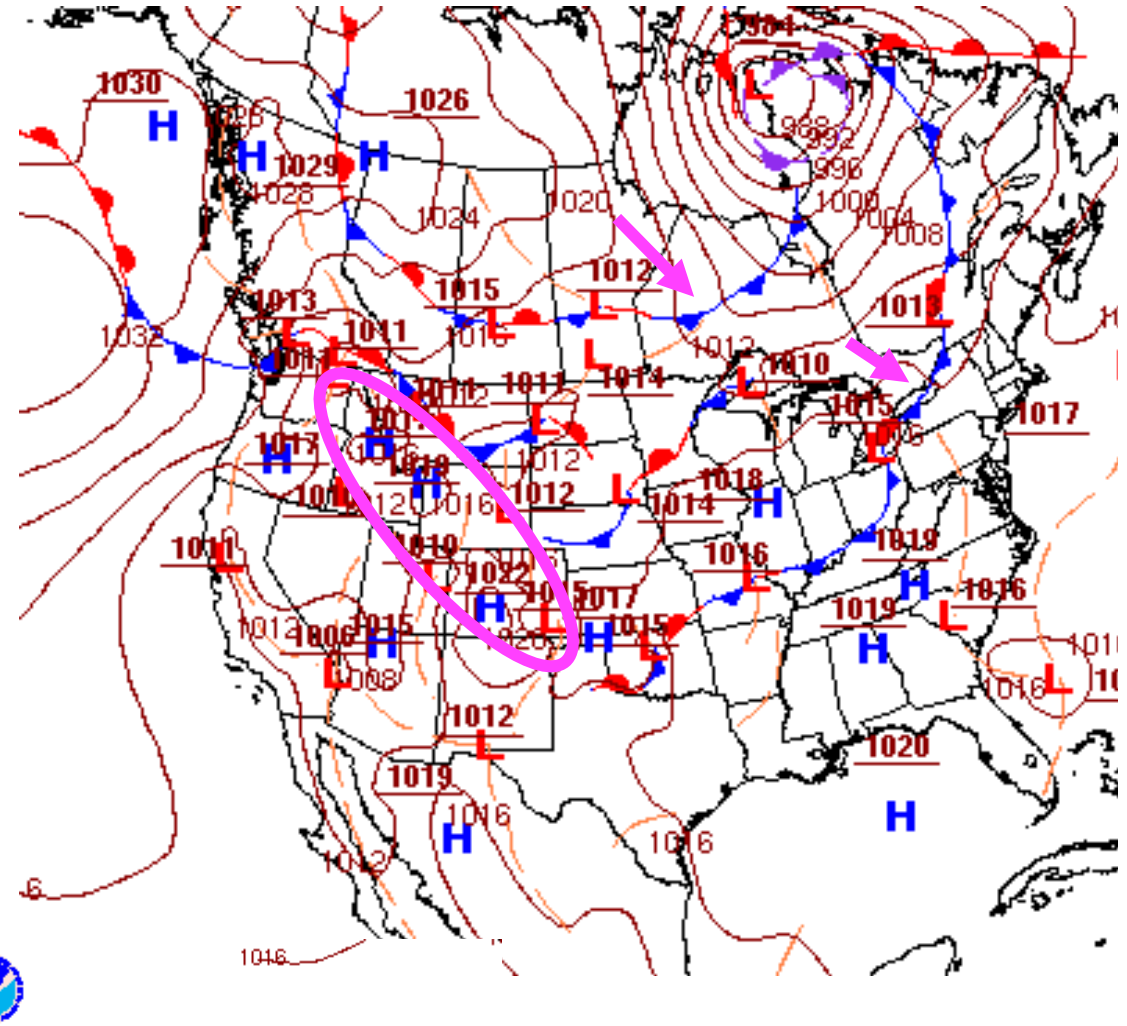
EARTH SCIENCE
APPLIED SCIENCES

Current Status: July 14 , 2025

500 mb Contours



Surface Analysis

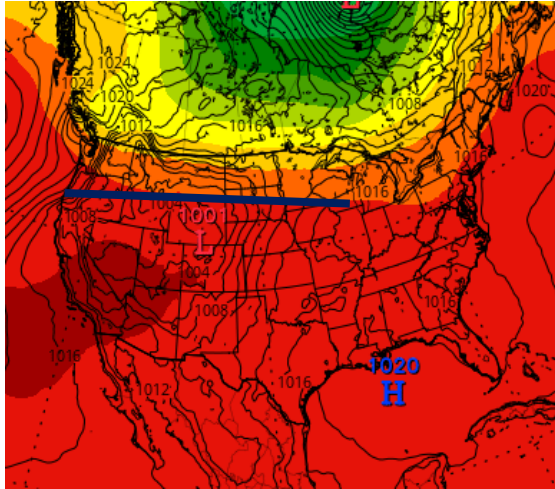


1200Z SURFACE ANALYSIS
DATE: MON JUL 14 2025
ISSUED: 1330Z MON JUL 14 2025
BY WPC ANALYST TATE
COLLABORATING CENTERS: WPC, NHC, OPC

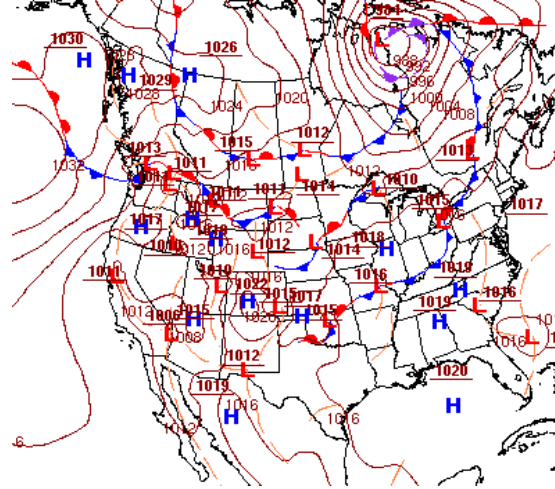
GFS 500mb Geopotential Height (dam) & MSLP (mb)
Init: 06z Jul 14 2025 Forecast Hour: [12] valid at 18z Mon, Jul 14 2025

Current Status: July 14 , 2025

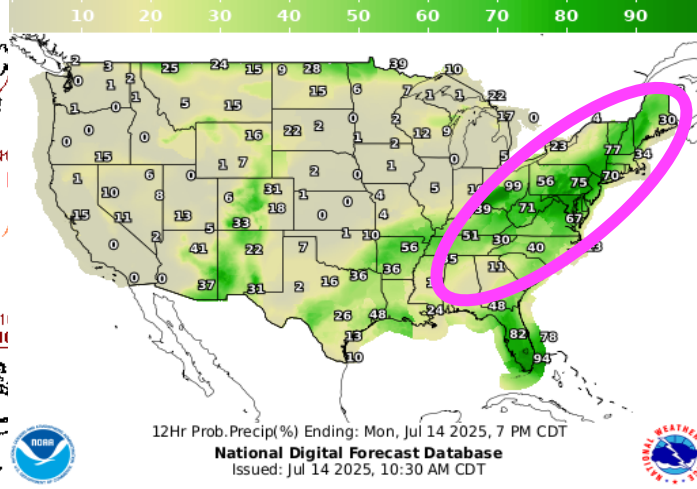
500 mb Contours



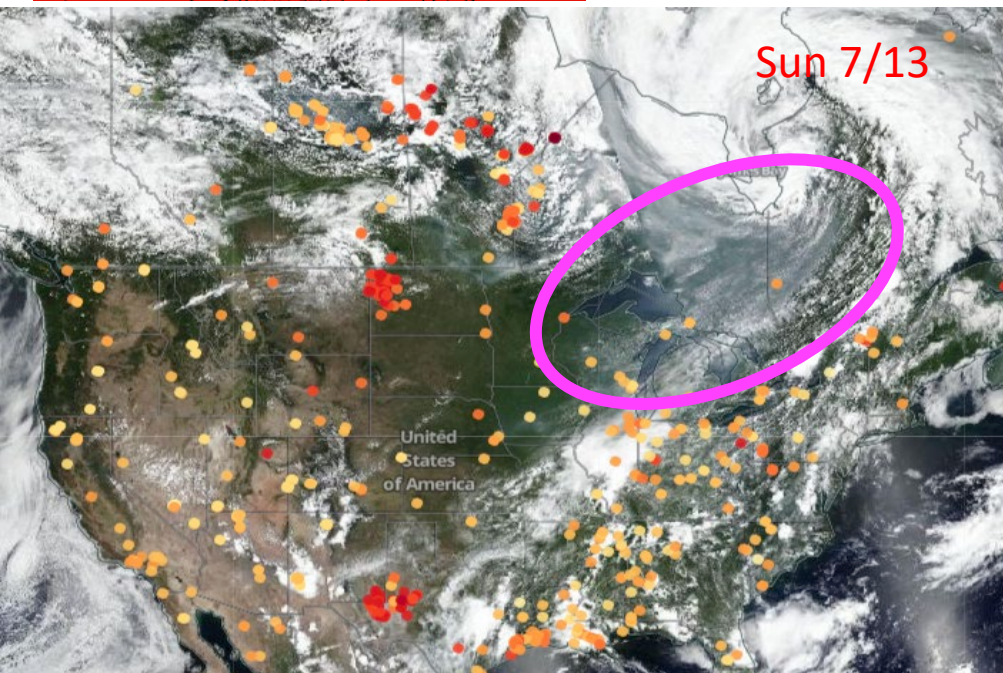
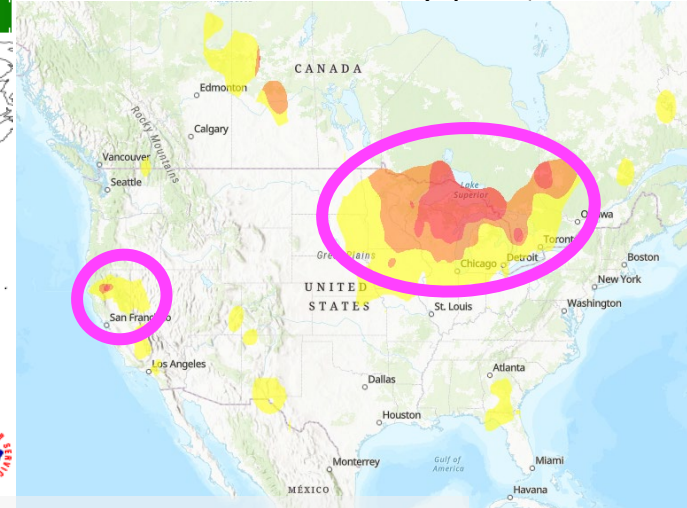
Surface Analysis



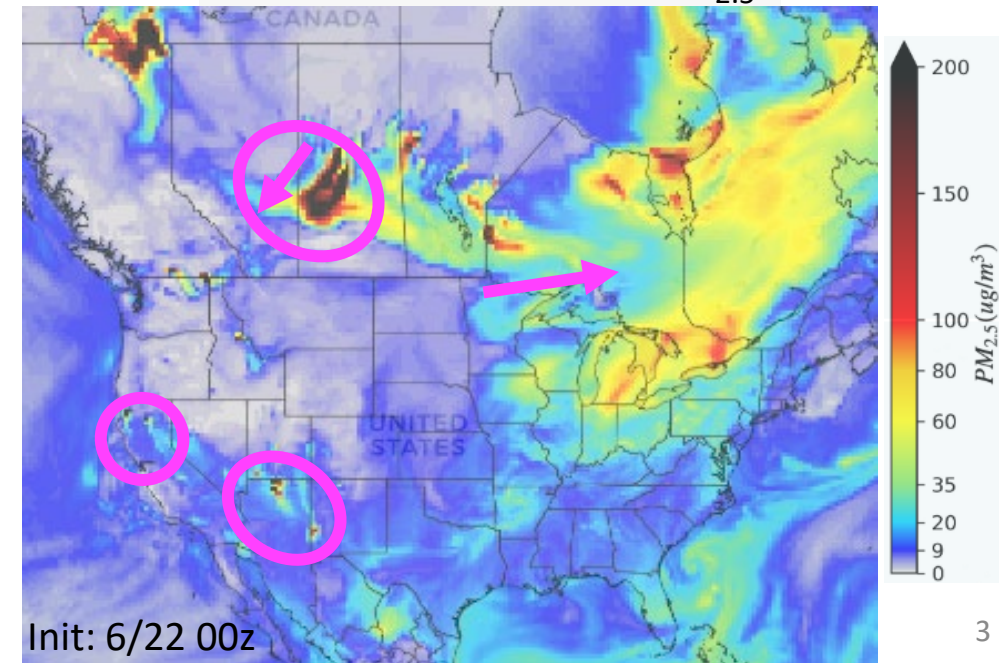
Precip. Prob.



AirNow PM_{2.5} AQI

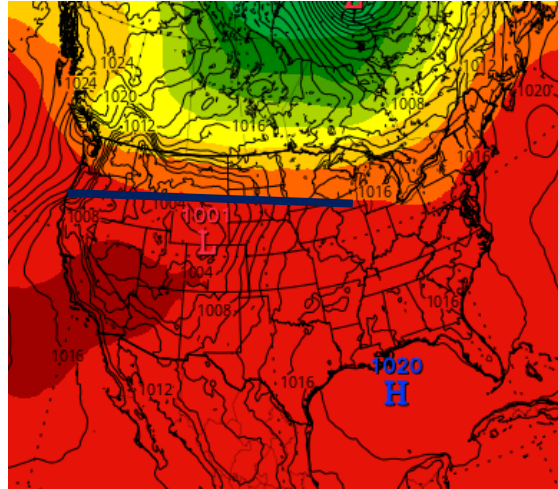


GEOS-FP 6/23 16 UTC PM_{2.5}

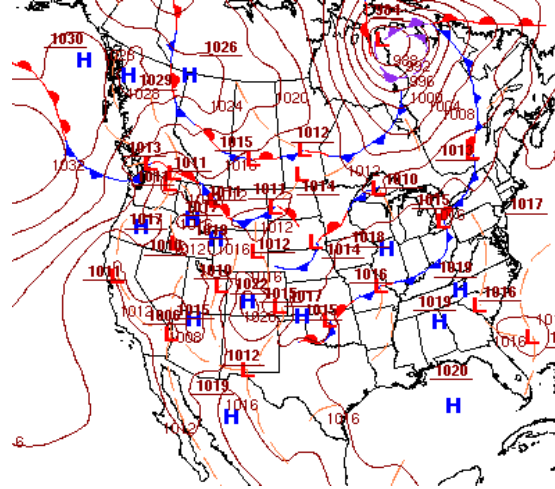


Current Status: July 14 , 2025

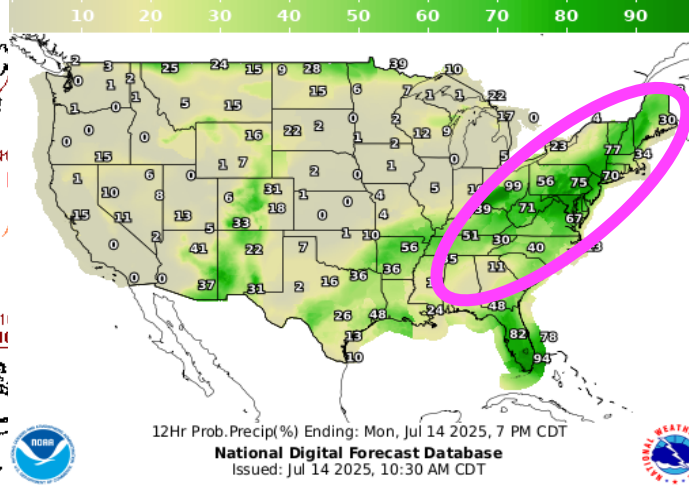
500 mb Contours



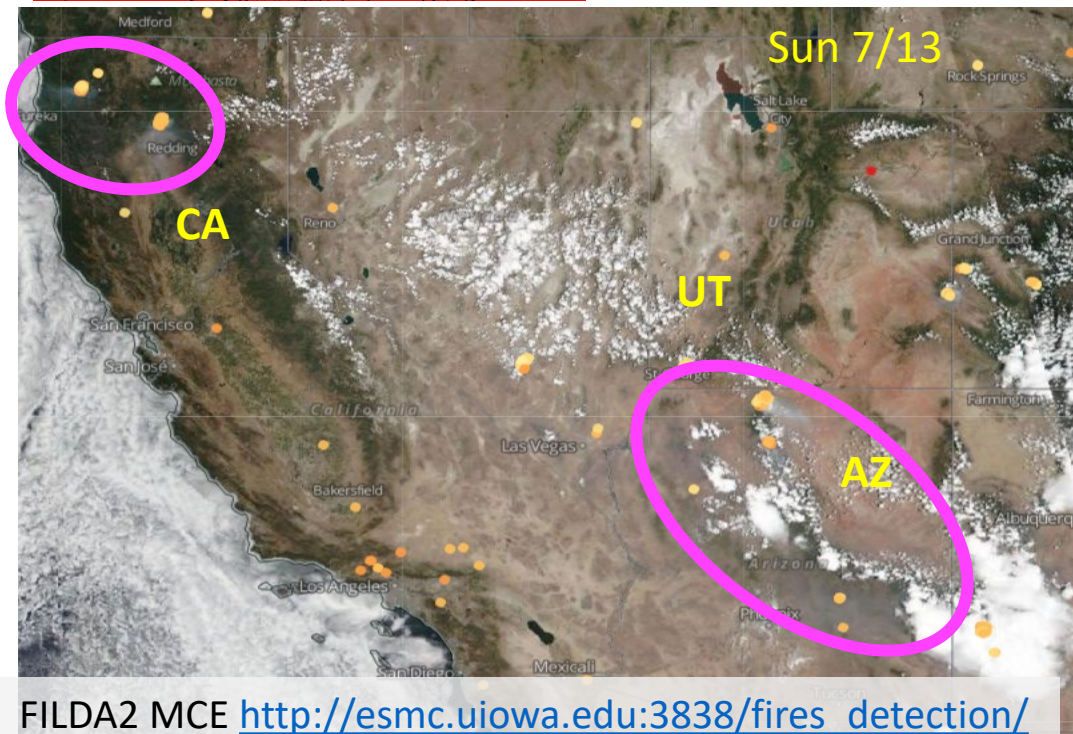
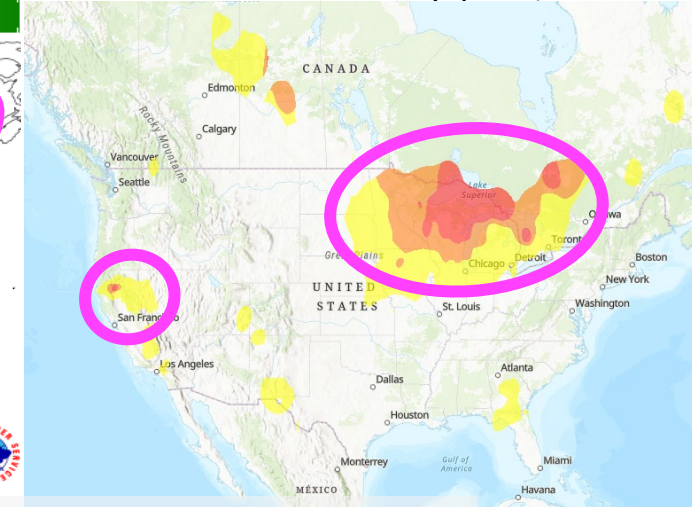
Surface Analysis



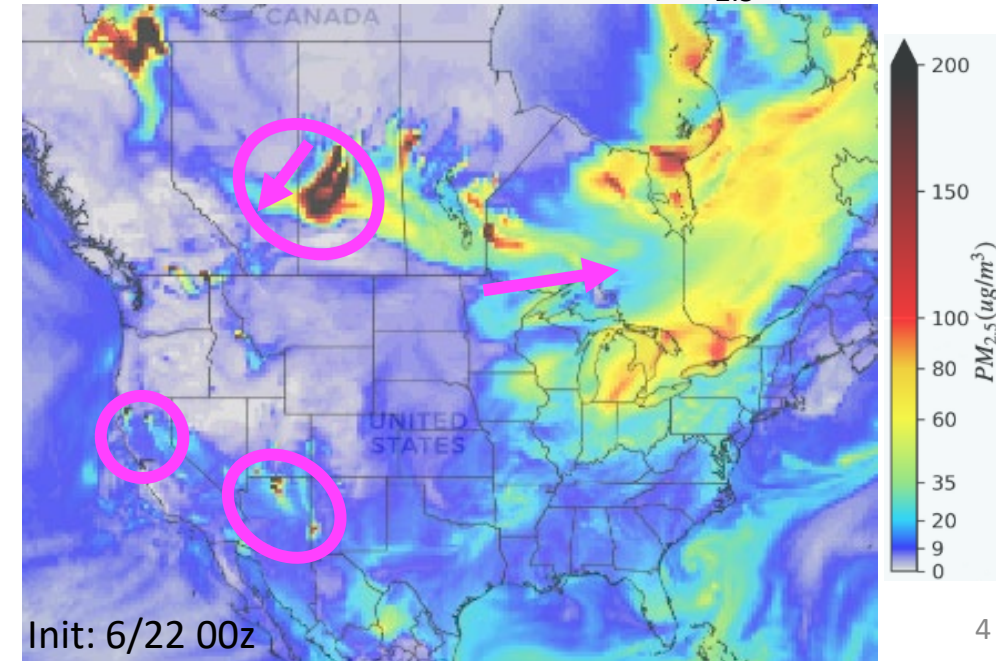
Precip. Prob.



AirNow PM_{2.5} AQI



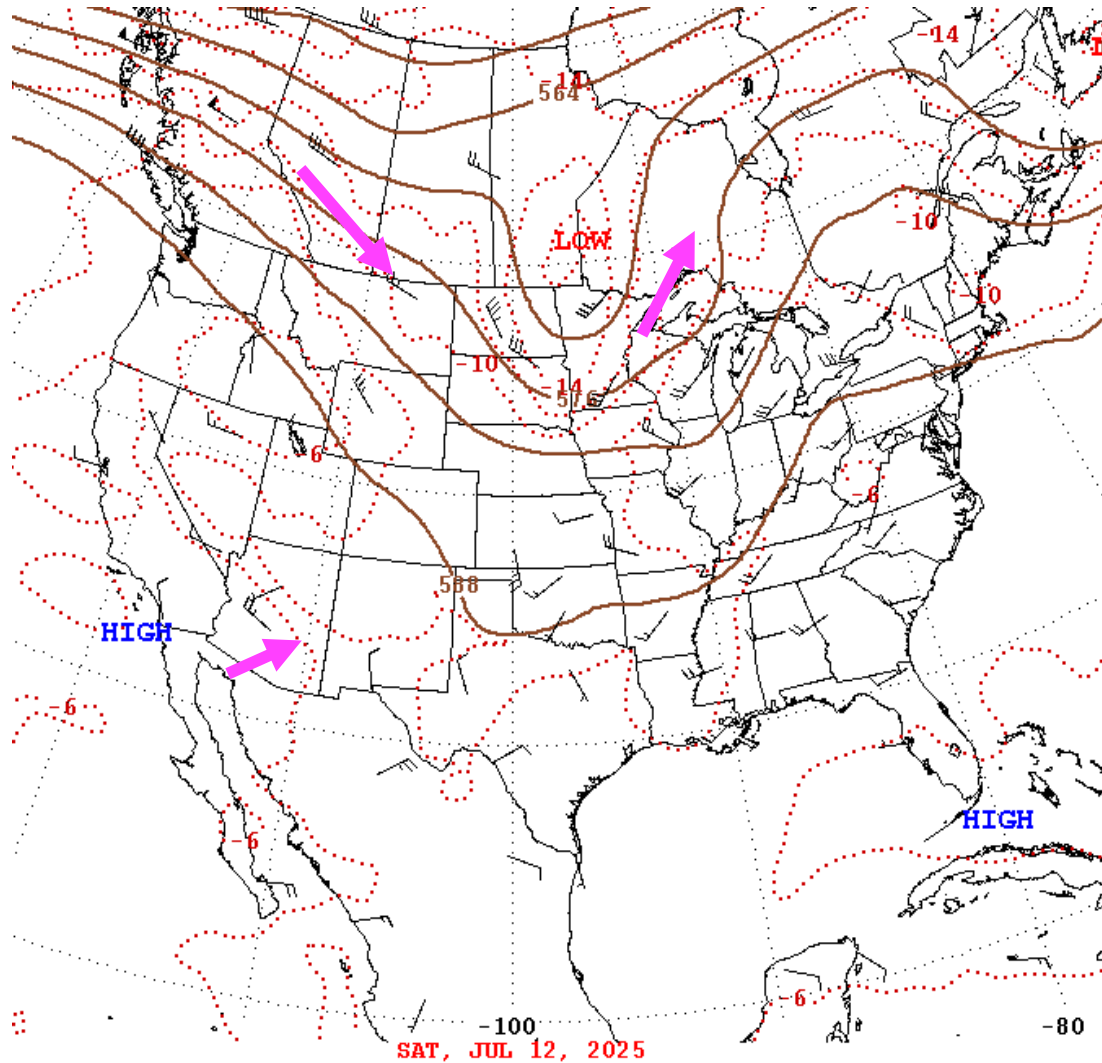
GEOS-FP 6/23 16 UTC PM_{2.5}



Init: 6/22 00z

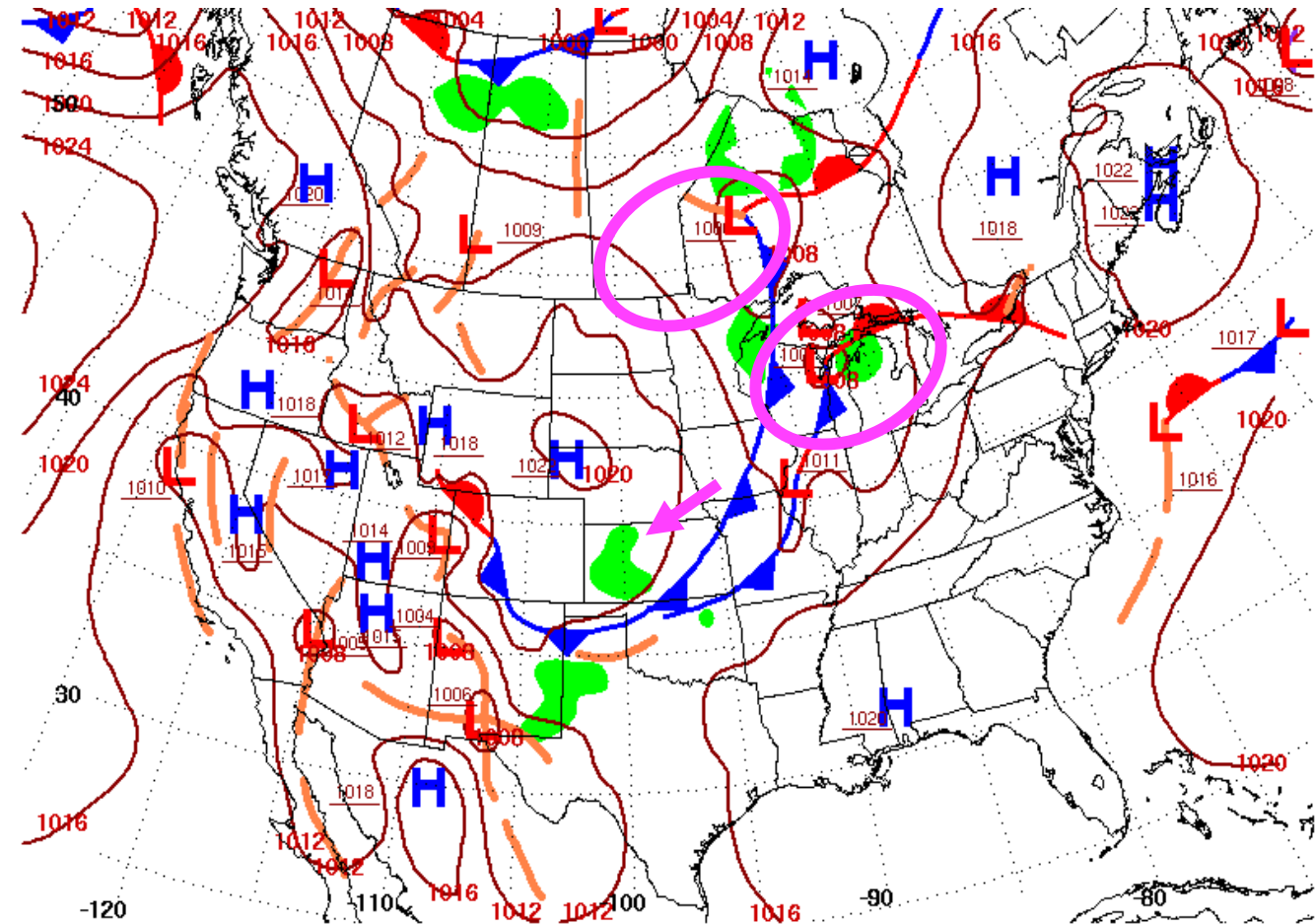
Air Quality Reflection: Saturday July 12, 2025

500 mb Contours



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

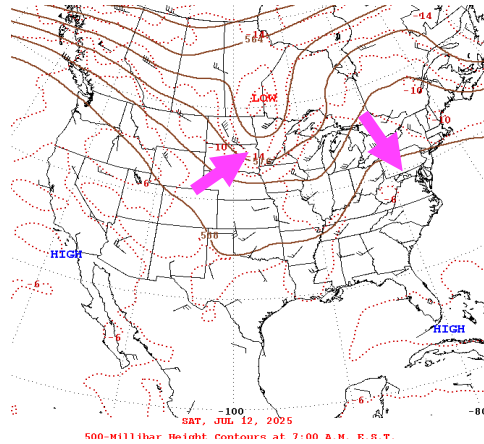
Surface Weather



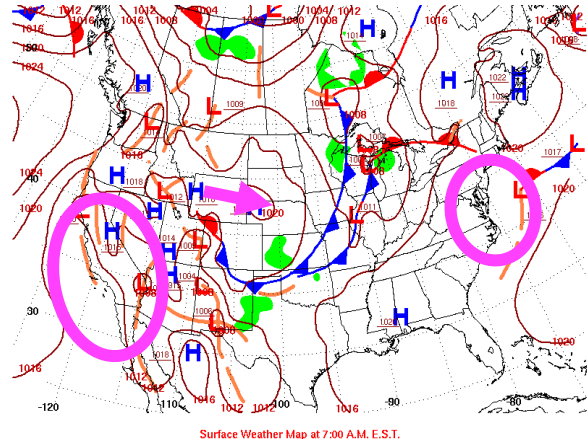
Surface Weather Map at 7:00 A.M. E.S.T.

Air Quality Reflection: Saturday July 12, 2025

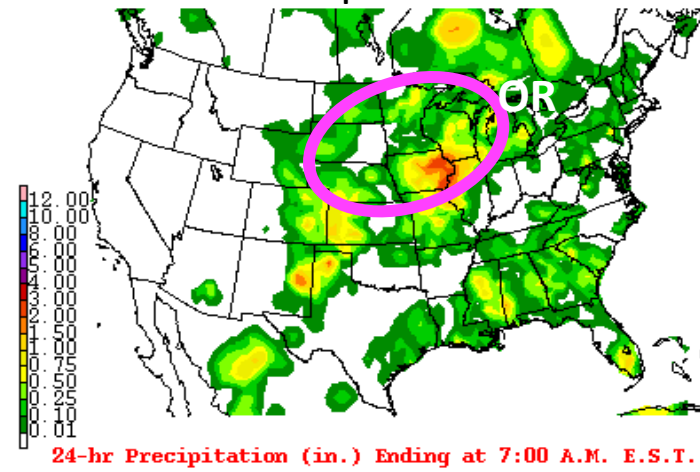
500 mb Contours



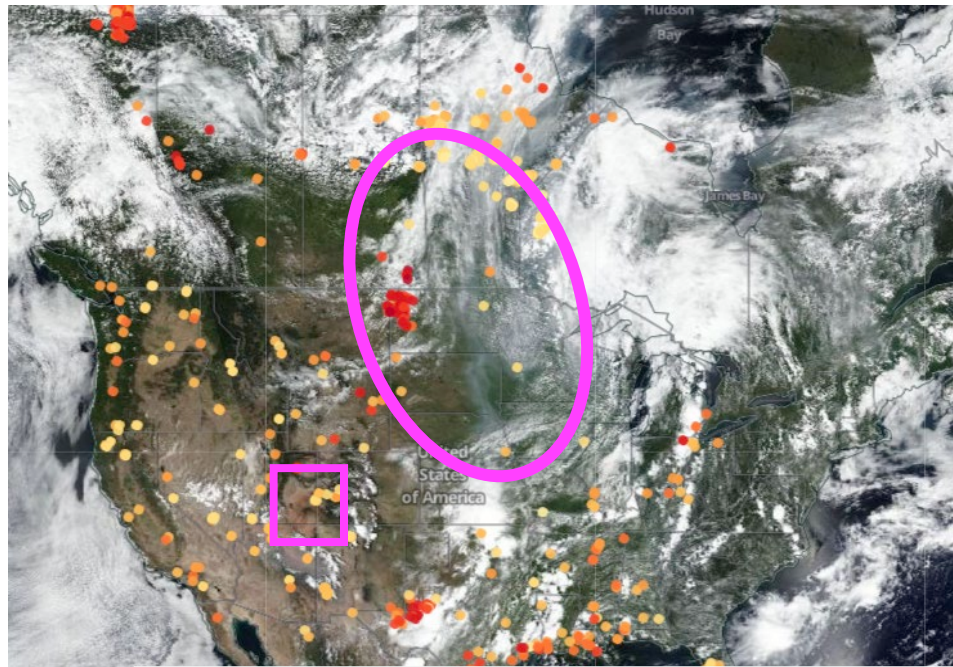
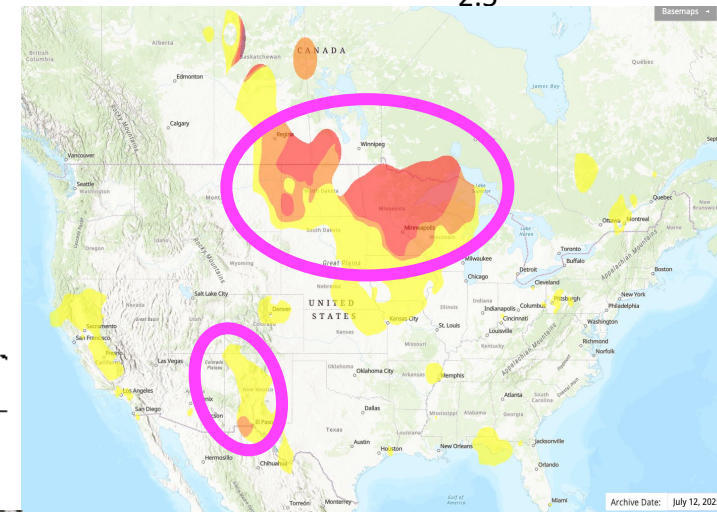
Surface Weather



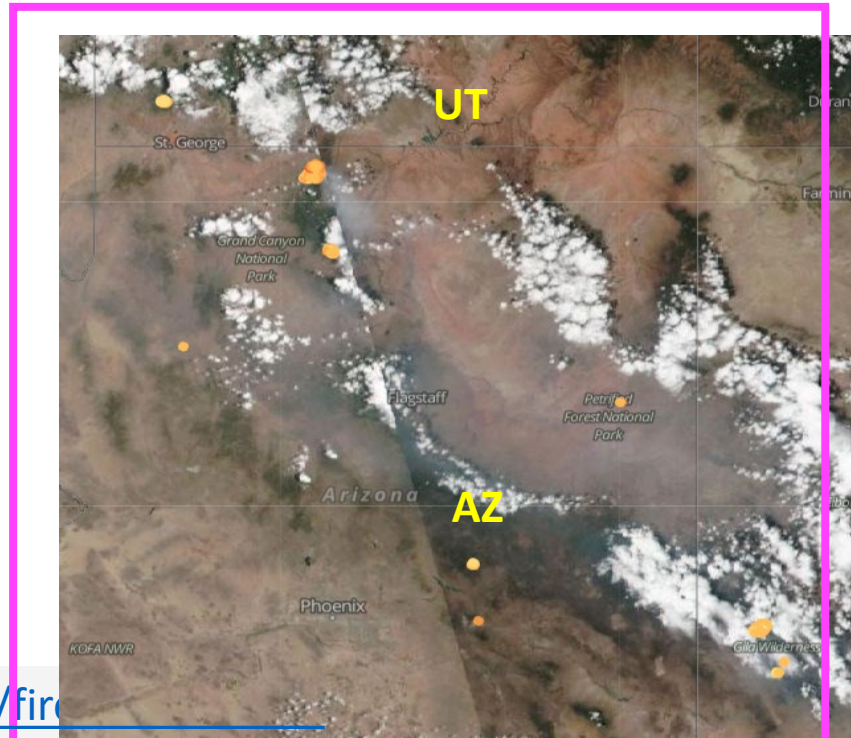
Precipitation



AirNow PM_{2.5} AQI

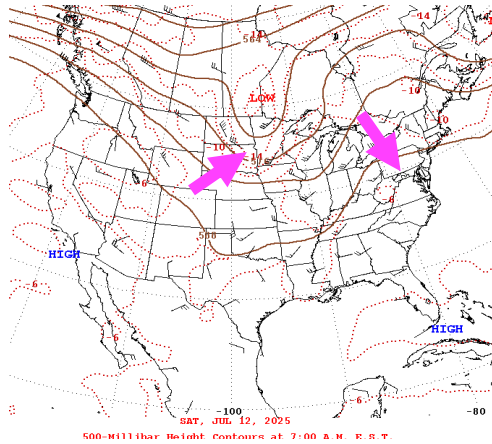


FILDA2 MCE <http://esmc.uiowa.edu:3838/fire>

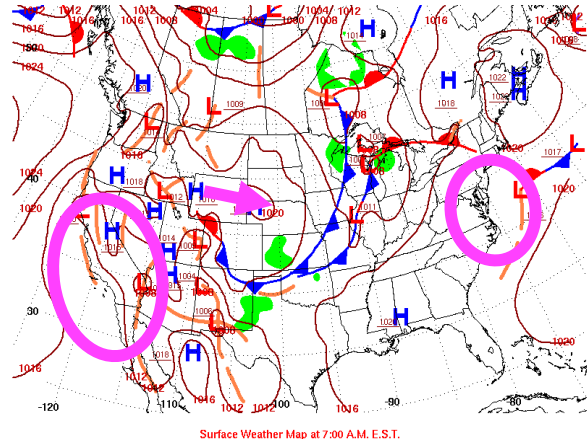


Air Quality Reflection: Saturday July 12, 2025

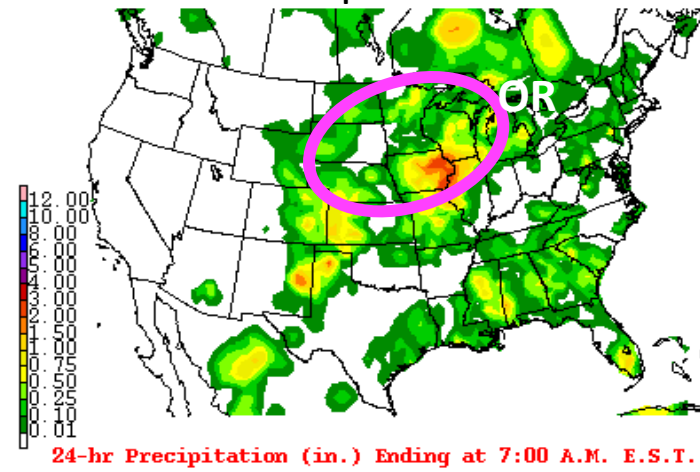
500 mb Contours



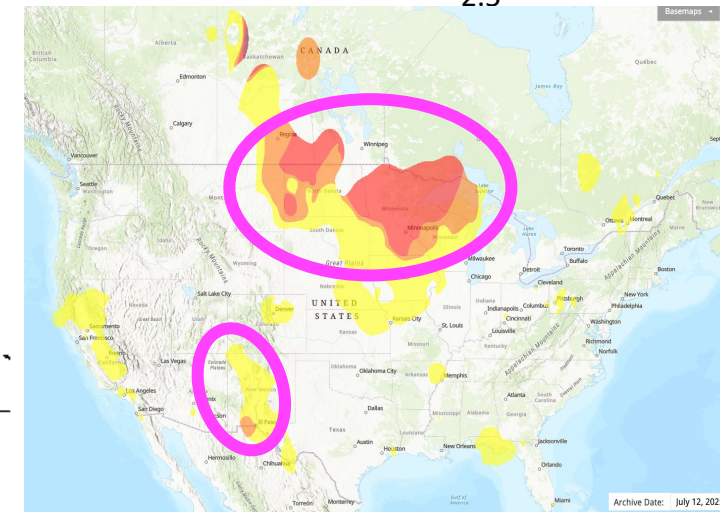
Surface Weather



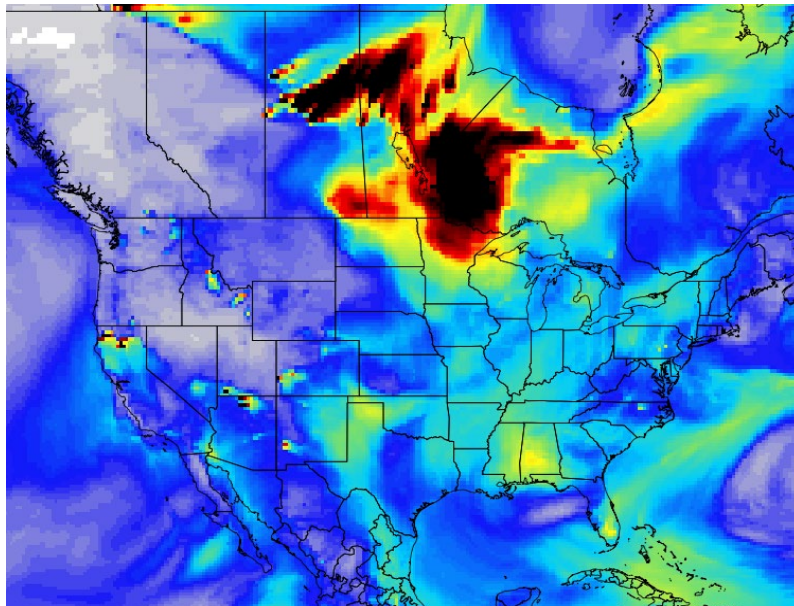
Precipitation



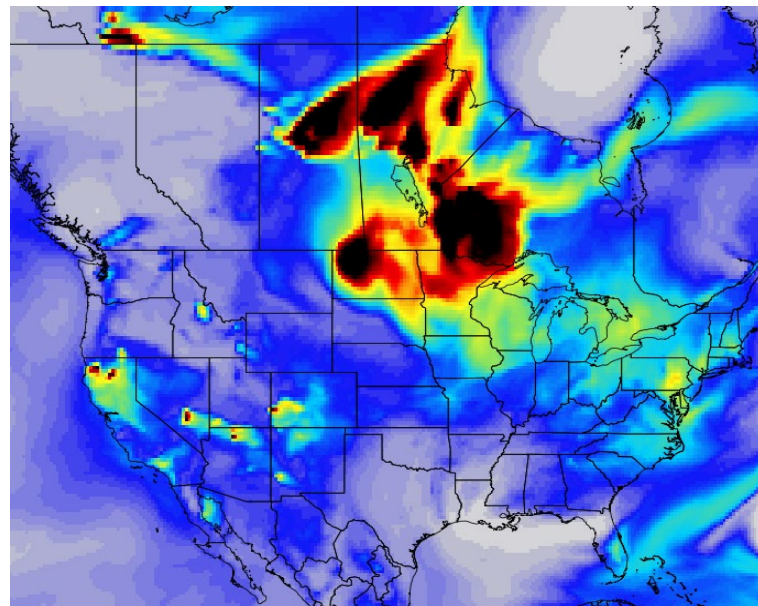
AirNow PM_{2.5} AQI



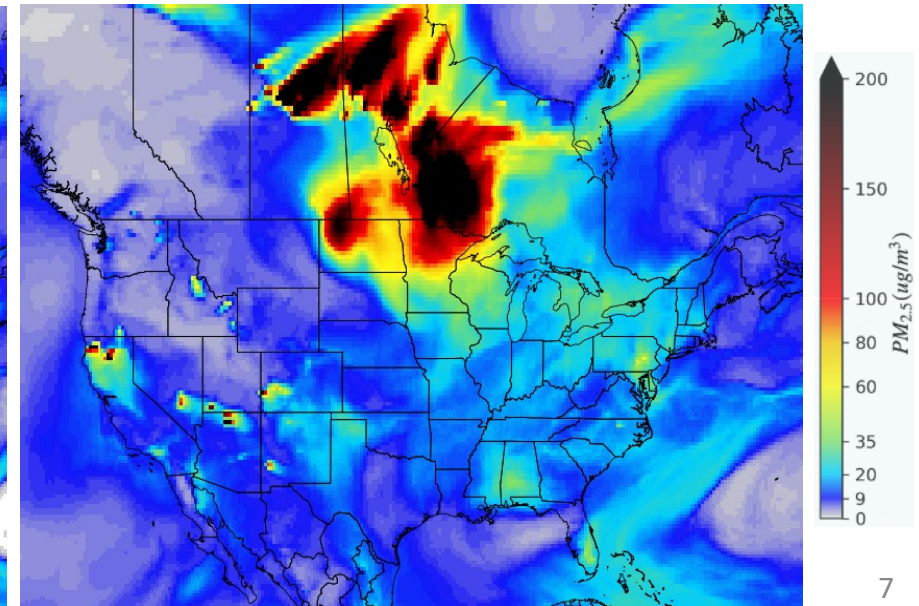
GEOS-FP



GEOS-CF



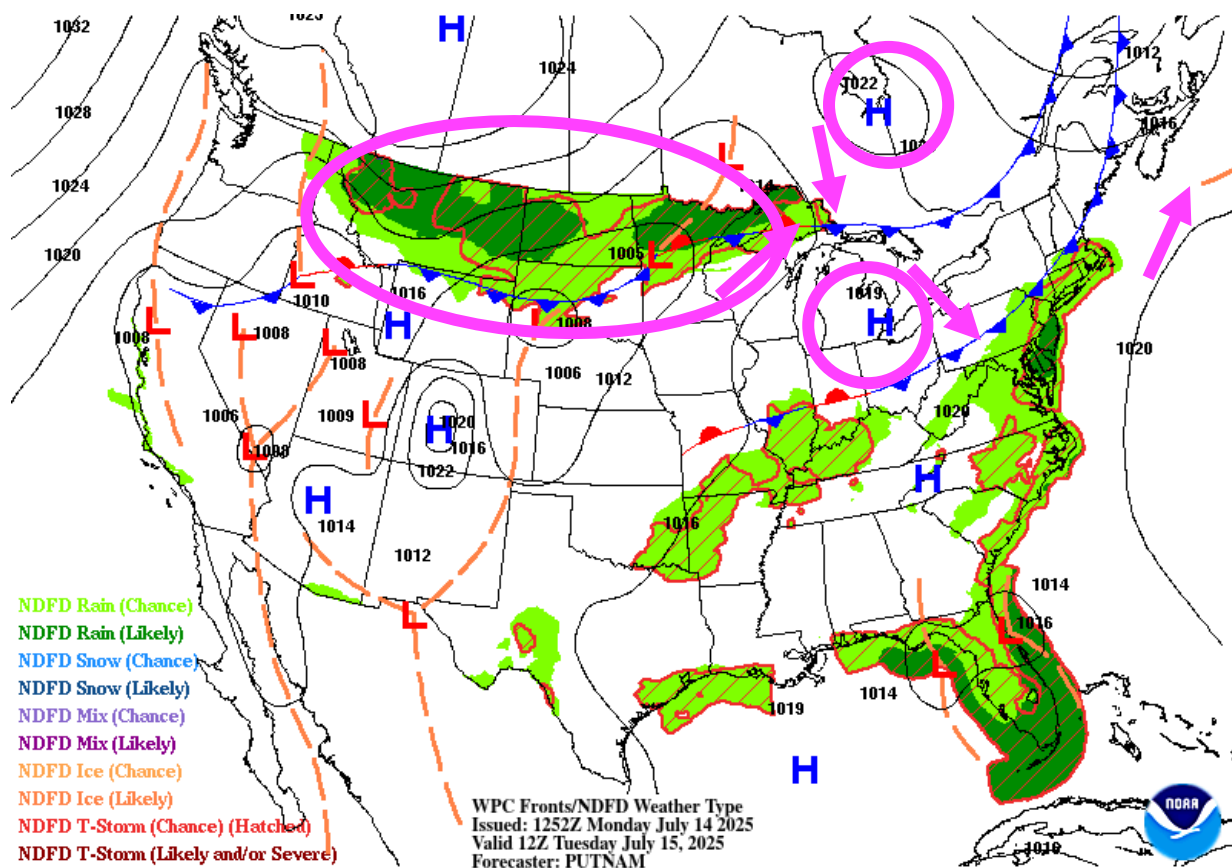
Ensemble



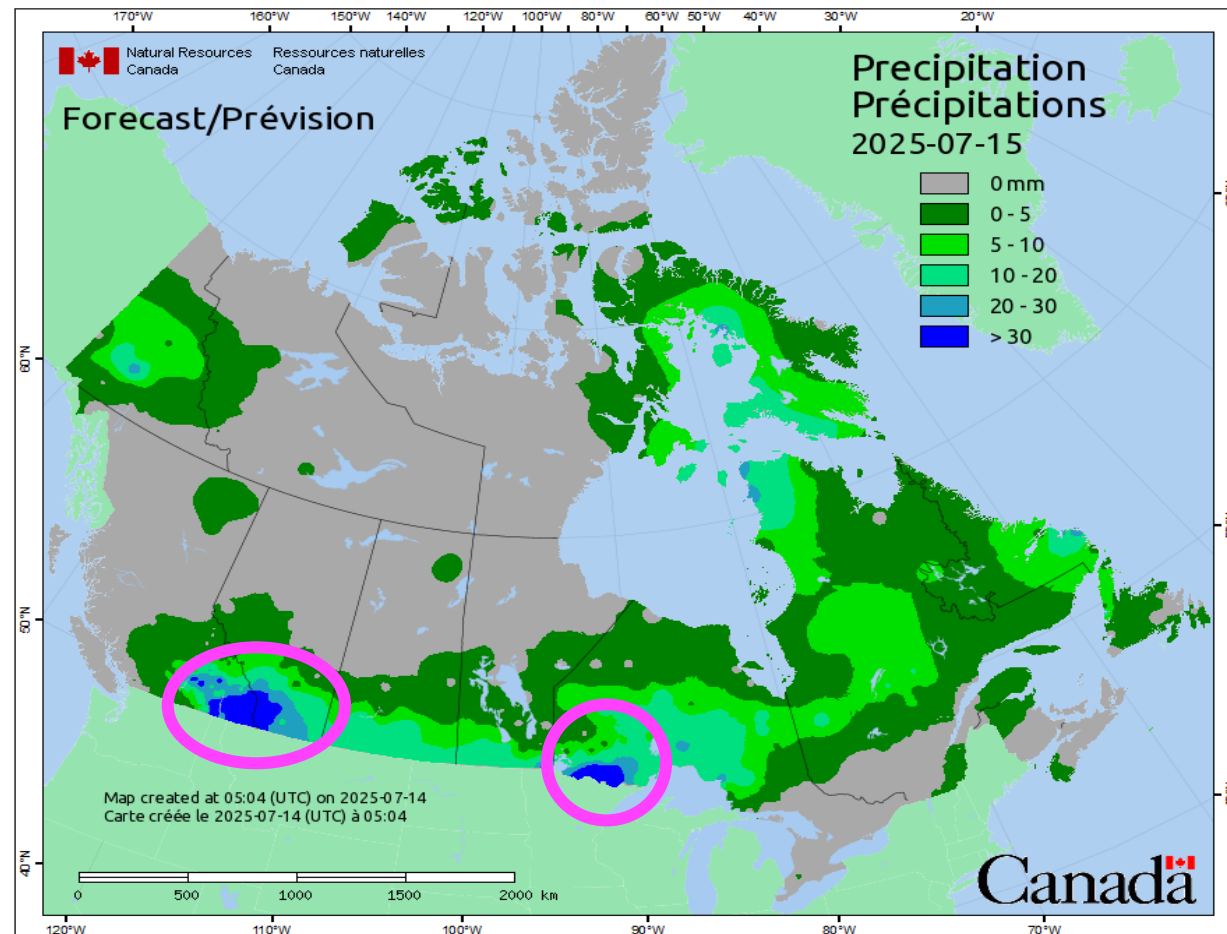
Outlook: Short Range (1–3 days)

Surface Forecast (**Tuesday 7/15**)

US NWS Forecast

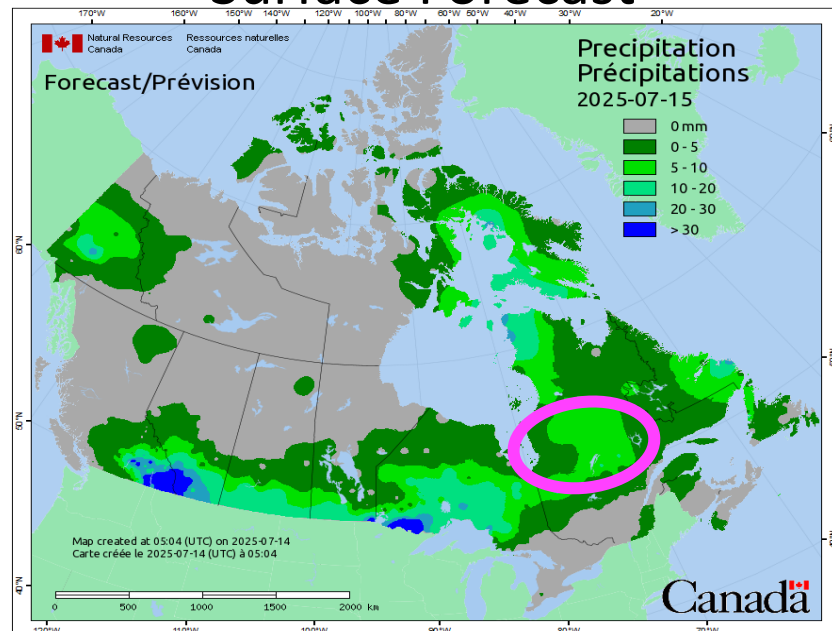


Environment Canada Forecast



Outlook: Short Range (1–3 days)

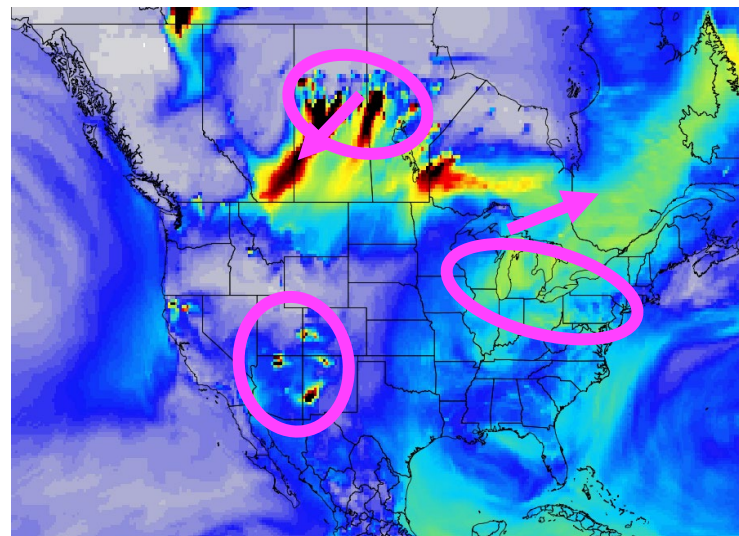
Surface Forecast



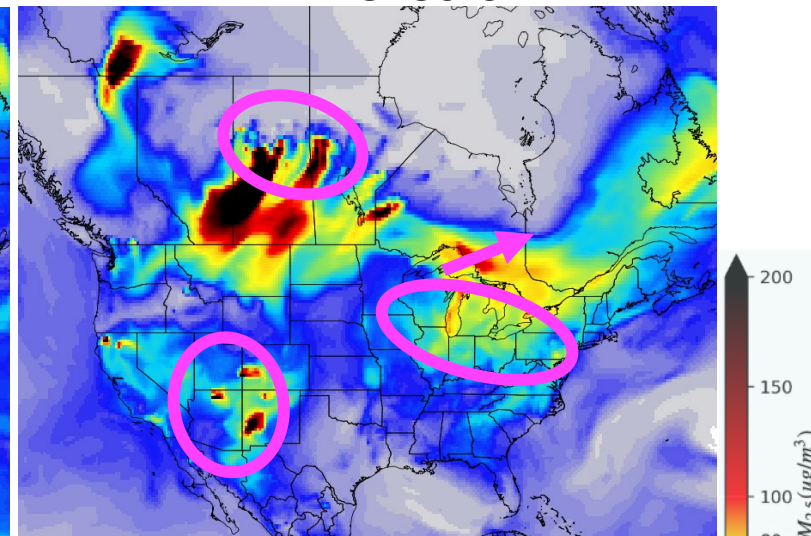
(Tuesday 7/15)

Model Means $PM_{2.5}$

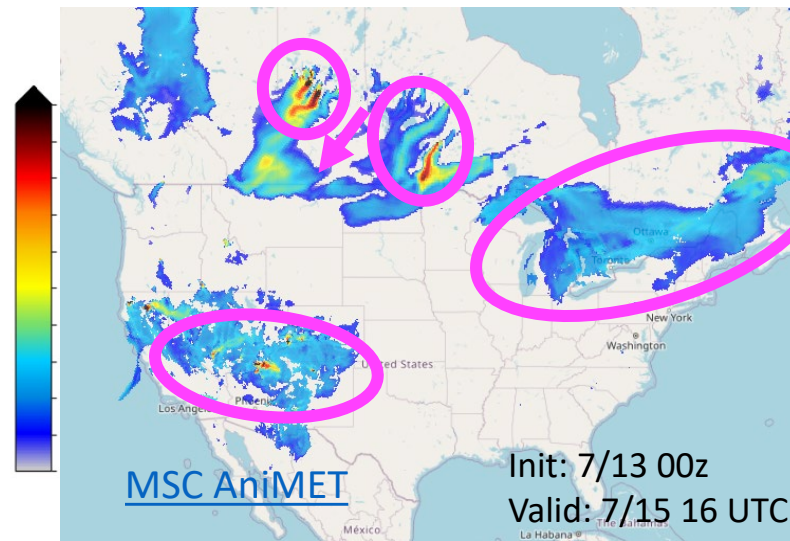
GEOS-FP



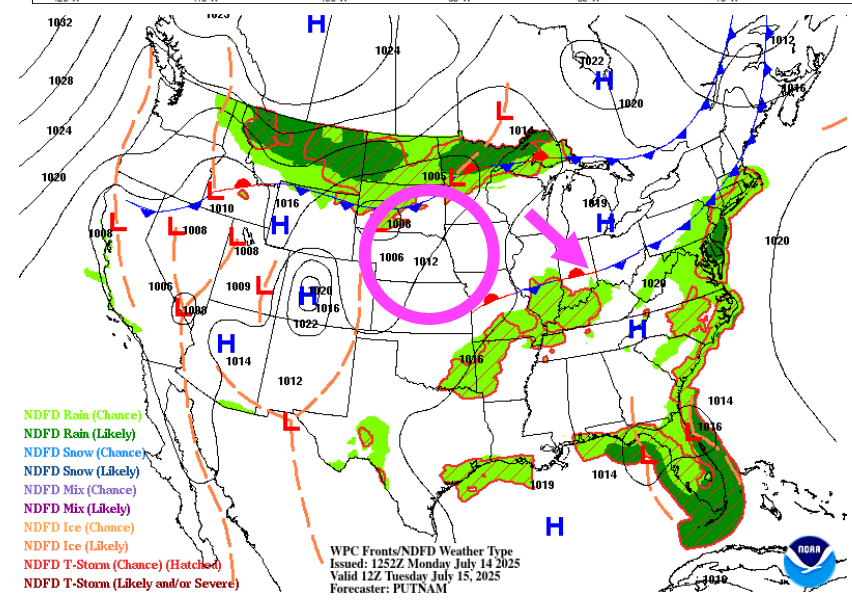
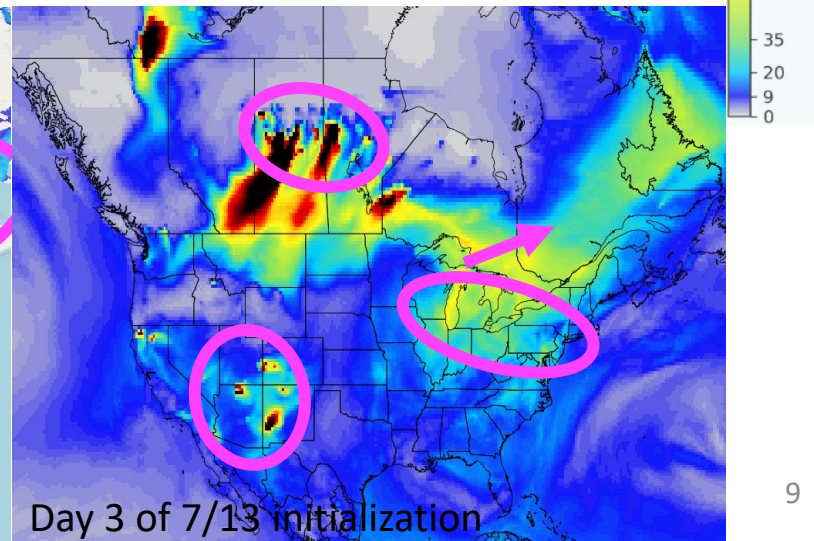
GEOS-CF



Canada MSC AniMET



Ensemble

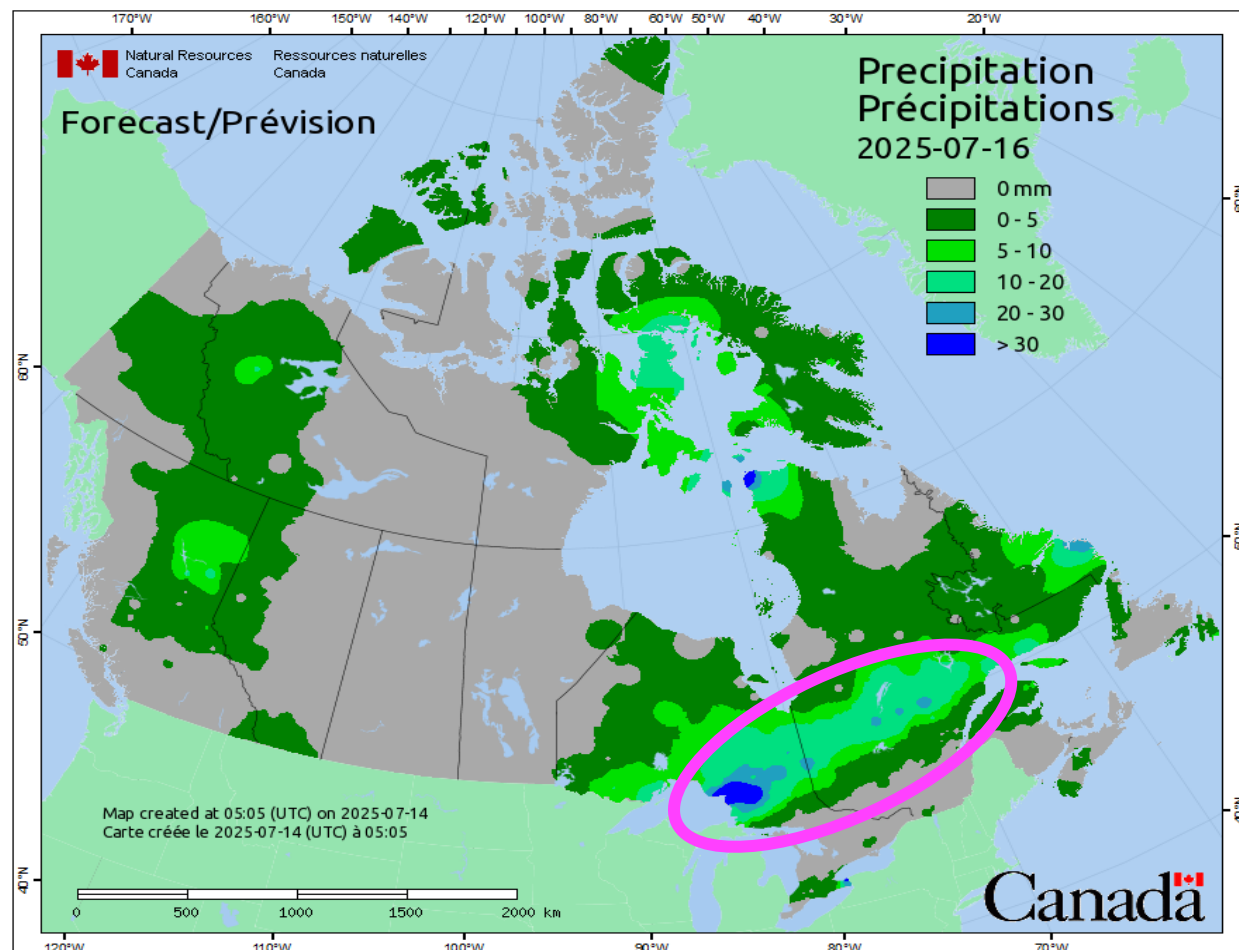
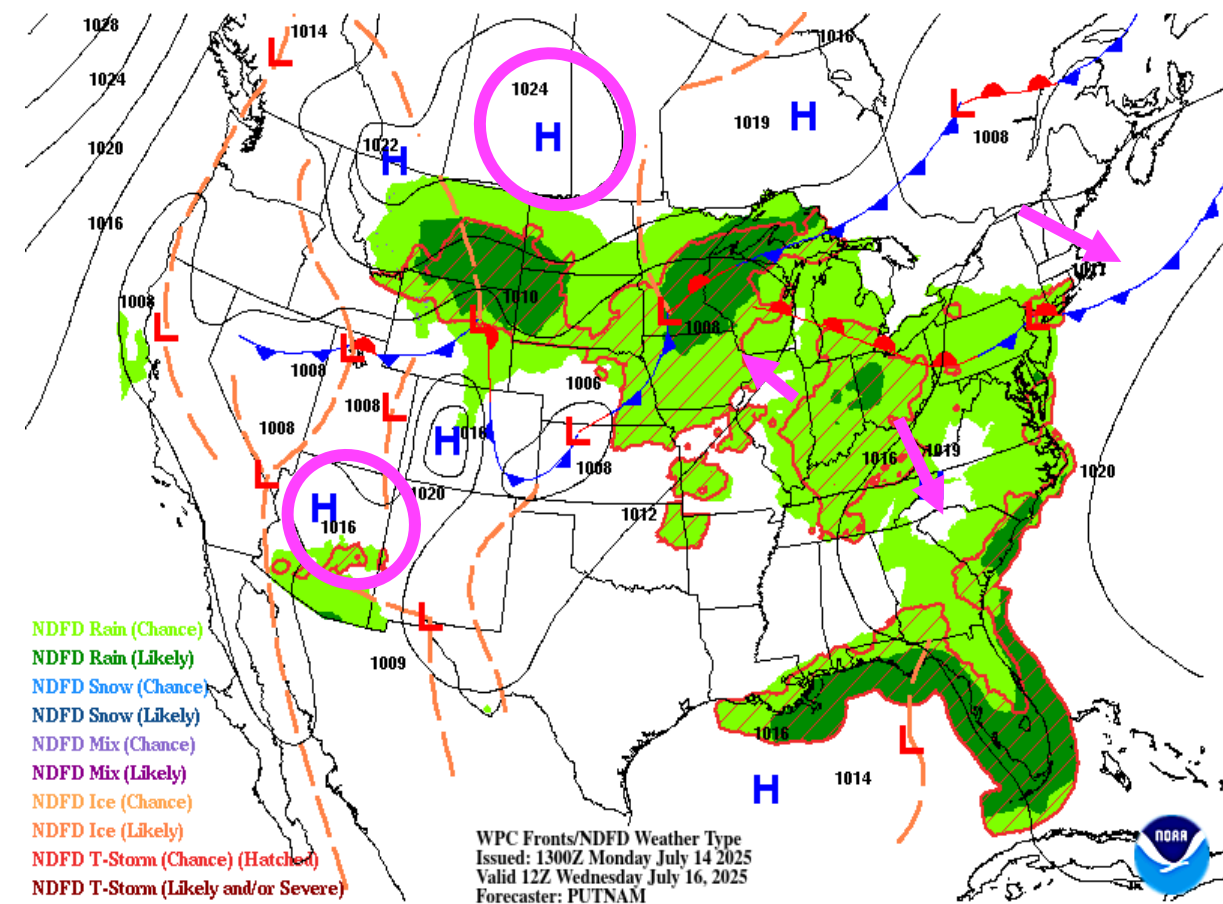


Outlook: Short Range (1–3 days)

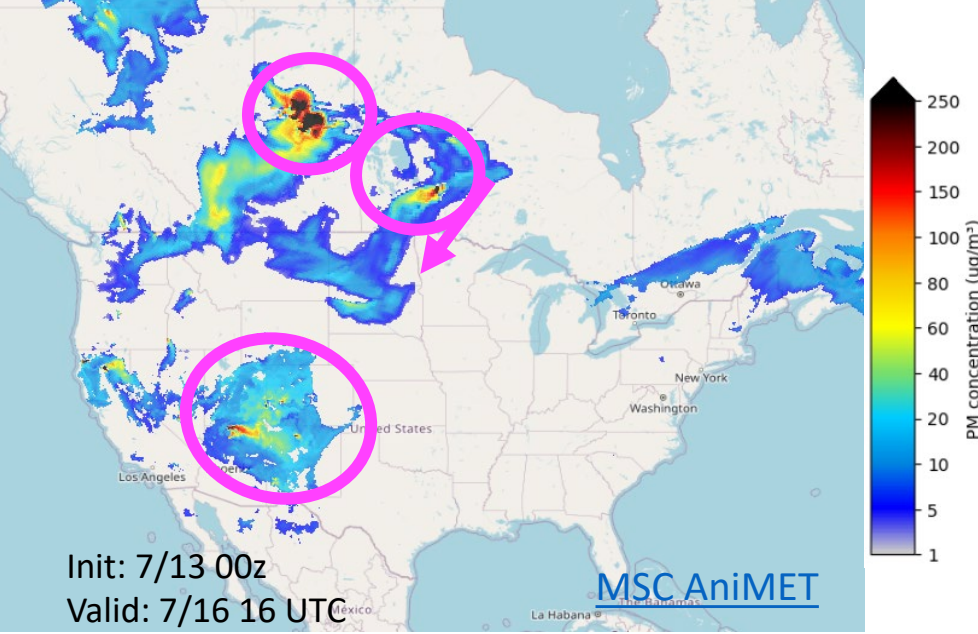
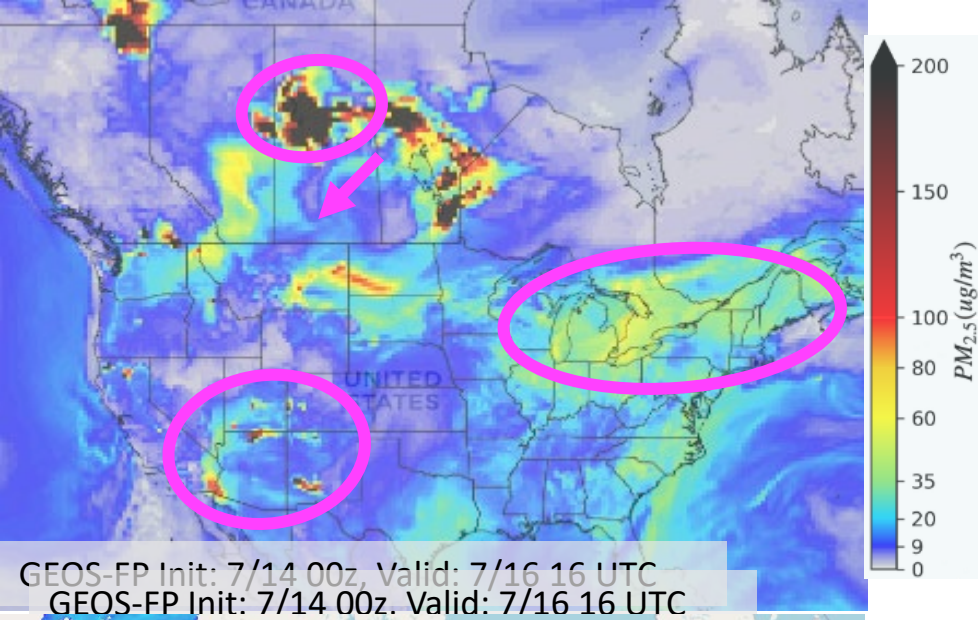
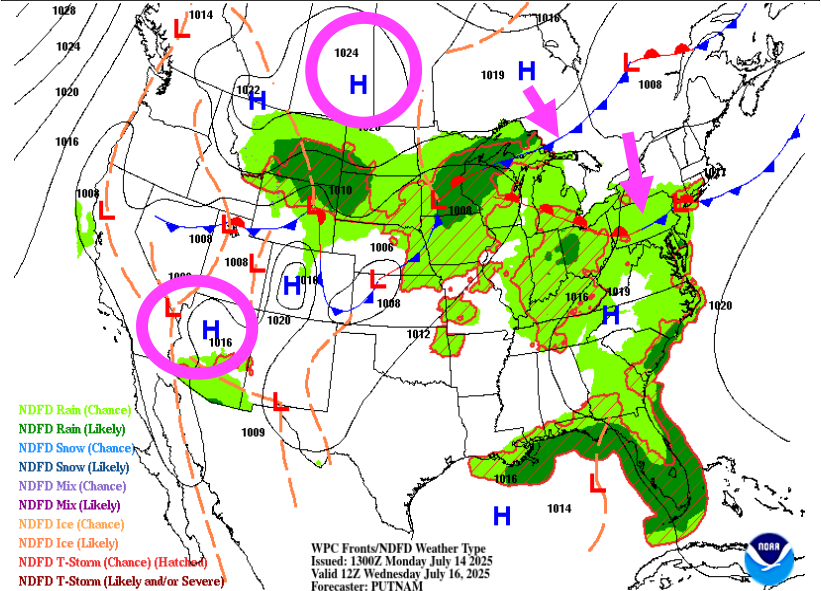
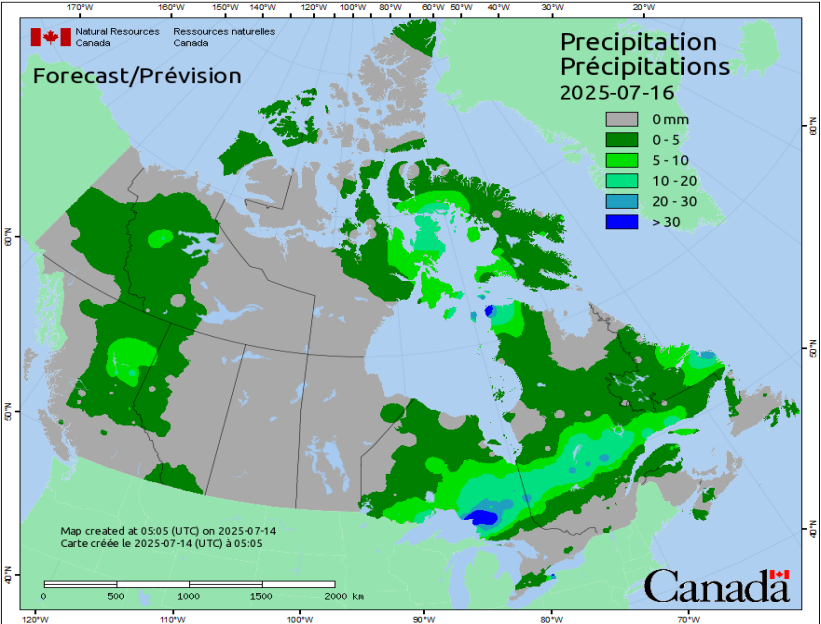
Surface Forecast (**Wednesday 7/16**)

US NWS Forecast

Environment Canada Forecast



Outlook: Short Range (1–3 days)



Outlook: Medium Range

Thurs
7/17

500 mb Contours

