

Weather and Air Quality: Reflection and Outlook During Smoke Conditions

Presenter: Megan Christiansen
Date: September 22, 2025

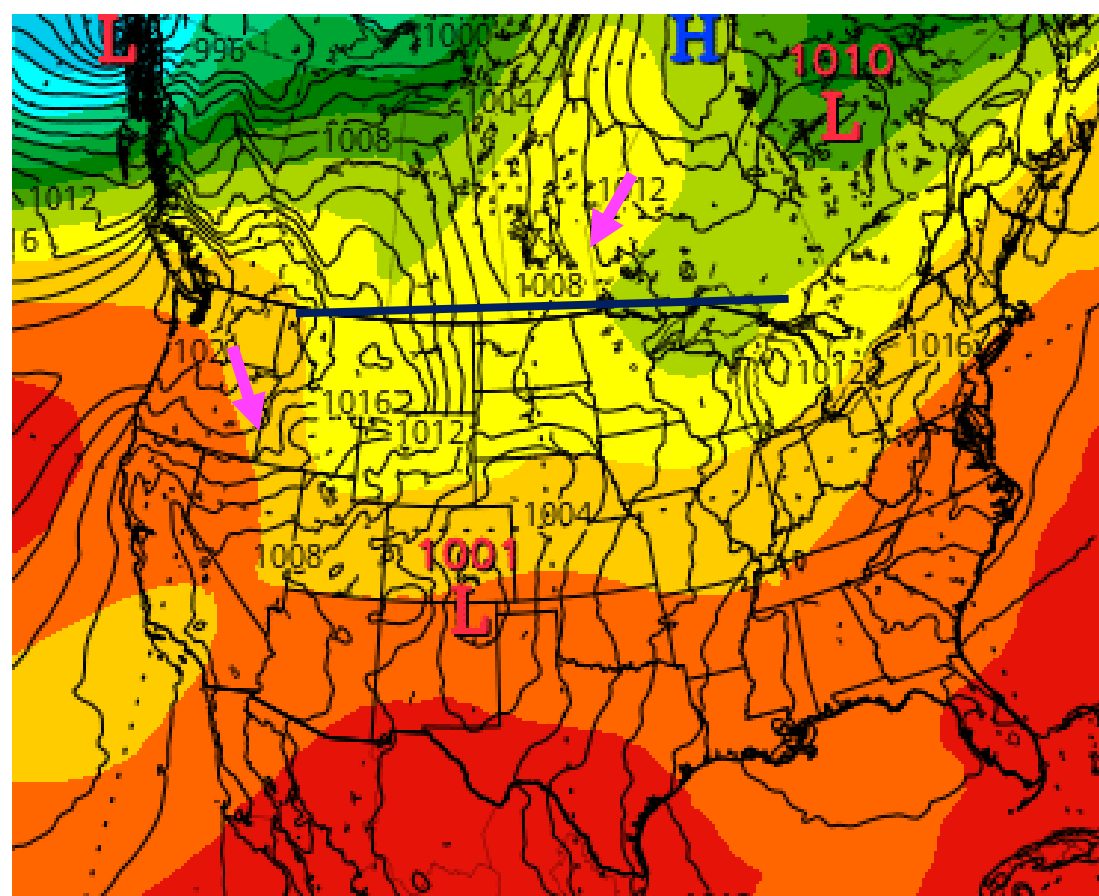


FireAQ is funded by NASA HAQ. We thank NASA GMAO and ECMWF for the model data products.

EARTH SCIENCE
APPLIED SCIENCES

Current Status: Sept 22, 2025

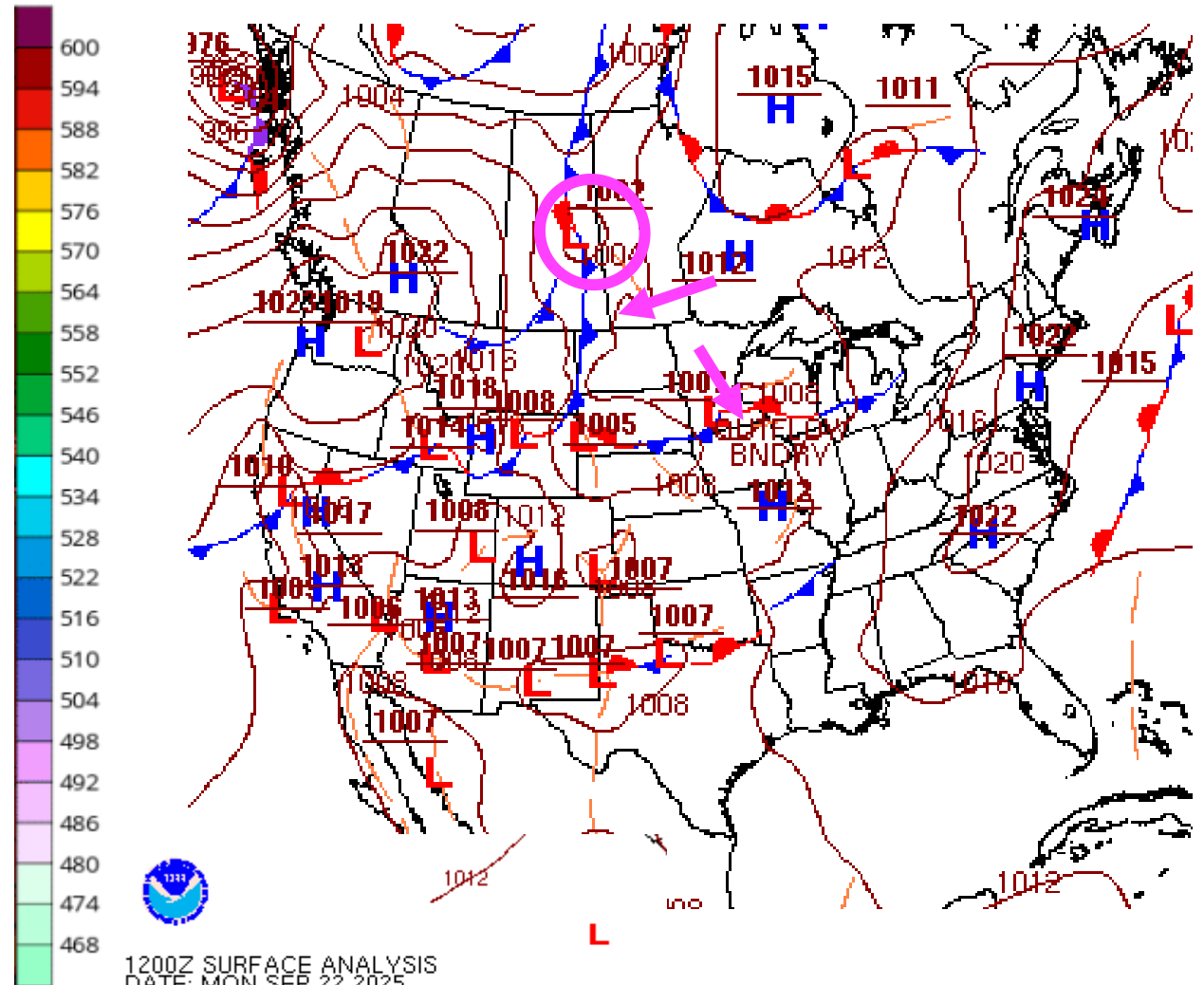
500 mb Contours



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

Init: 06z Sep 22 2025 Forecast Hour: [12] valid at 18z Mon, Sep 22 2025

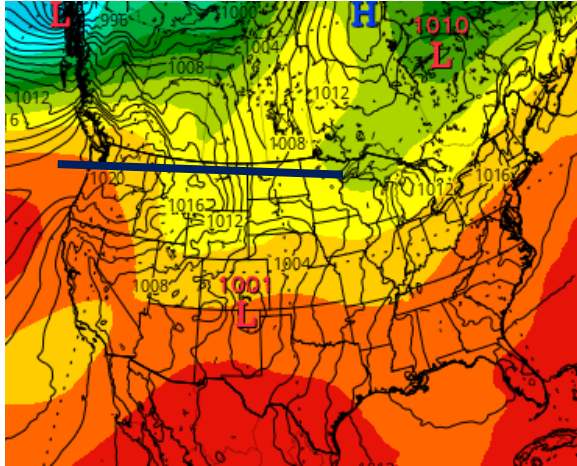
Surface Analysis



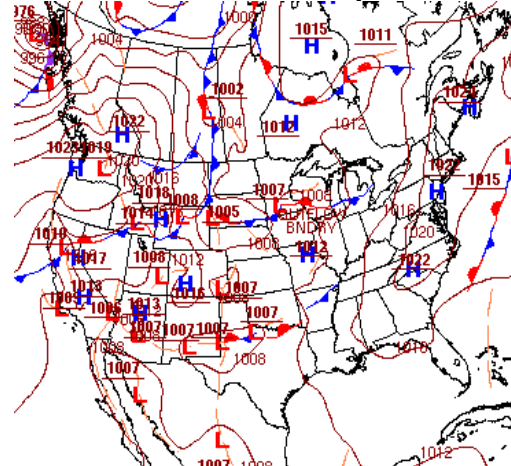
1200Z SURFACE ANALYSIS
DATE: MON SEP 22 2025
ISSUED: 1330Z MON SEP 22 2025
BY WPC ANALYST TATE
COLLABORATING CENTERS: WPC, NHC, OPC

Current Status: Sept 22, 2025

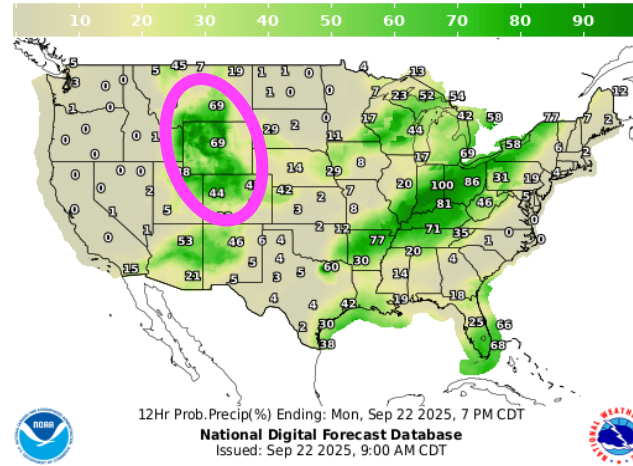
500 mb Contours



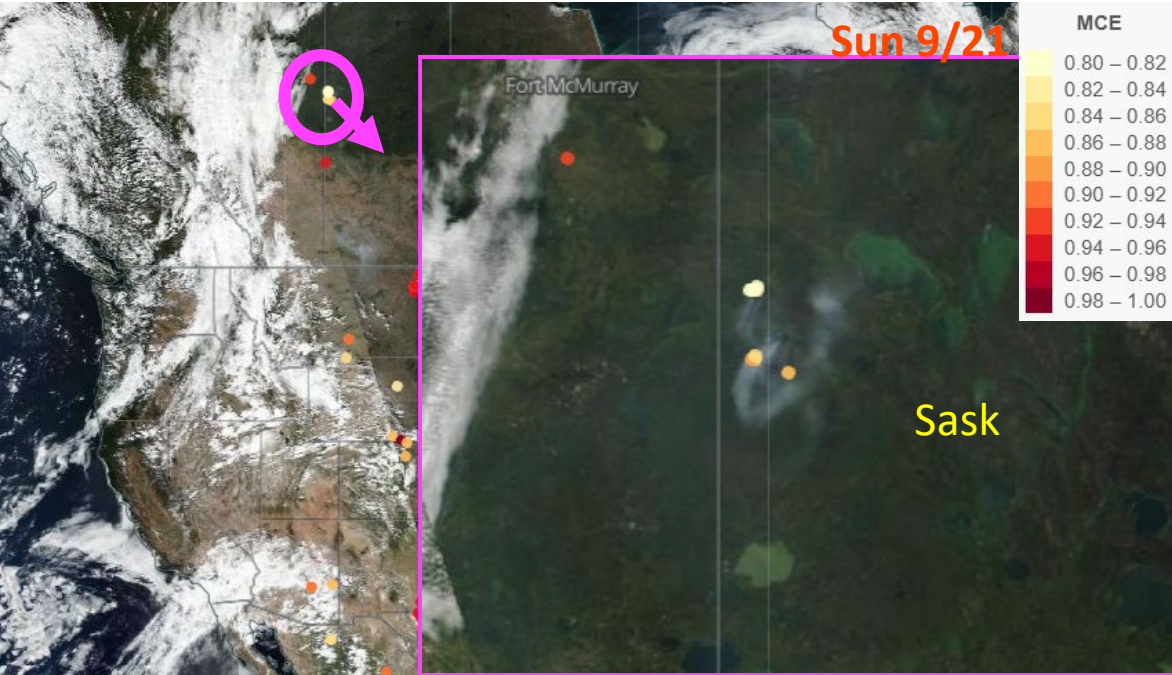
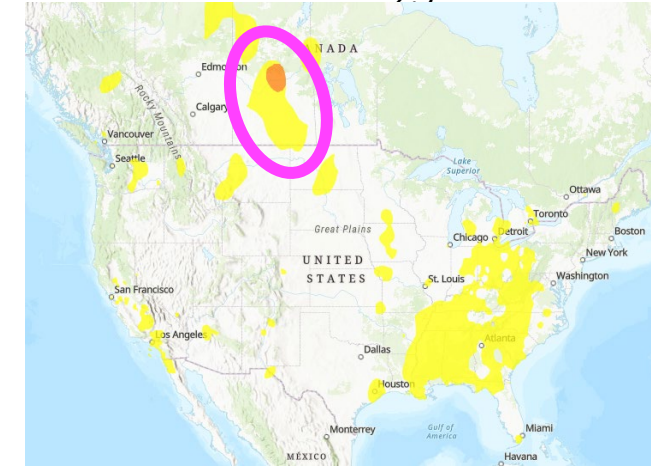
Surface Analysis



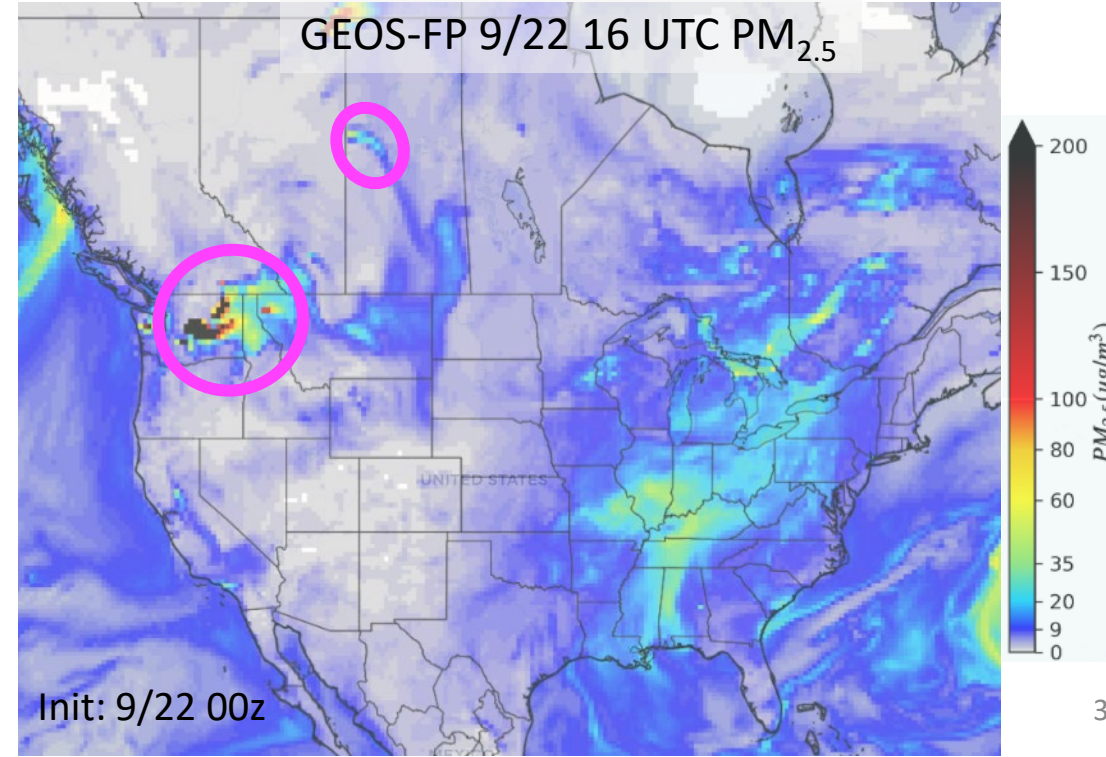
Precip. Prob.



AirNow PM_{2.5} AQI

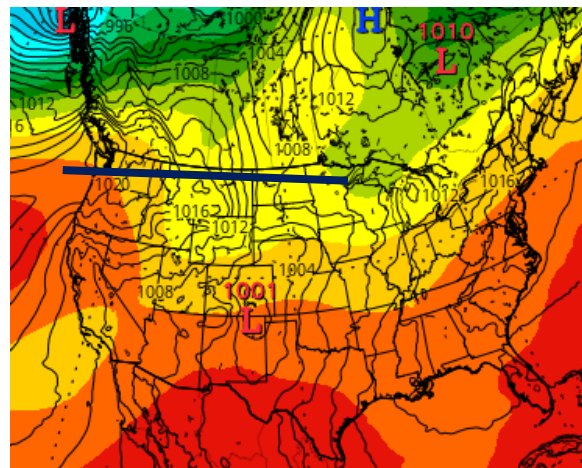


GEOS-FP 9/22 16 UTC PM_{2.5}

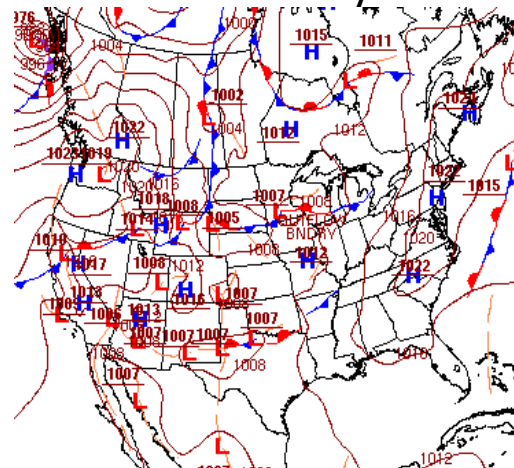


Current Status: Sept 22, 2025

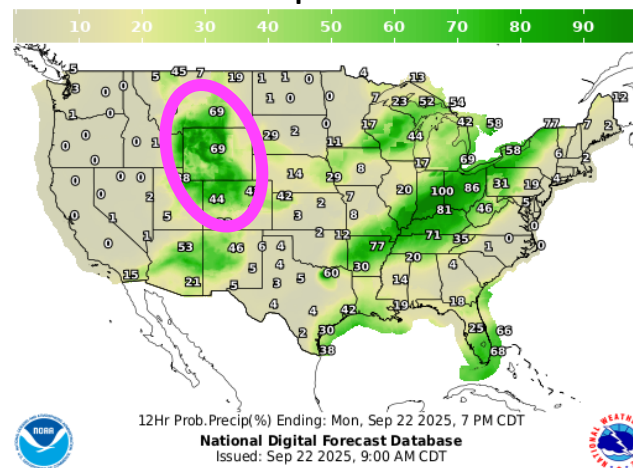
500 mb Contours



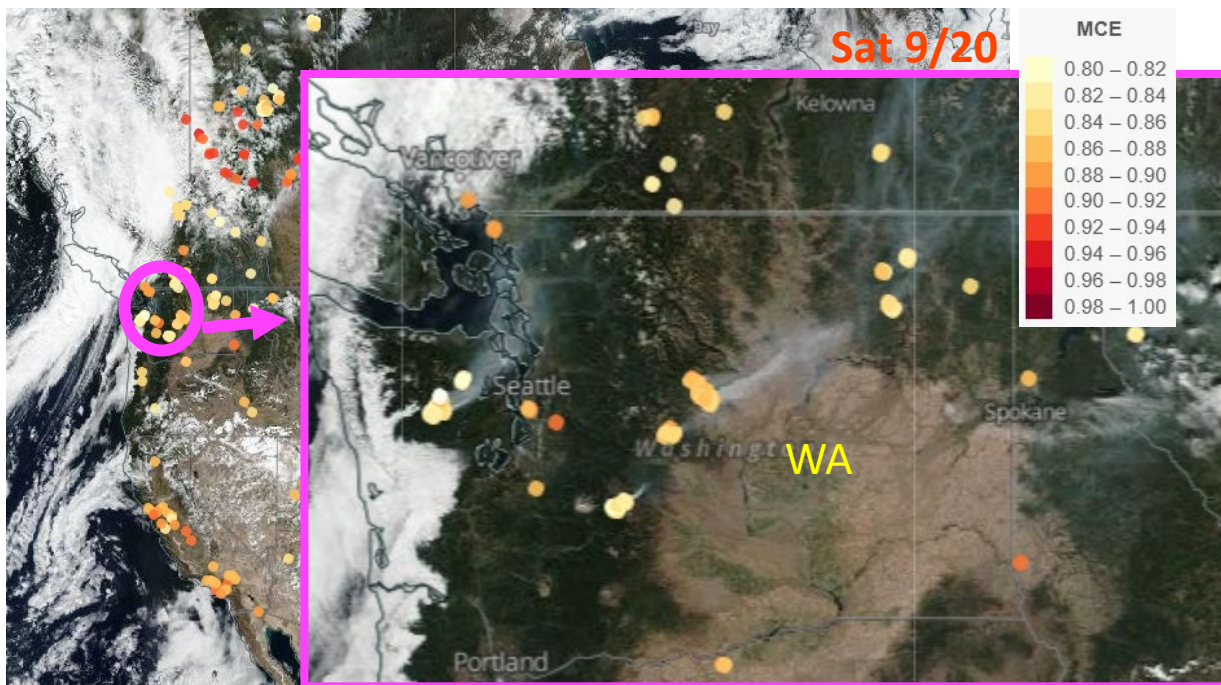
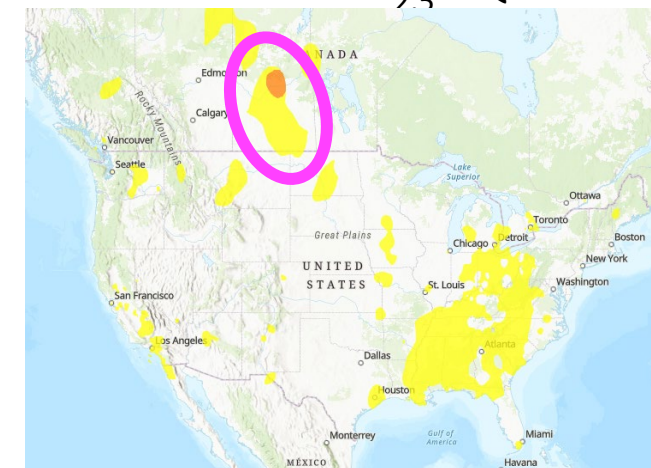
Surface Analysis



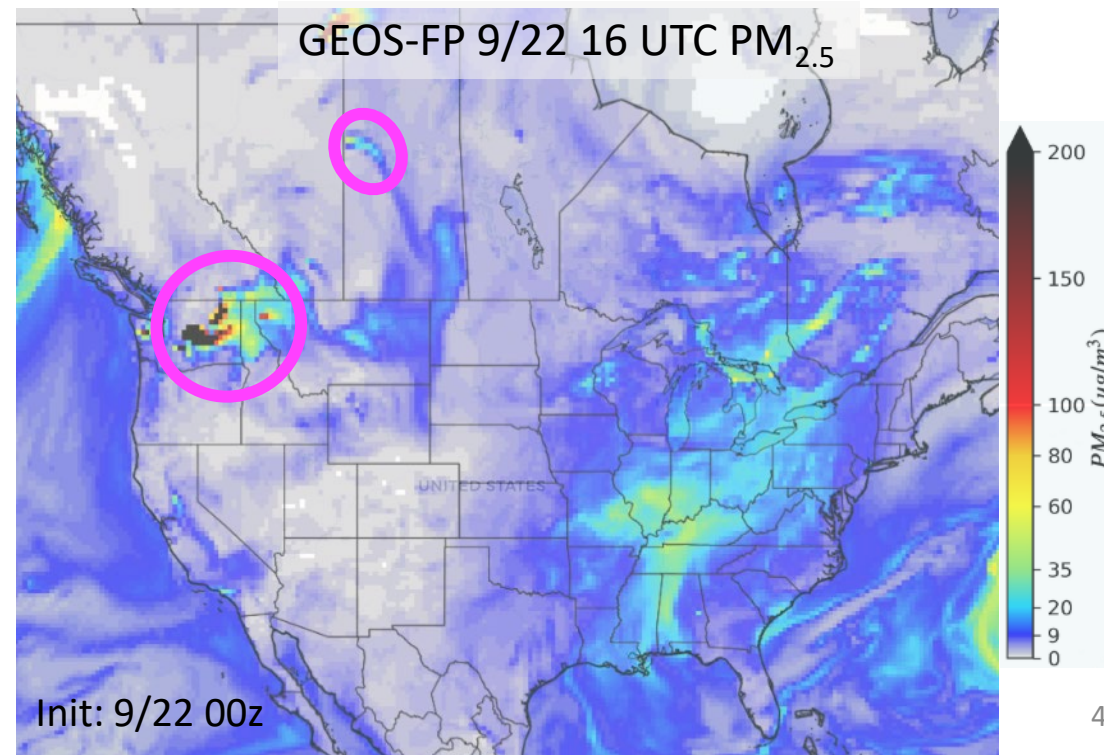
Precip. Prob.



AirNow PM_{2.5} AQI

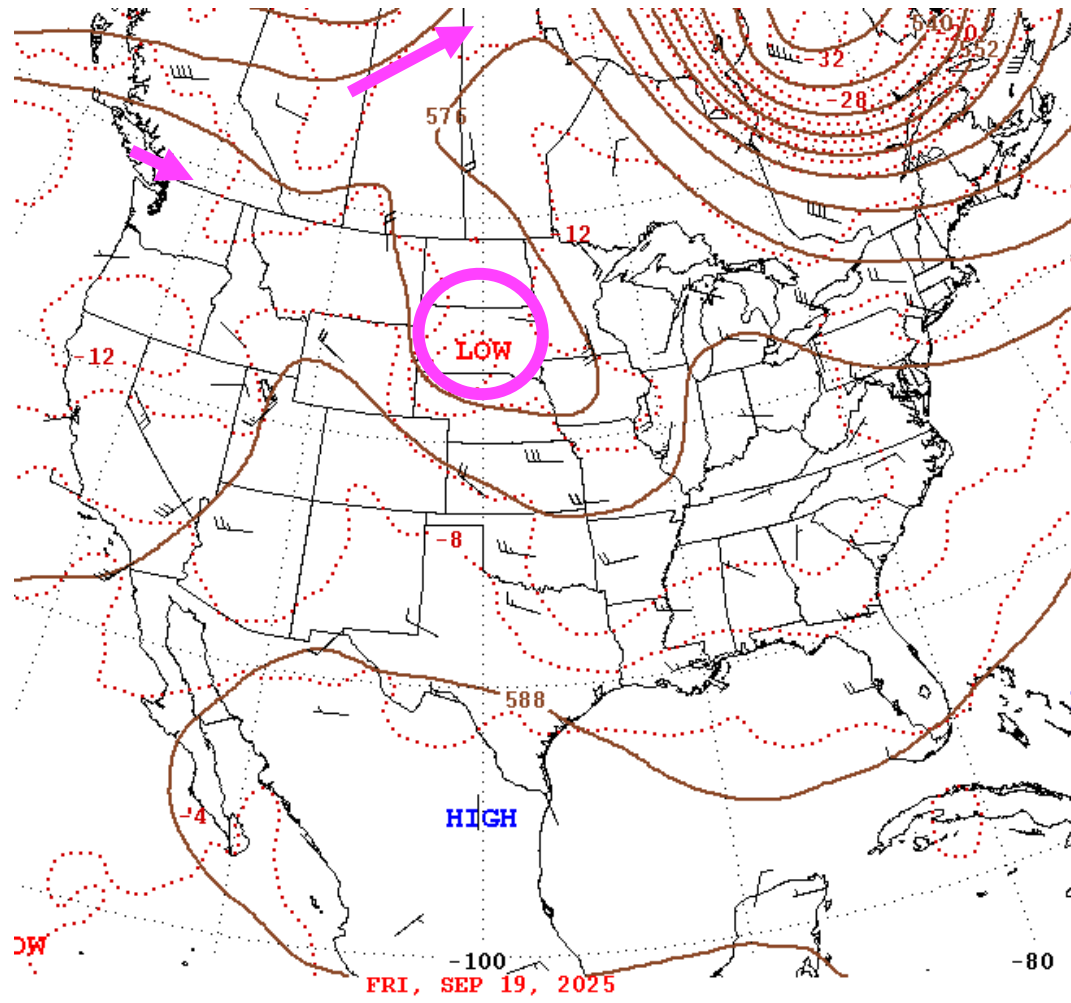


GEOS-FP 9/22 16 UTC PM_{2.5}



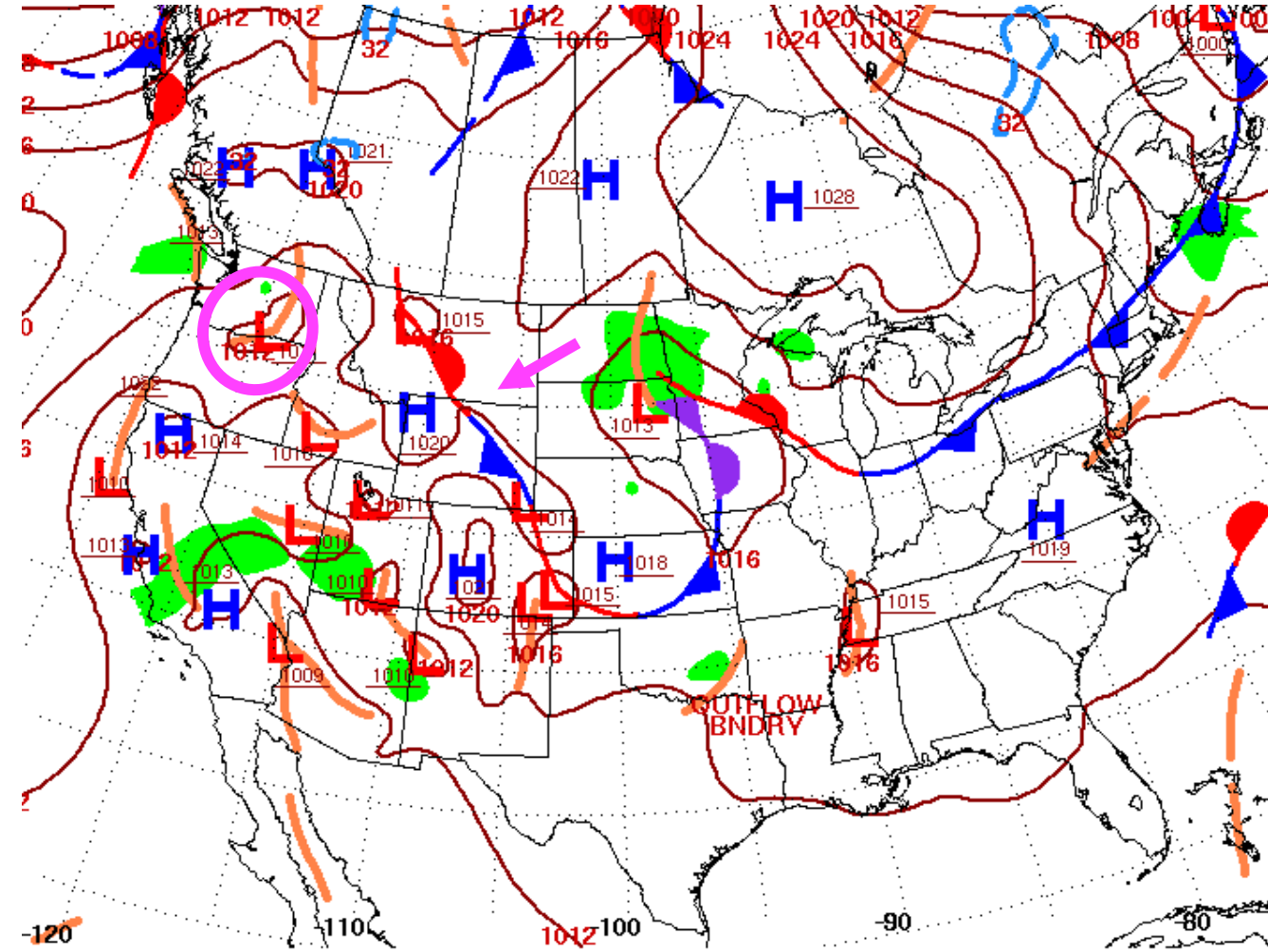
Air Quality Reflection: Friday Sept 19, 2025

500 mb Contours



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

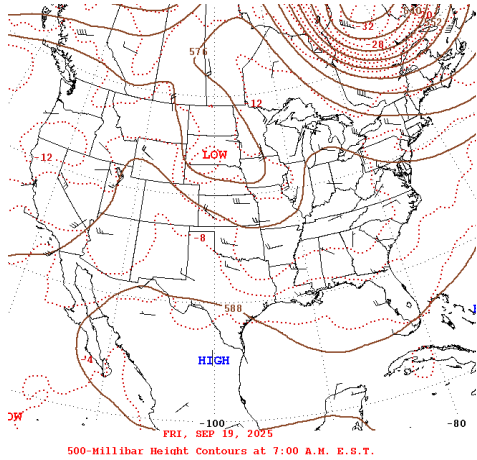
Surface Weather



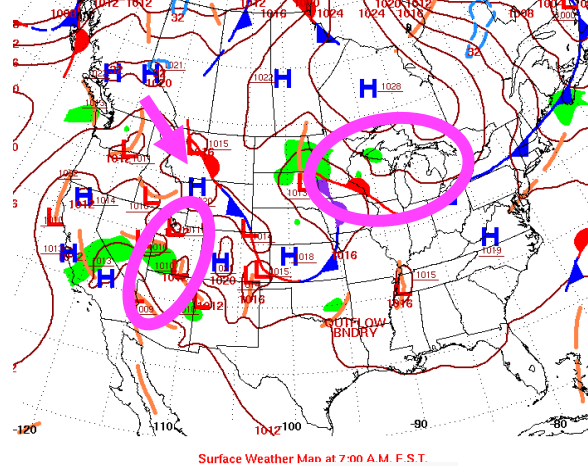
Surface Weather Map at 7:00 A.M. E.S.T.

Air Quality Reflection: Friday Sept 19, 2025

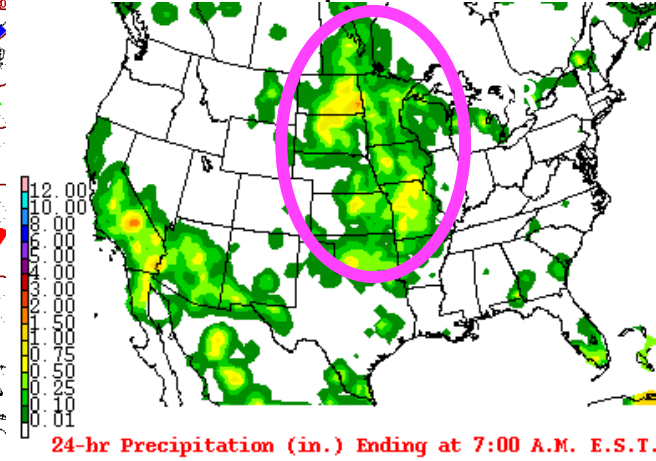
500 mb Contours



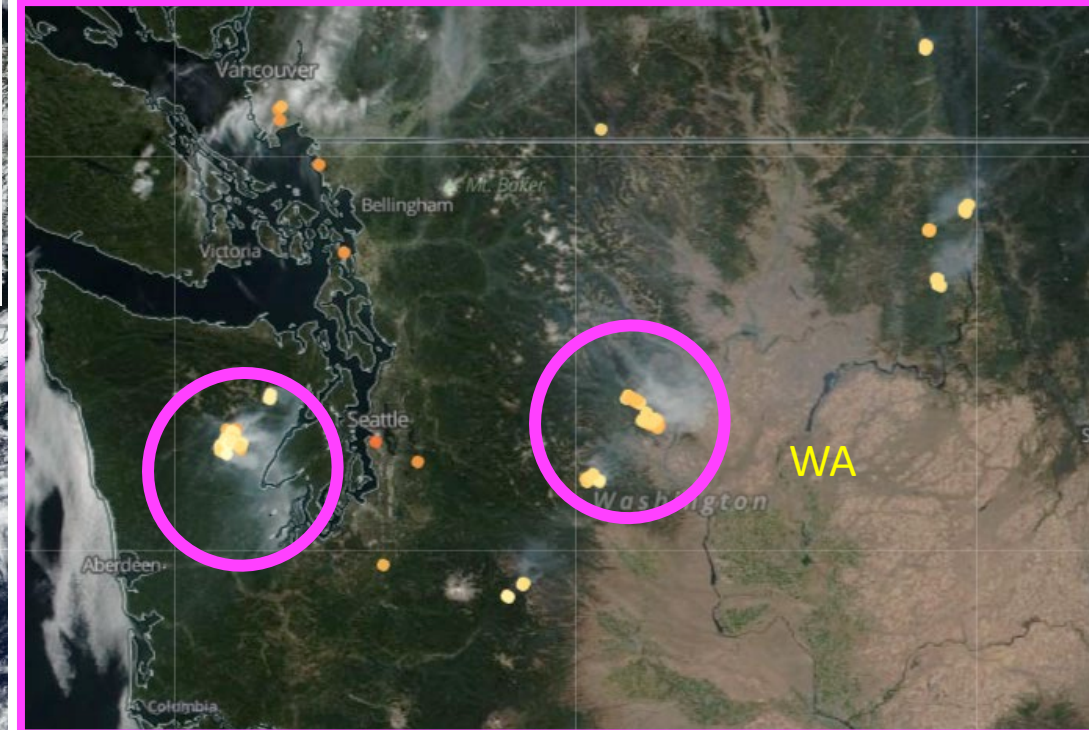
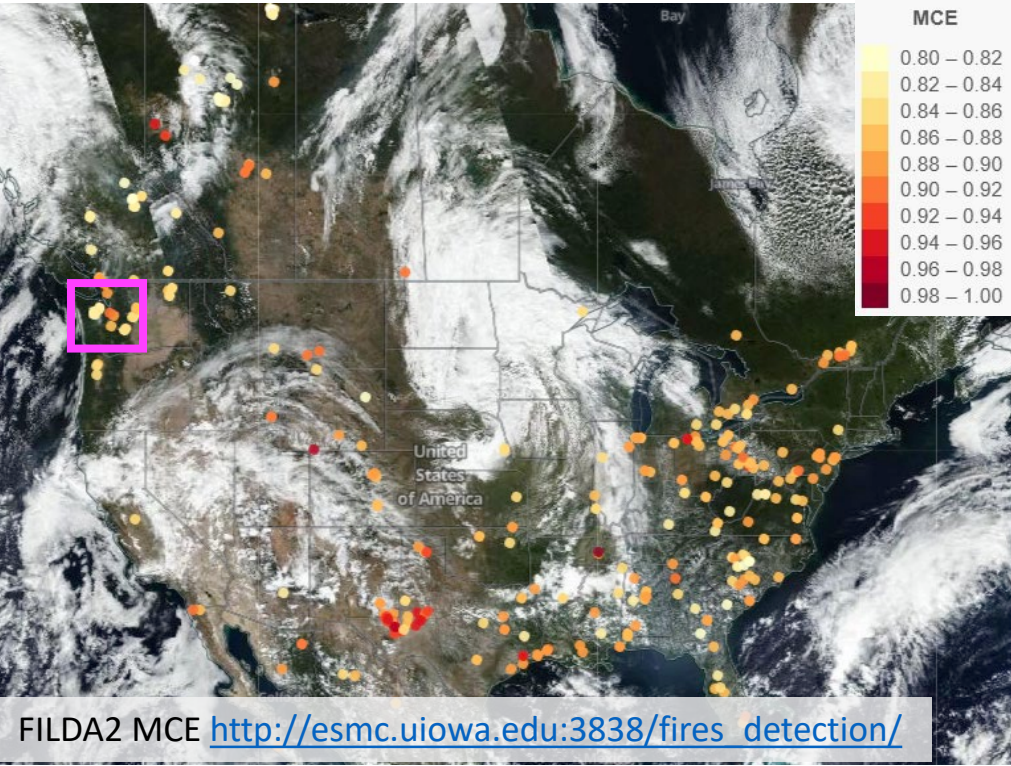
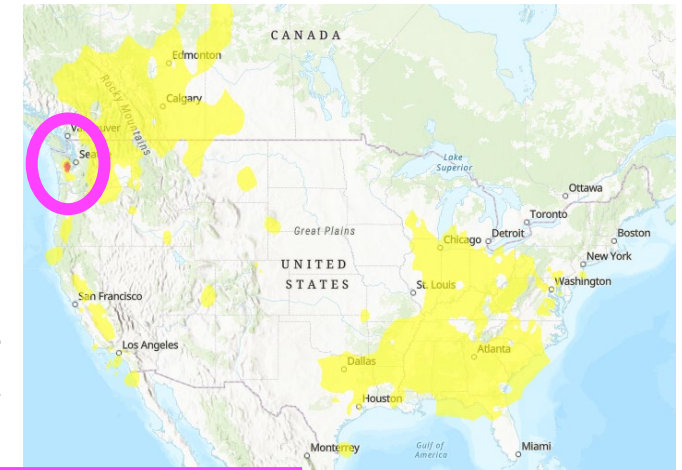
Surface Weather



Precipitation

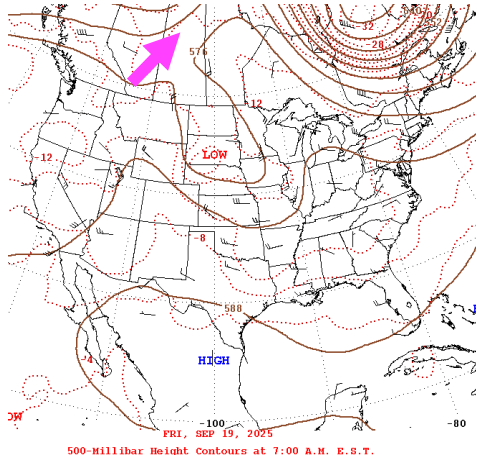


AirNow PM_{2.5} AQI

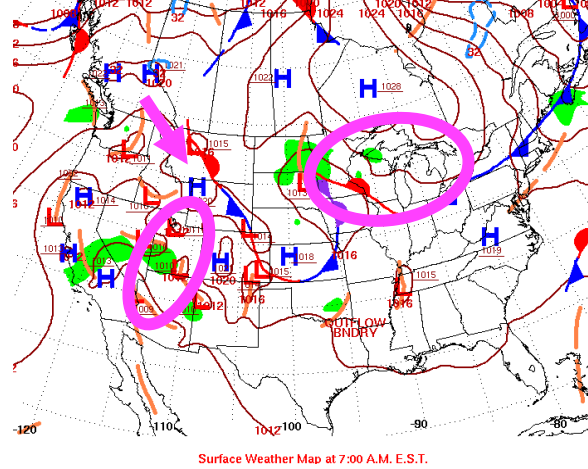


Air Quality Reflection: Friday Sept 19, 2025

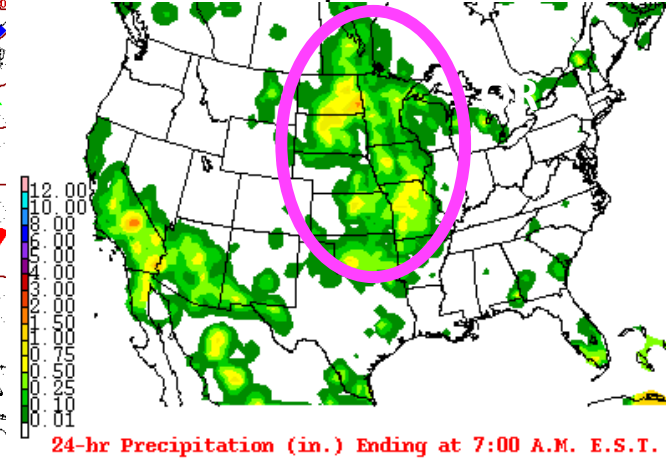
500 mb Contours



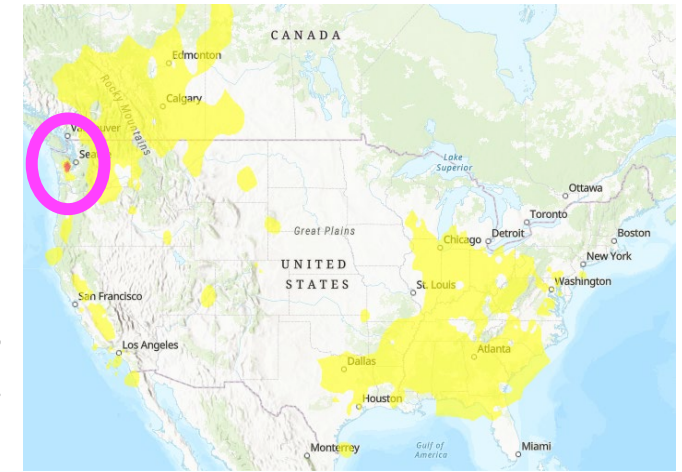
Surface Weather



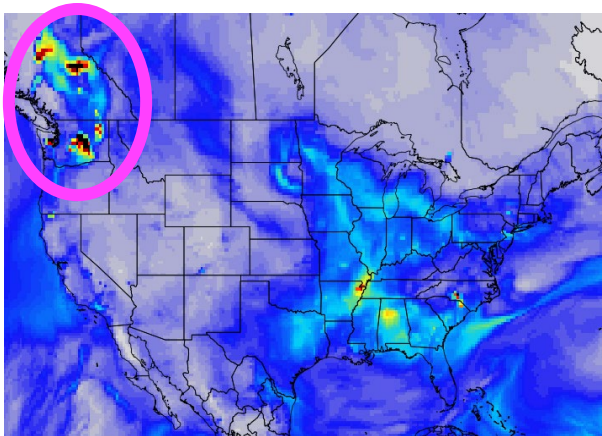
Precipitation



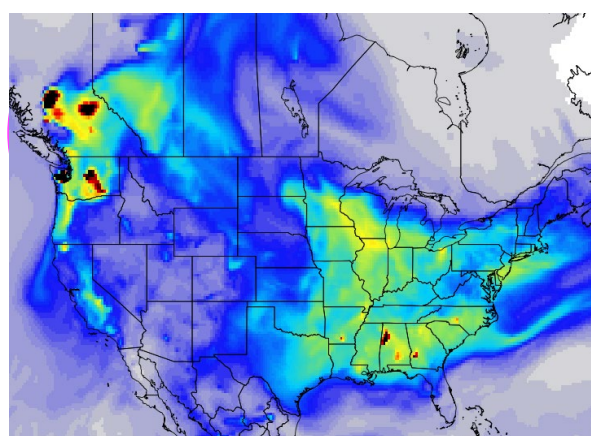
AirNow PM_{2.5} AQI



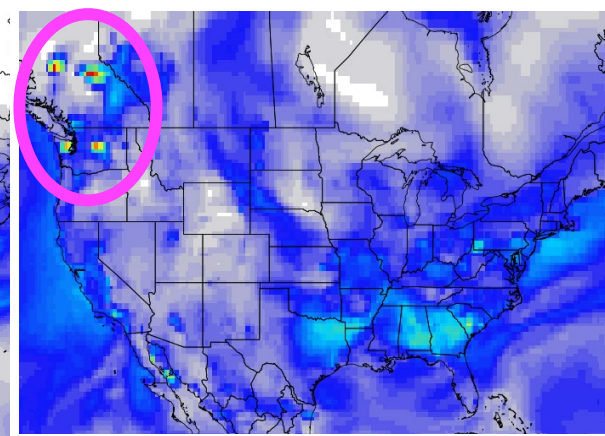
GEOS-FP



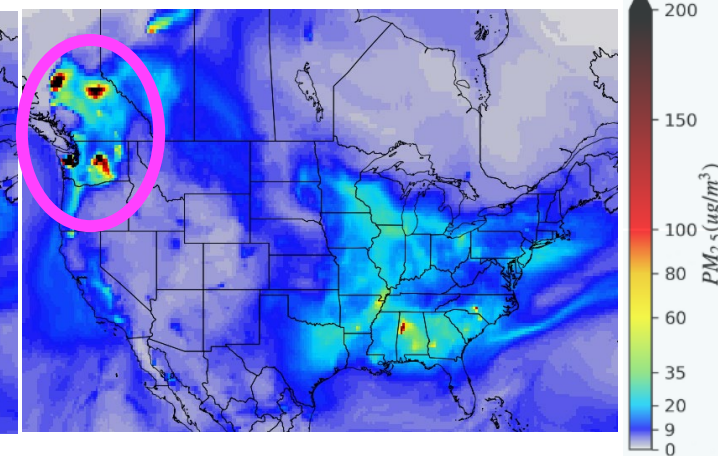
GEOS-CF



CAMS



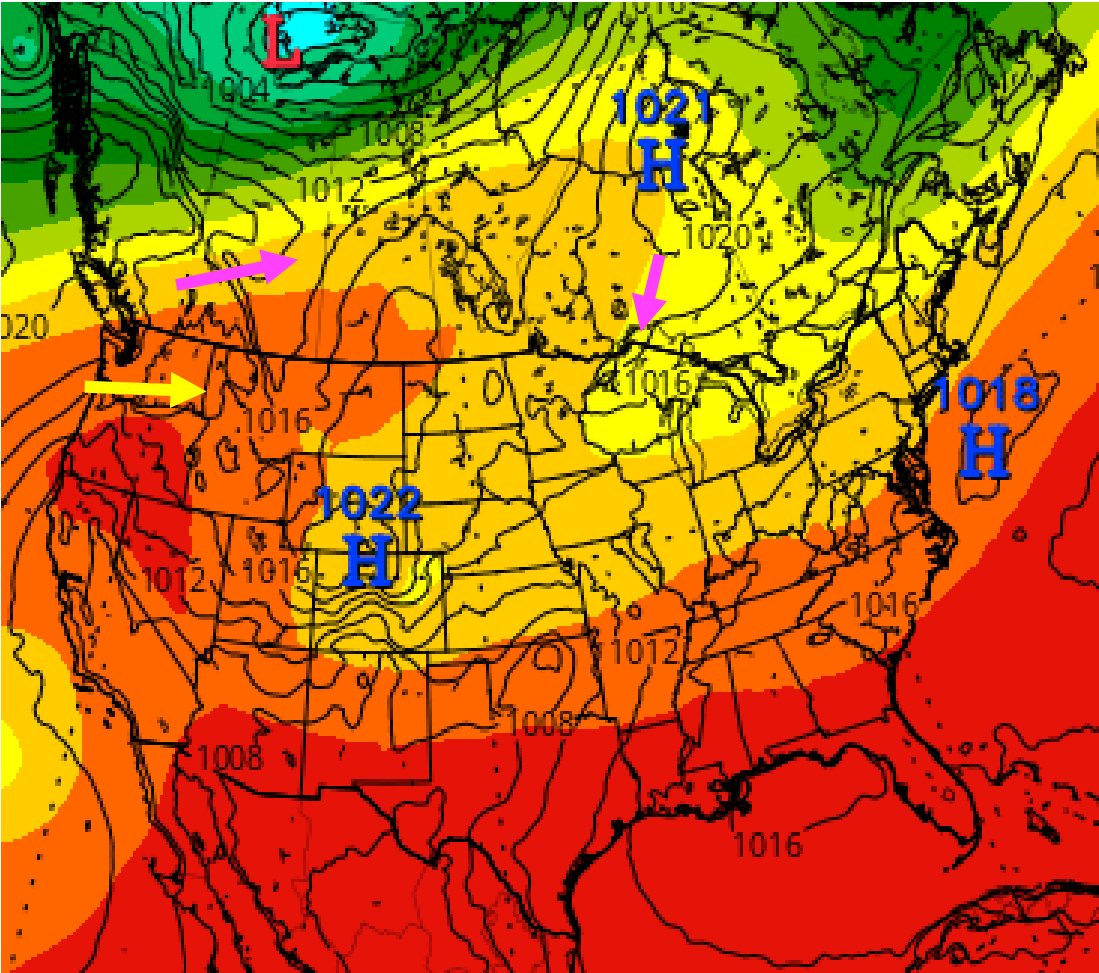
Ensemble



Outlook: Short Range (1-3 days)

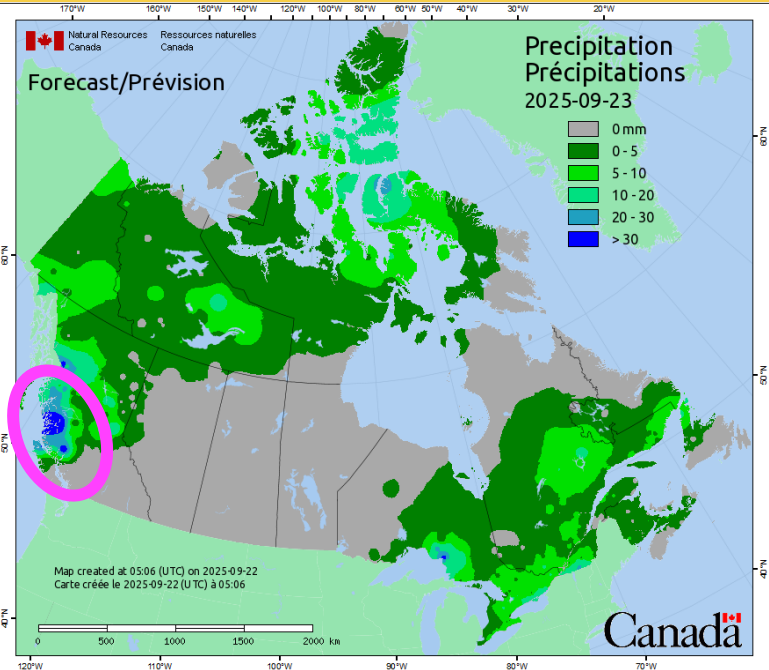
(Forecast Tuesday 9/23)

GFS 500 mb

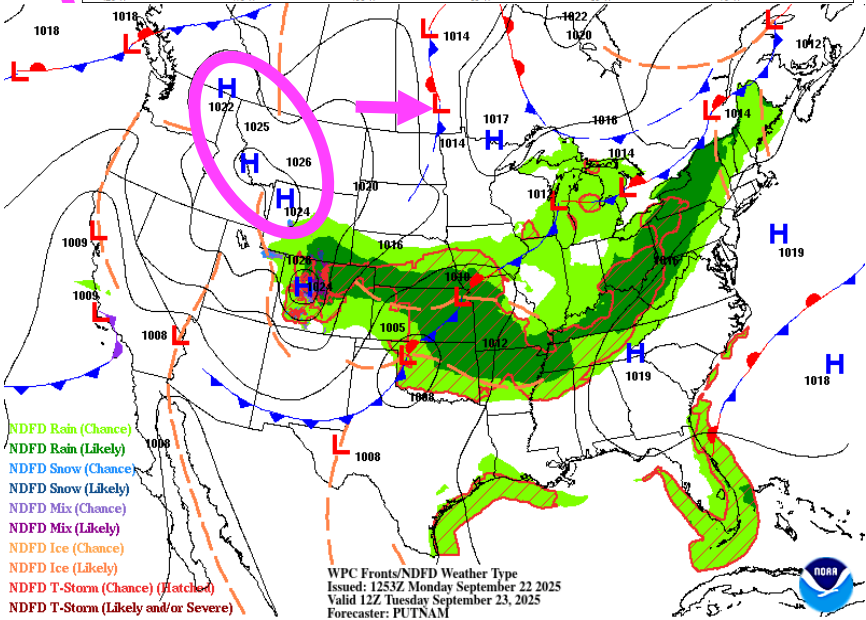


GFS 500mb Geopotential Height (dam) & MSLP (mb)
Init: 06z Sep 22 2025 Forecast Hour: [36] valid at 18z Tue, Sep 23 2025

Environment
Canada
Forecast

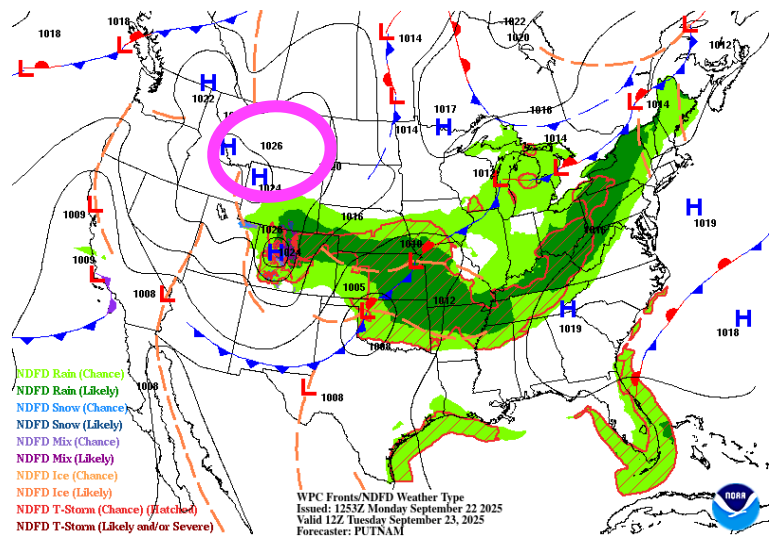


US NWS
Forecast

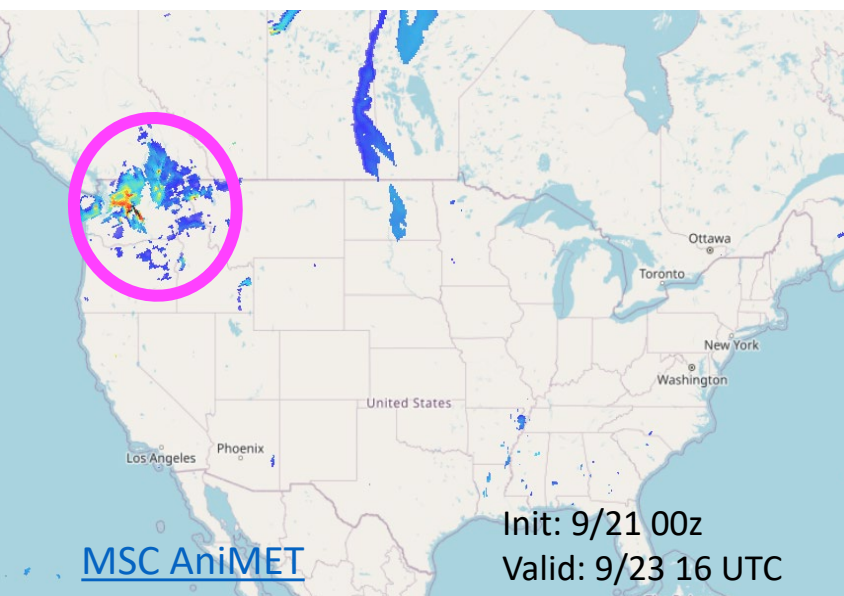


Outlook: Short Range (1–3 days)

Surface Forecast



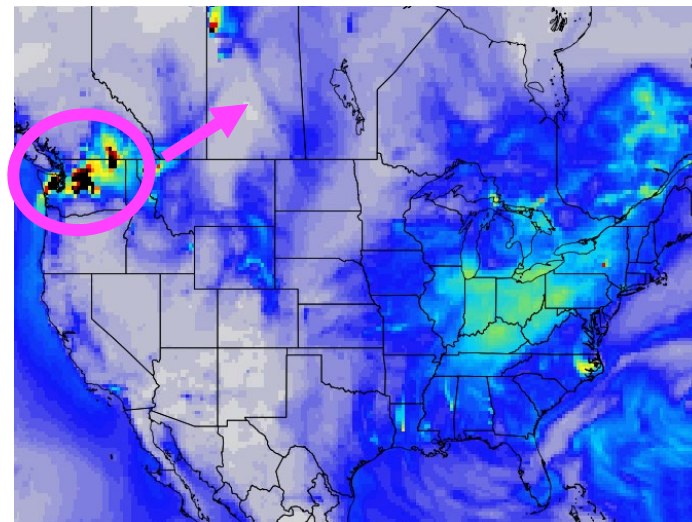
Canada MSC AniMET



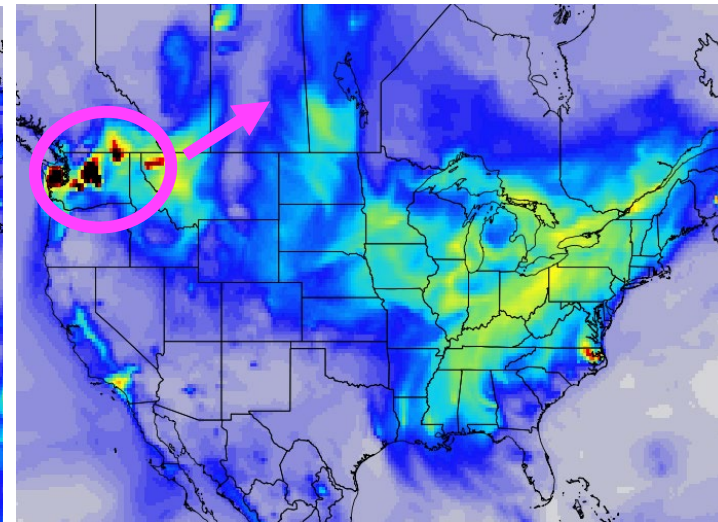
(Tuesday 9/23)

Model Means PM_{2.5}

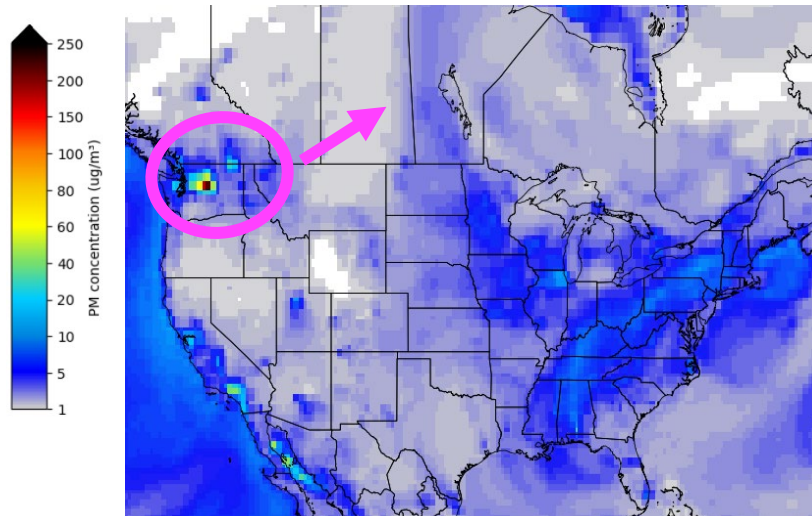
GEOS-FP



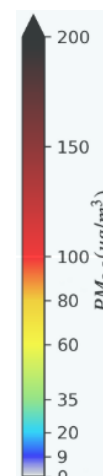
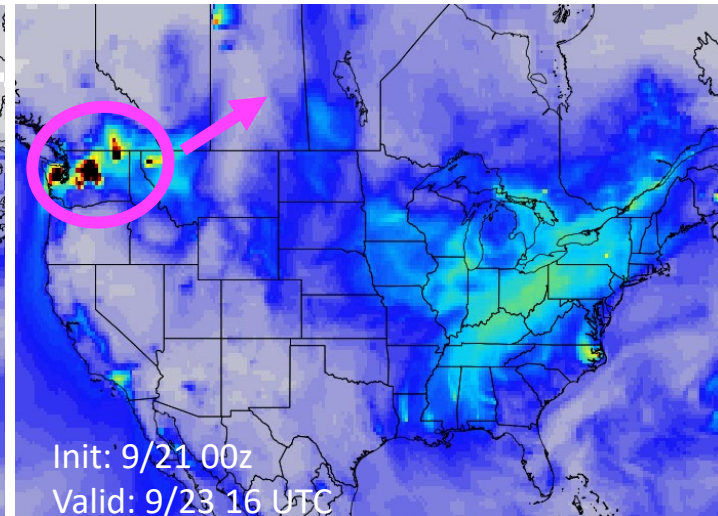
GEOS-CF



CAMS



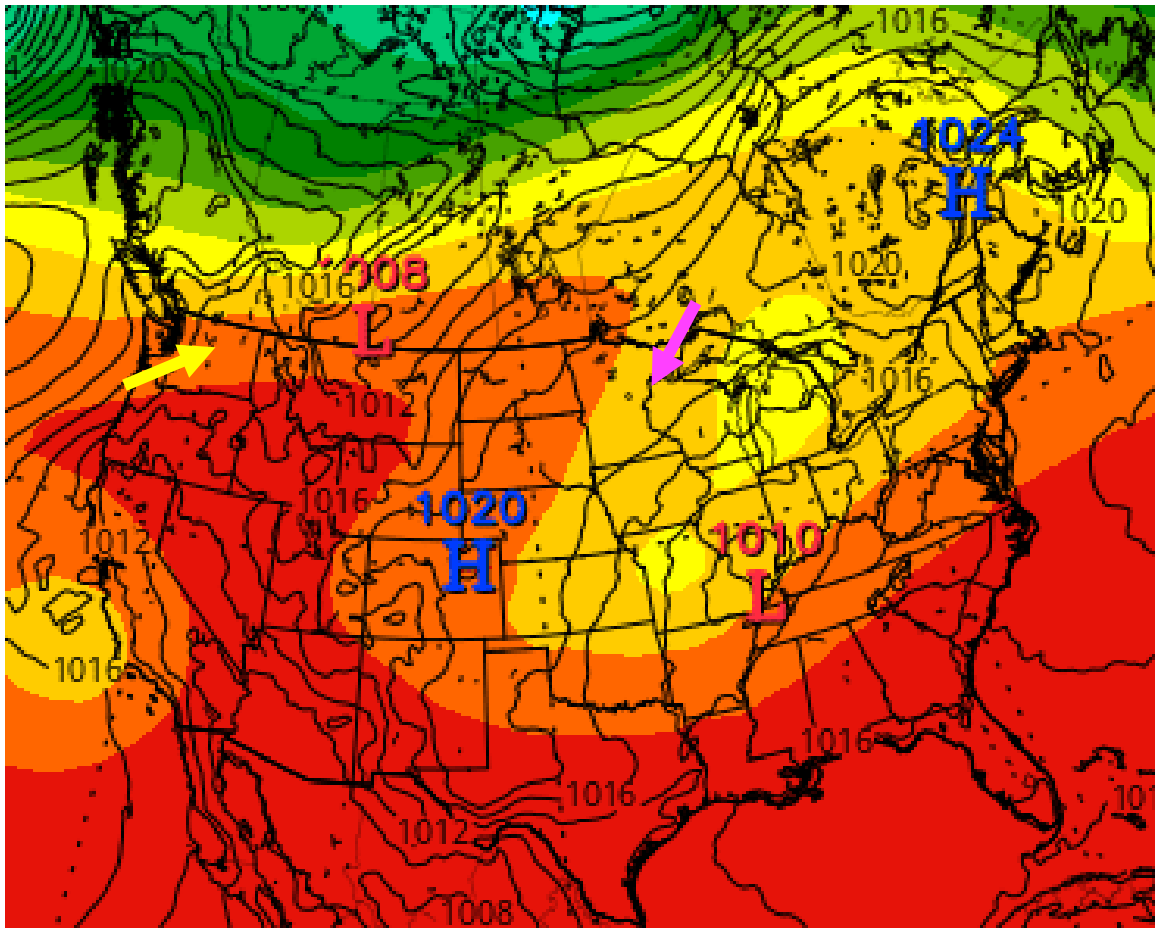
Ensemble



Outlook: Short Range (1–3 days)

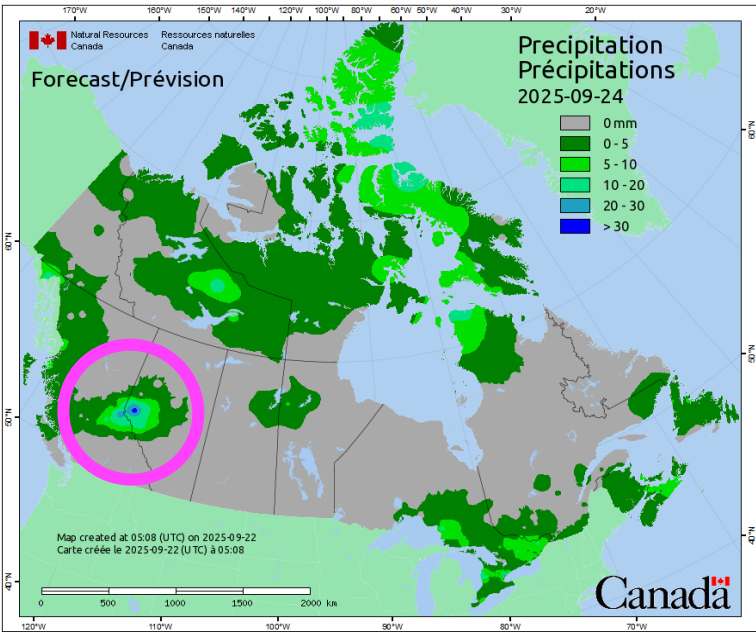
(Forecast **Wednesday 9/24**)

GFS 500 mb

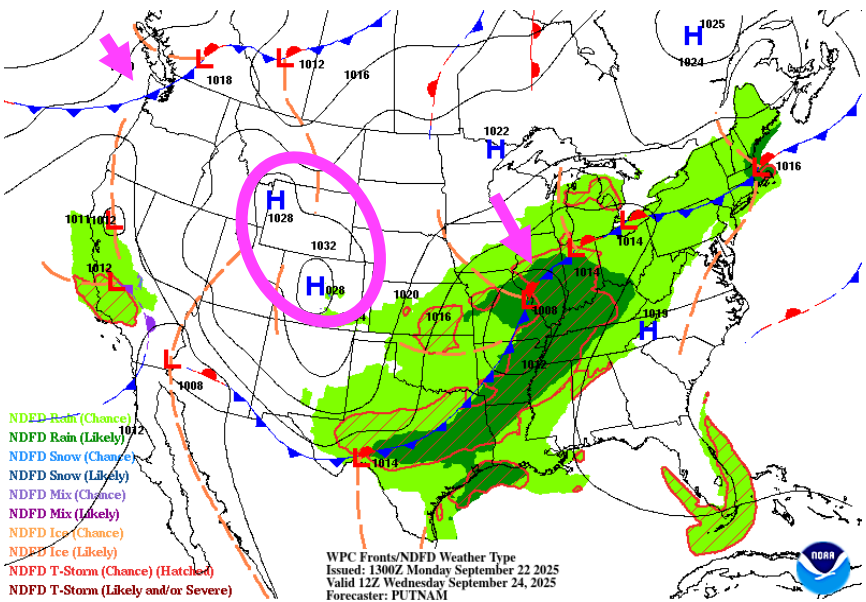


GFS 500mb Geopotential Height (dam) & MSLP (mb)
Init: 06z Sep 22 2025 Forecast Hour: 1601 valid at 18z Wed. Sep 24 2025

Environment
Canada
Forecast

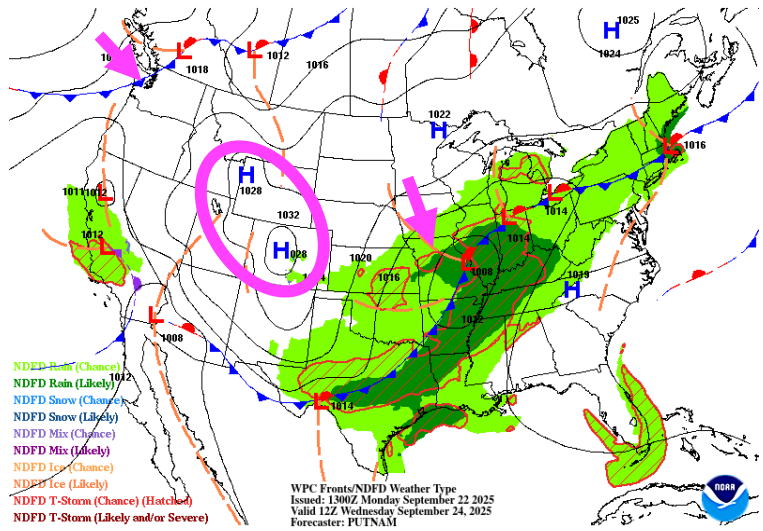


US NWS
Forecast

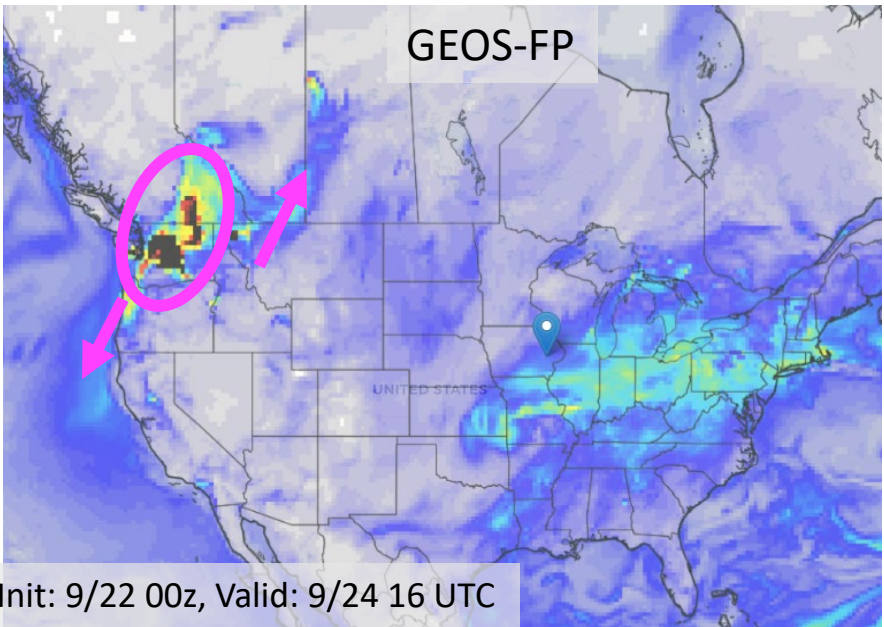


Outlook: Short Range (1–3 days)

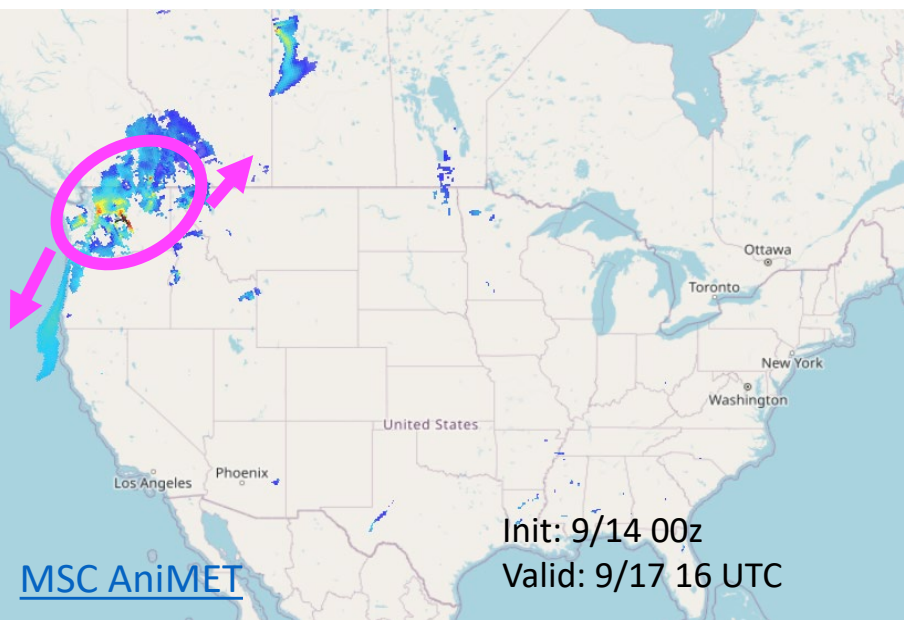
Surface Forecast



(Wednesday 9/24)



Canada MSC AniMET

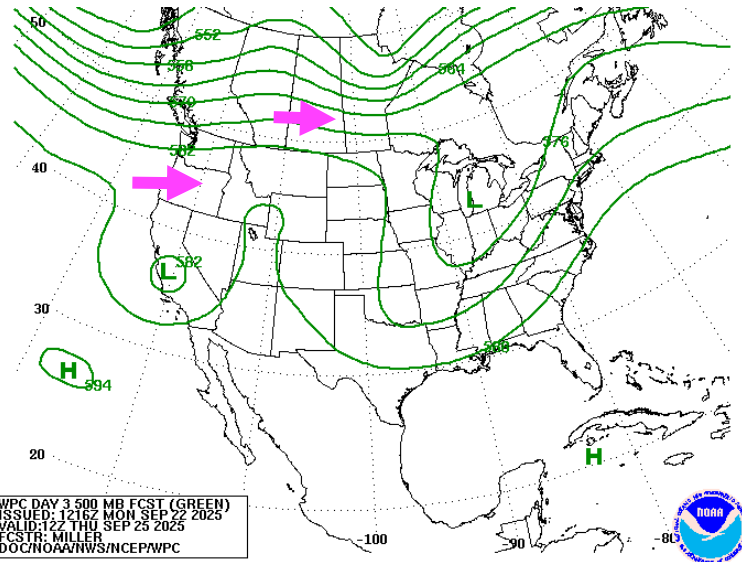


CAMS

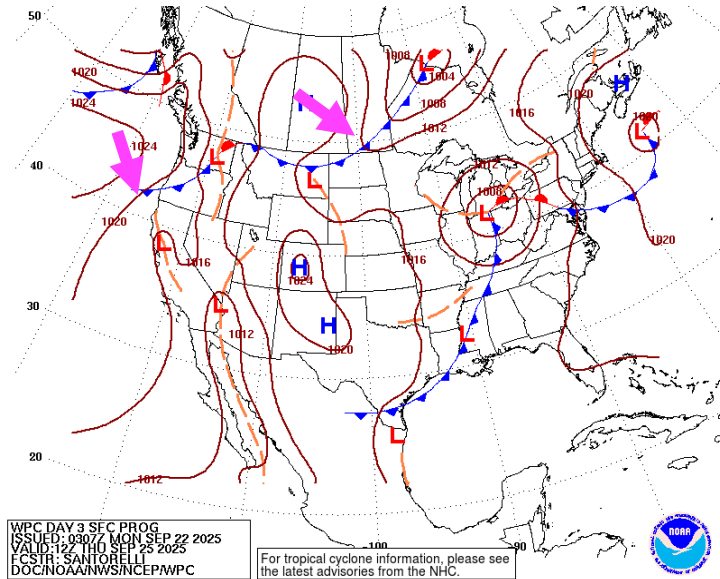
N/A

Outlook: Medium Range

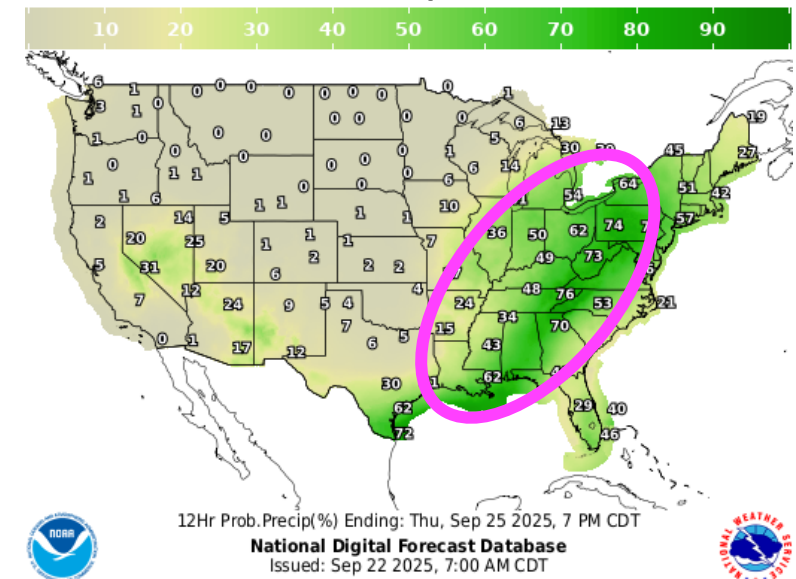
500 mb Contours



Sea Level



Precip Prob.



Thurs
9/25

Friday
9/26

