

Weather and Air Quality: Reflection and Outlook During Smoke Conditions

Presenter: Megan Christiansen
Date: September 15, 2025

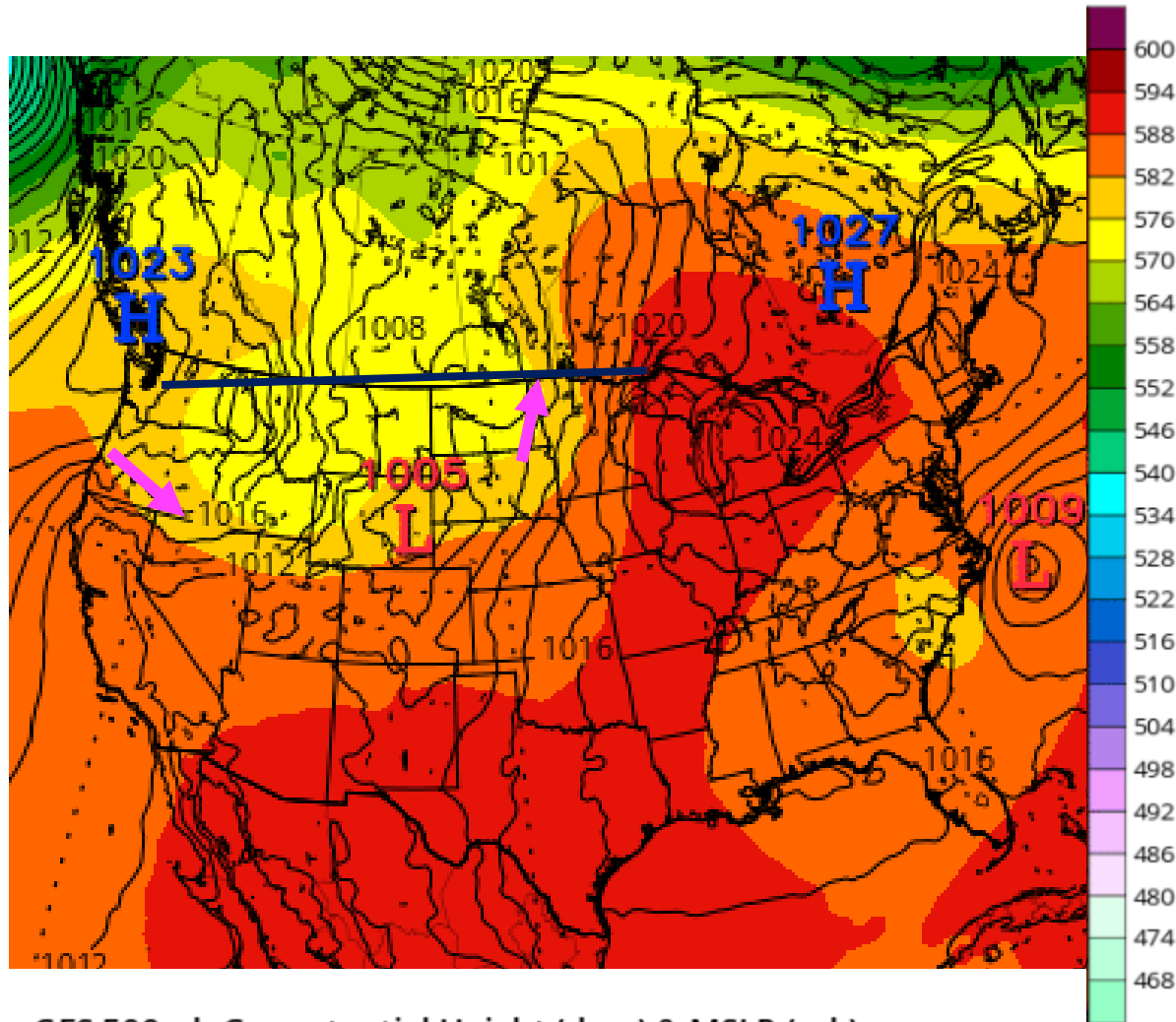


FireAQ is funded by NASA HAQ. We thank NASA GMAO and ECMWF for the model data products.

**EARTH SCIENCE
APPLIED SCIENCES**

Current Status: Sept 15, 2025

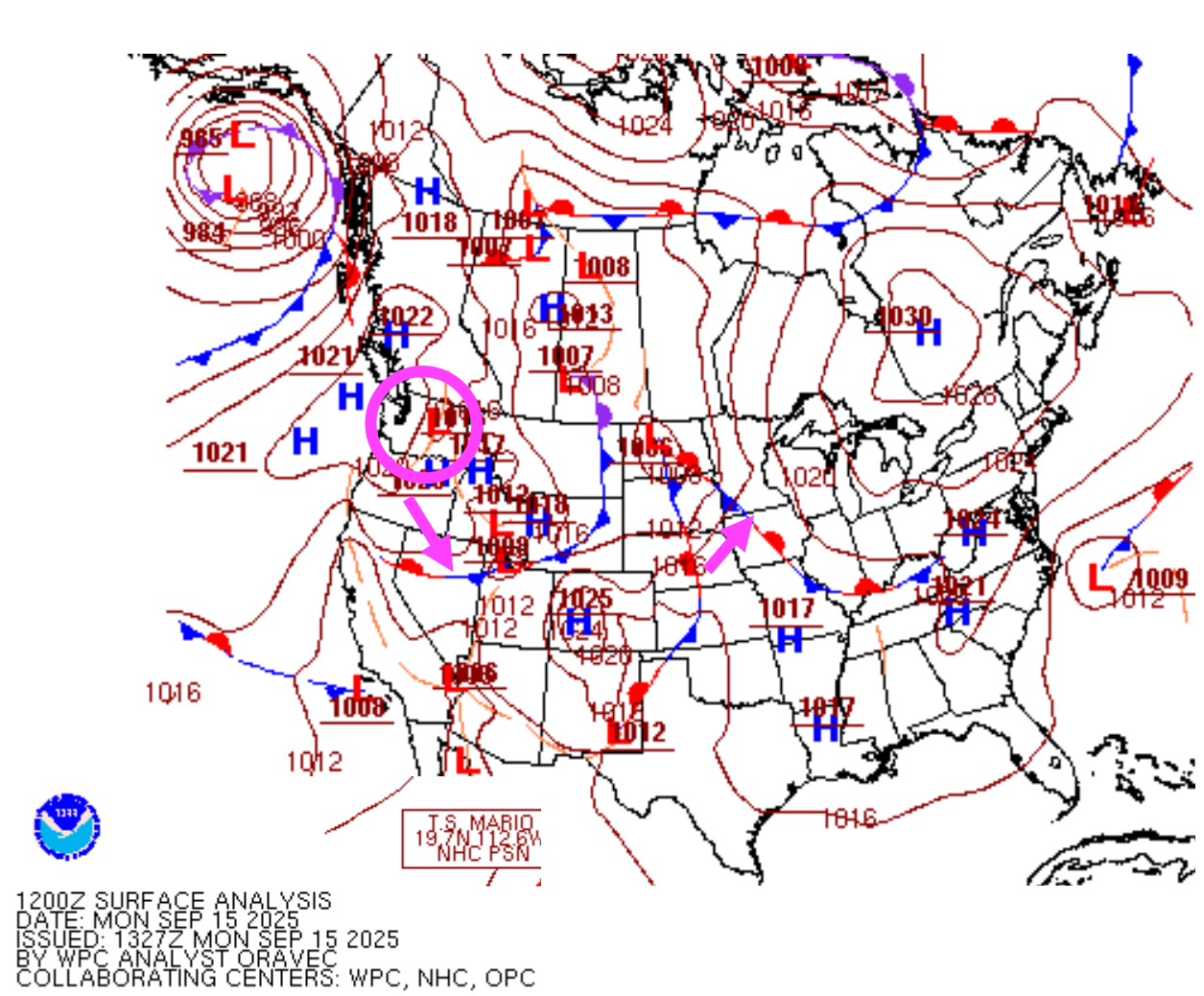
500 mb Contours



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

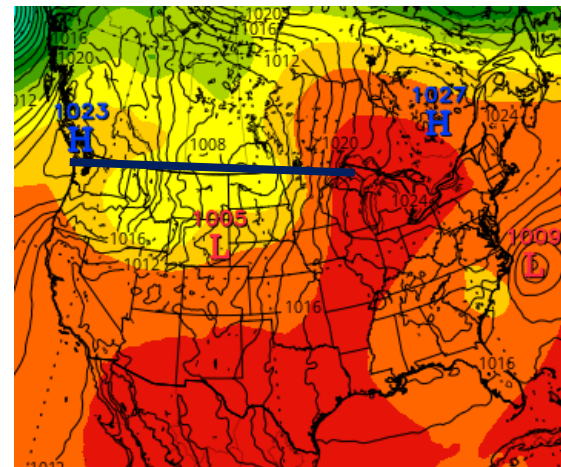
Init: 06z Sep 15 2025 Forecast Hour: [12] valid at 18z Mon, Sep 15 2025

Surface Analysis

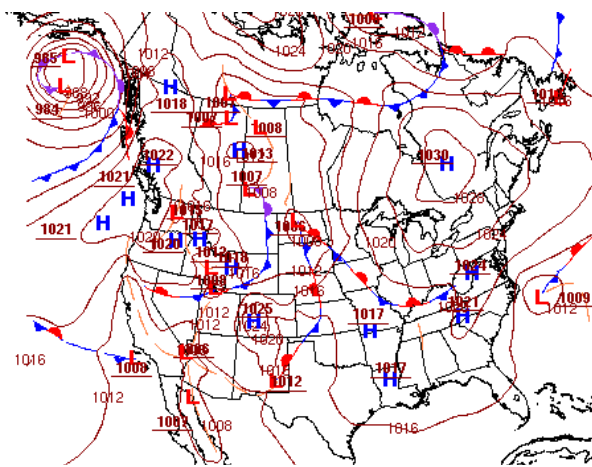


Current Status: Sept 15, 2025

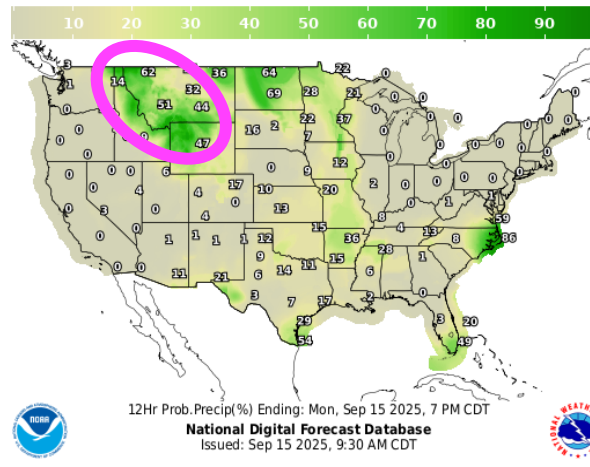
500 mb Contours



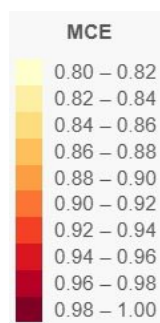
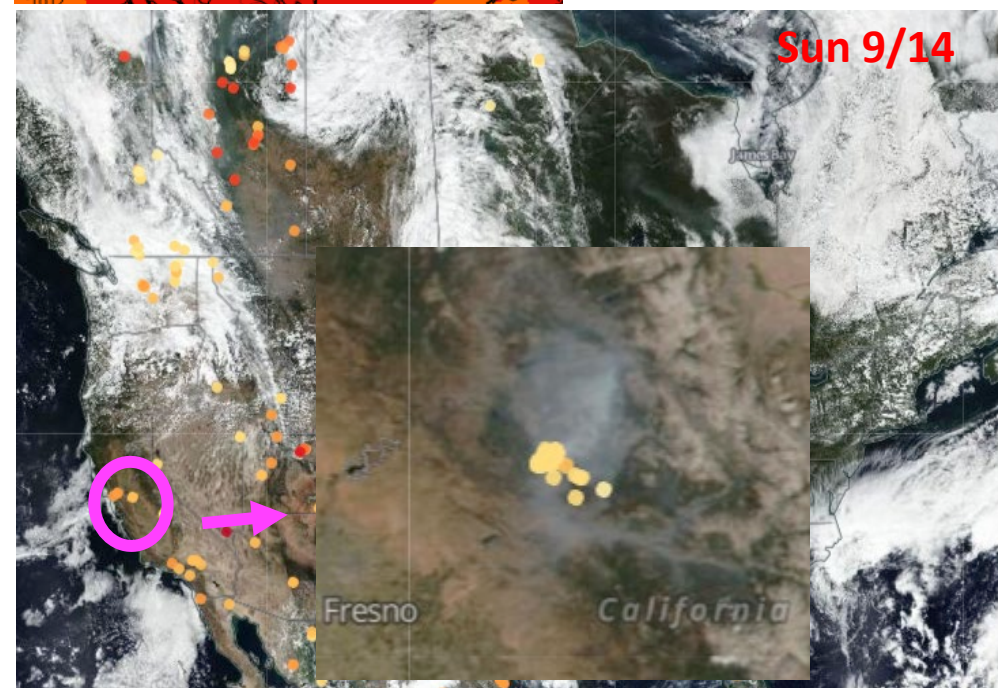
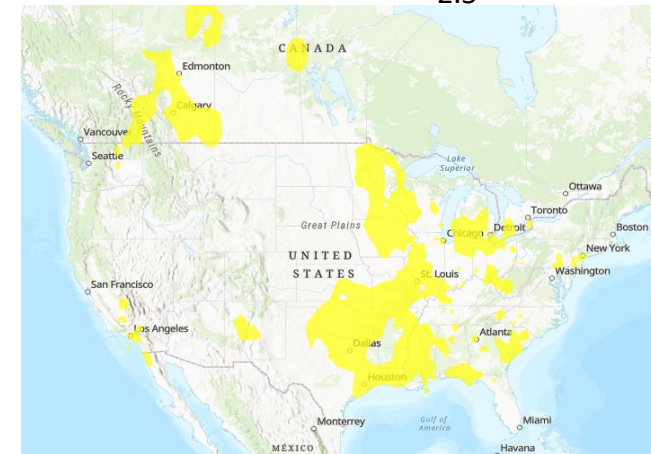
Surface Analysis



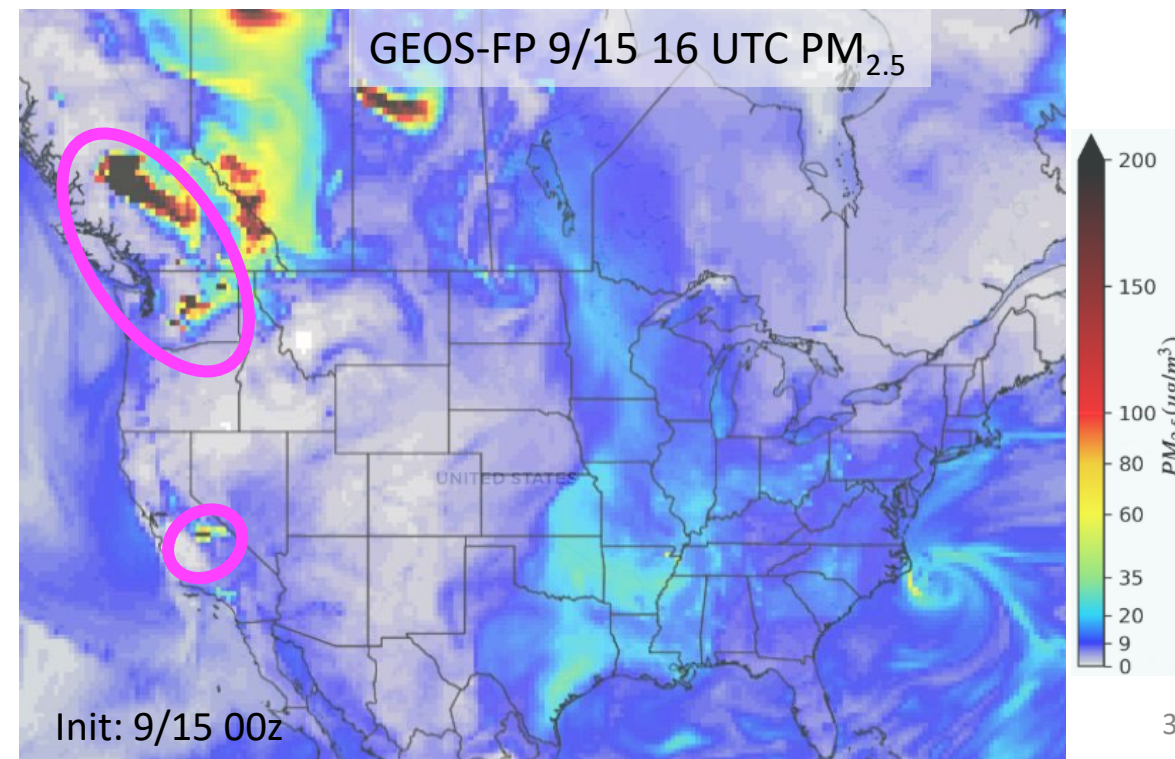
Precip. Prob.



AirNow PM_{2.5} AQI

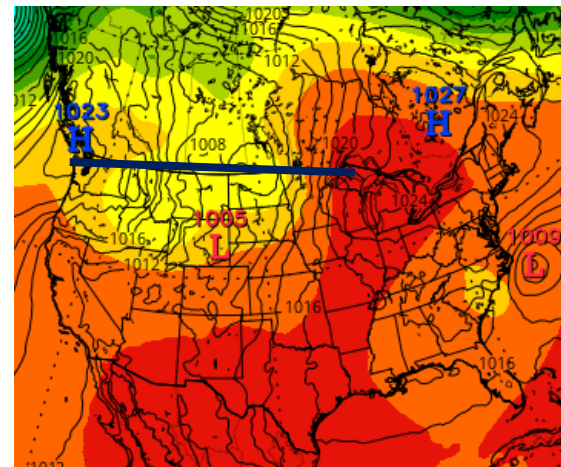


GEOS-FP 9/15 16 UTC PM_{2.5}

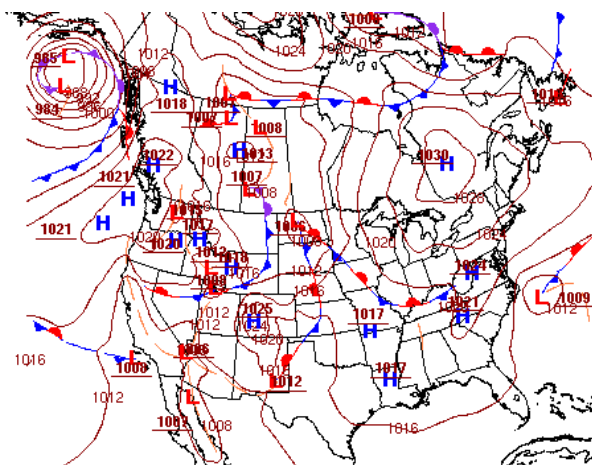


Current Status: Sept 15, 2025

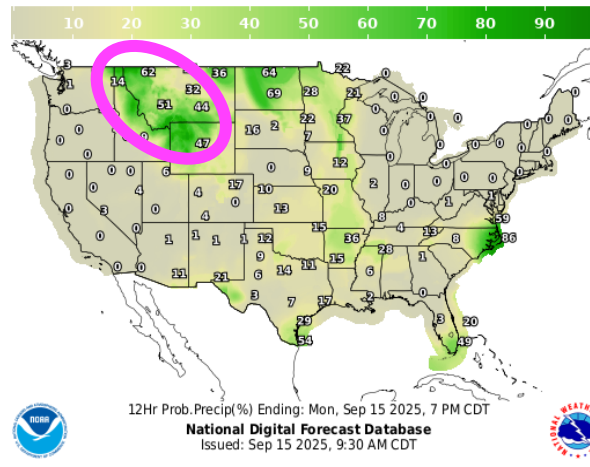
500 mb Contours



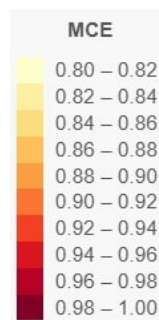
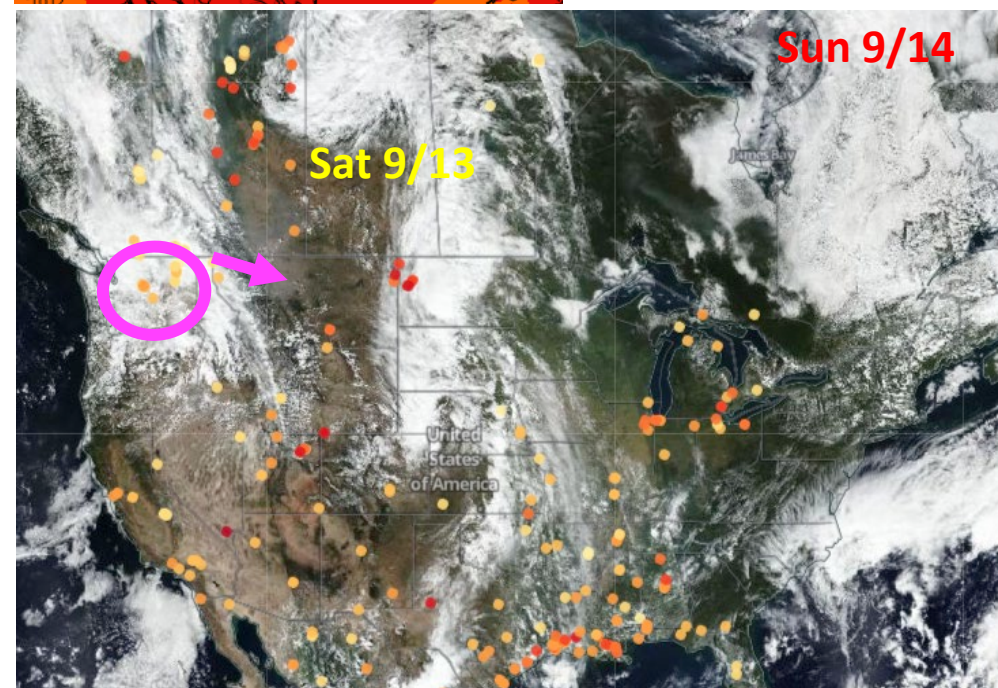
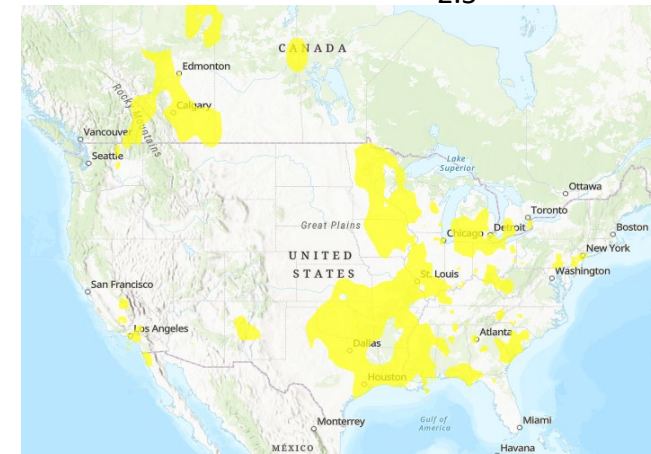
Surface Analysis



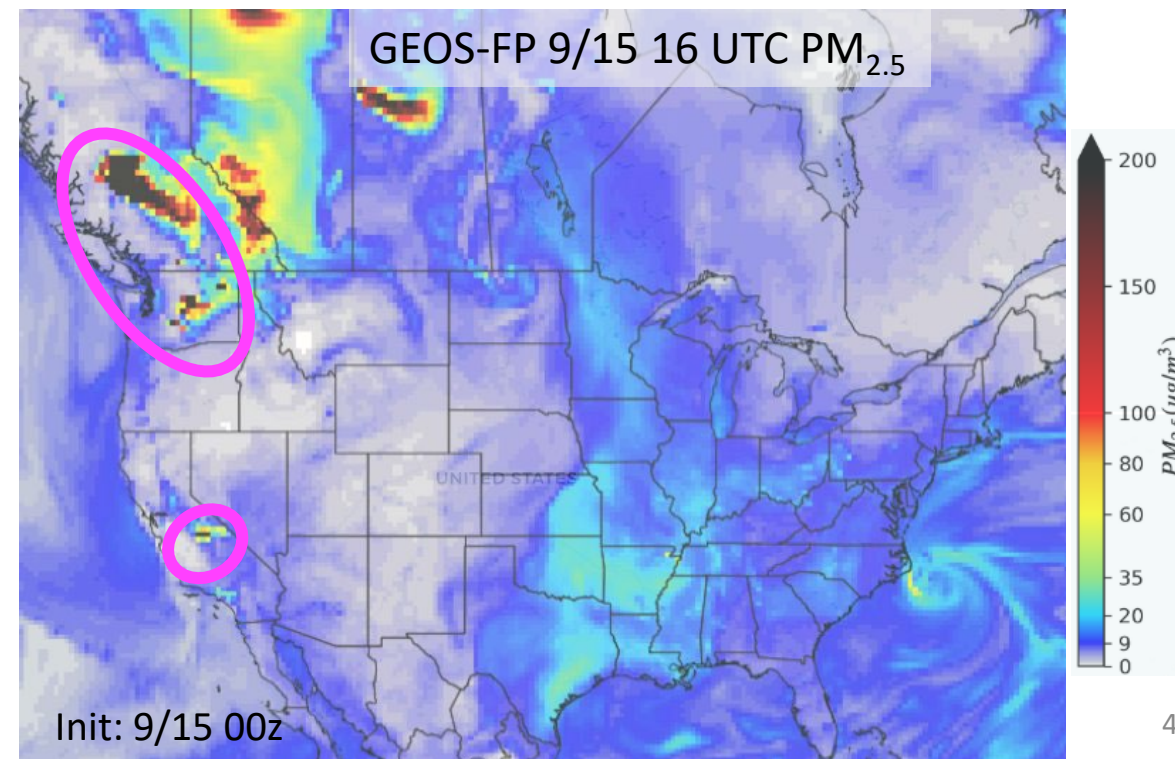
Precip. Prob.



AirNow PM_{2.5} AQI

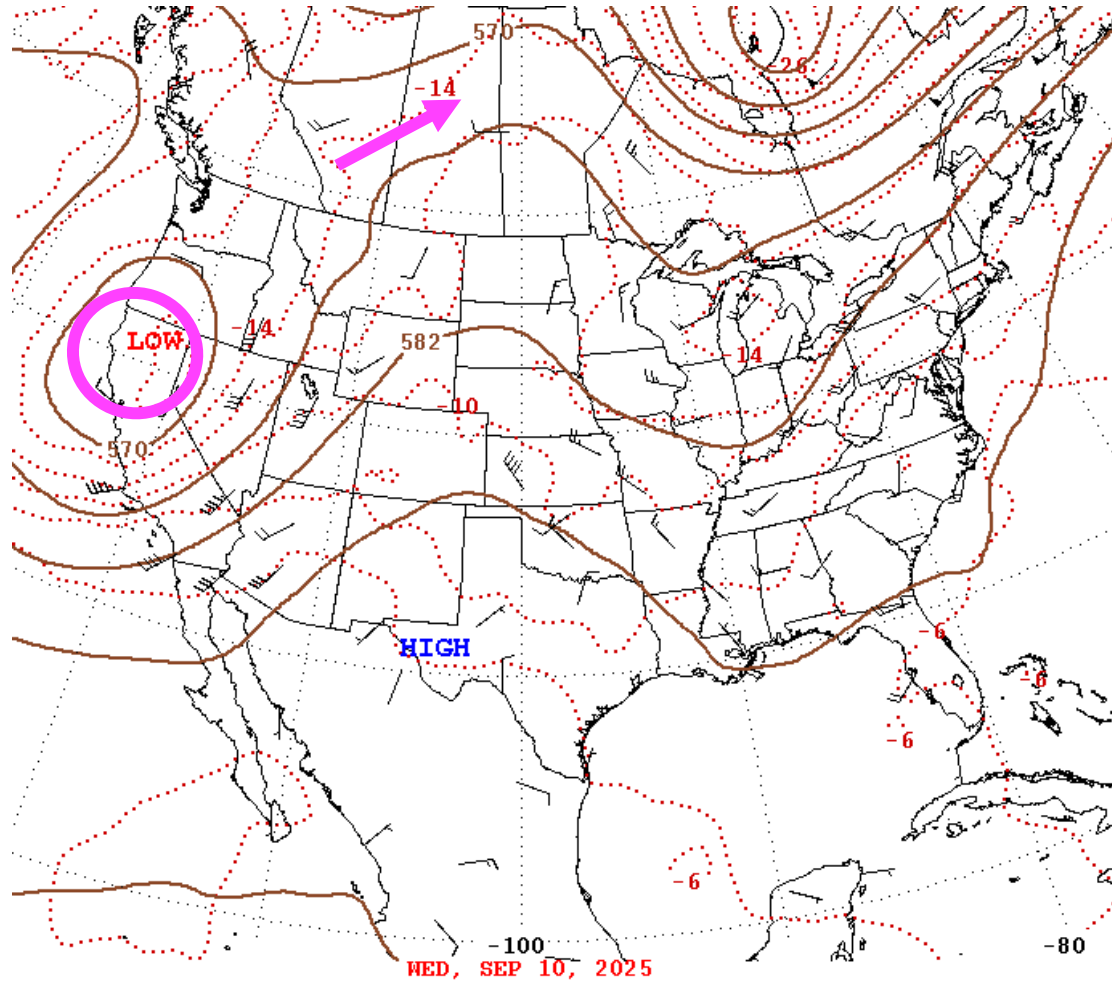


GEOS-FP 9/15 16 UTC PM_{2.5}



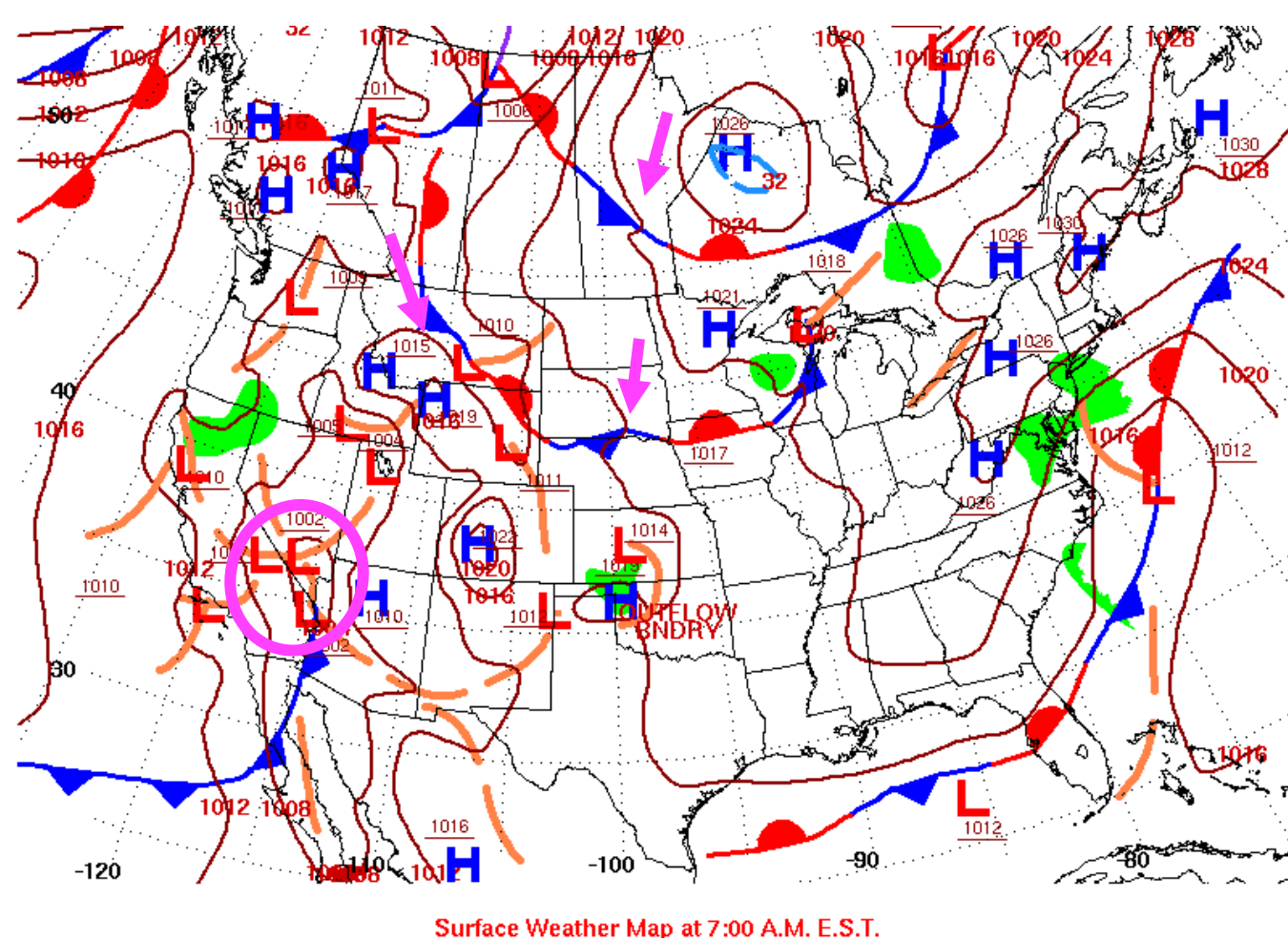
Air Quality Reflection: Wednesday Sept 10, 2025

500 mb Contours



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

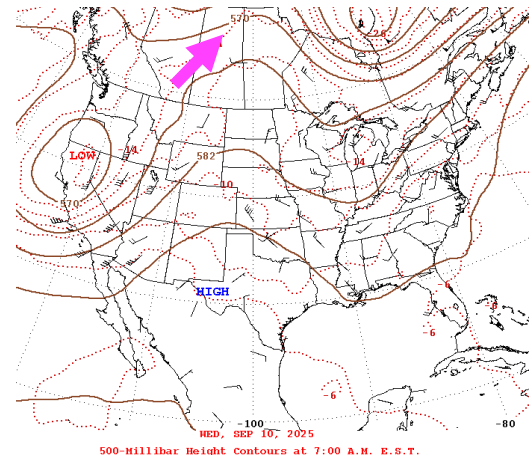
Surface Weather



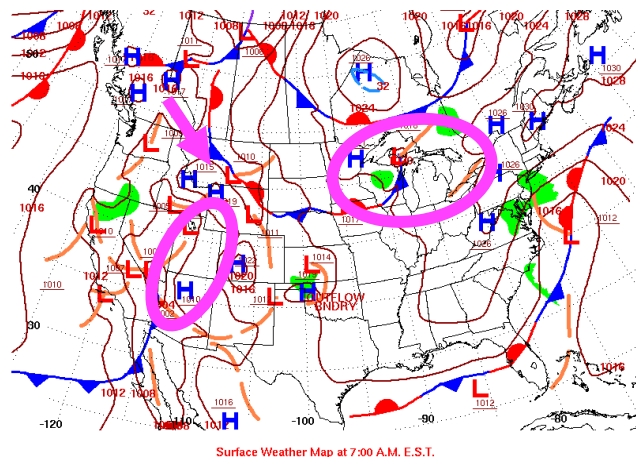
Surface Weather Map at 7:00 A.M. E.S.T.

Air Quality Reflection: Wednesday Sept 10, 2025

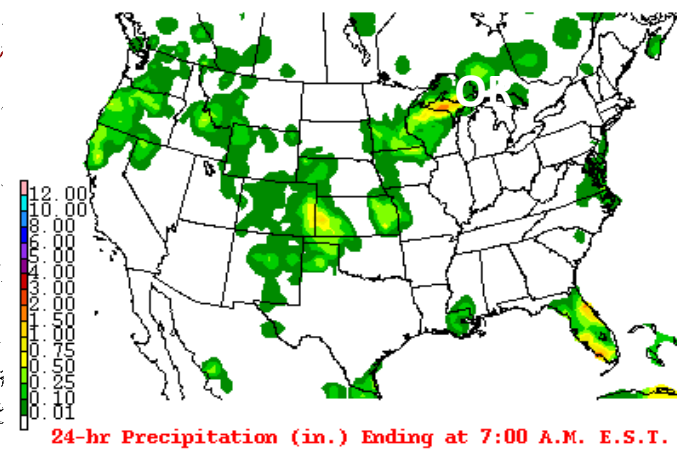
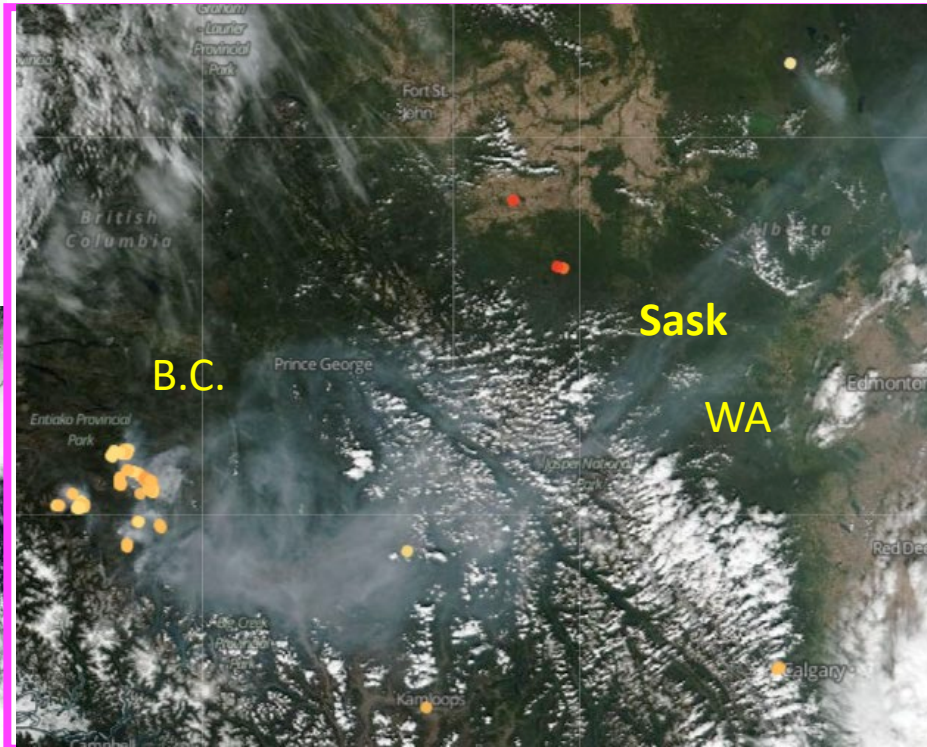
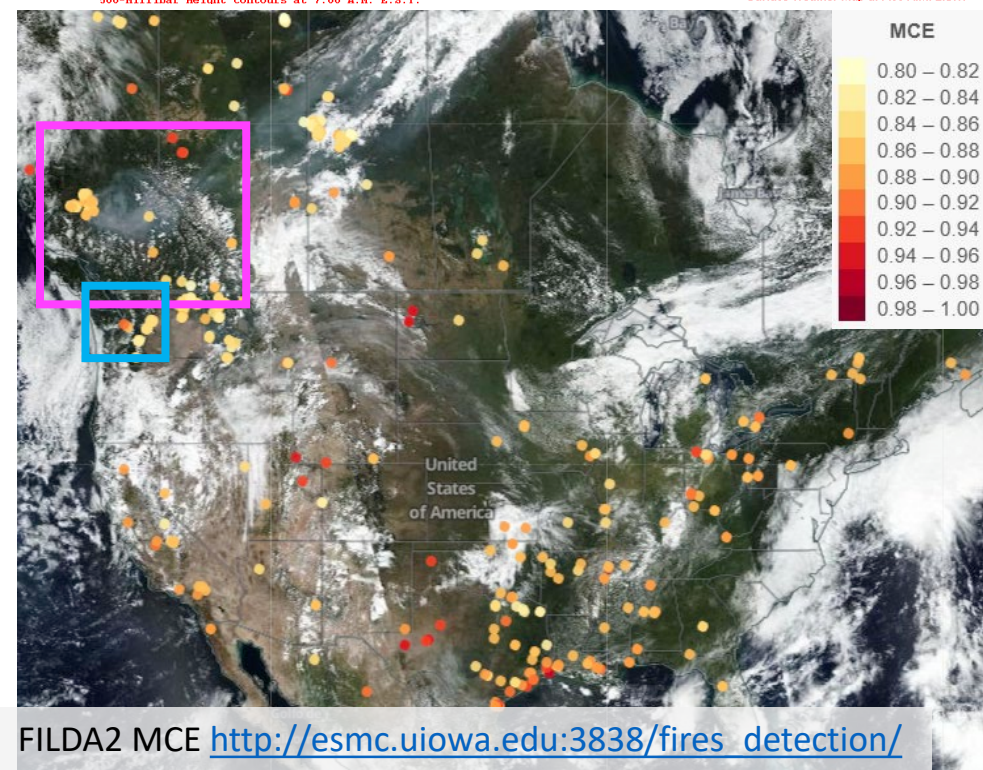
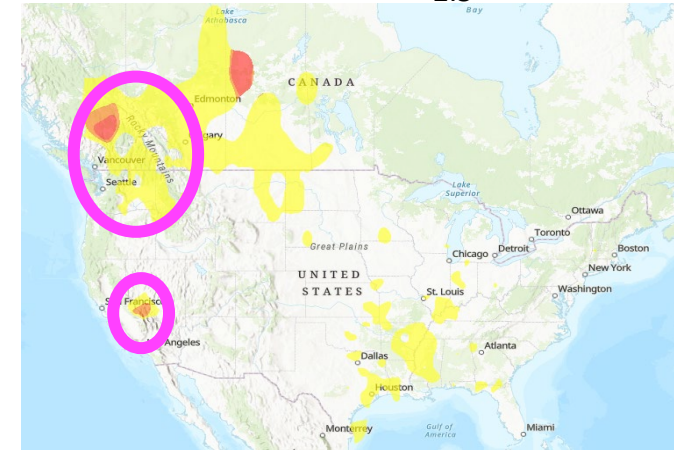
500 mb Contours



Surface Weather

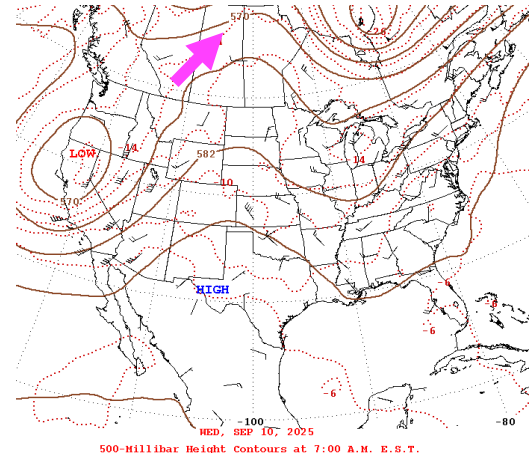


Precipitation

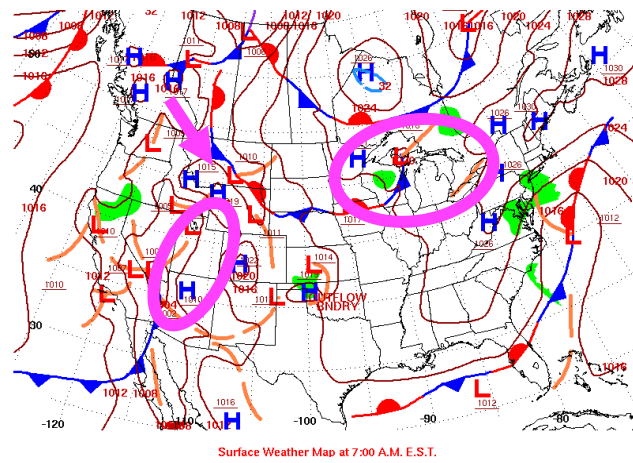
AirNow PM_{2.5} AQI

Air Quality Reflection: Wednesday Sept 10, 2025

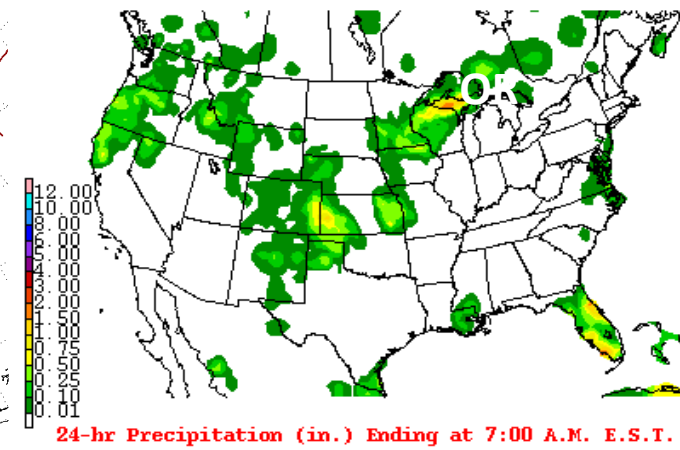
500 mb Contours



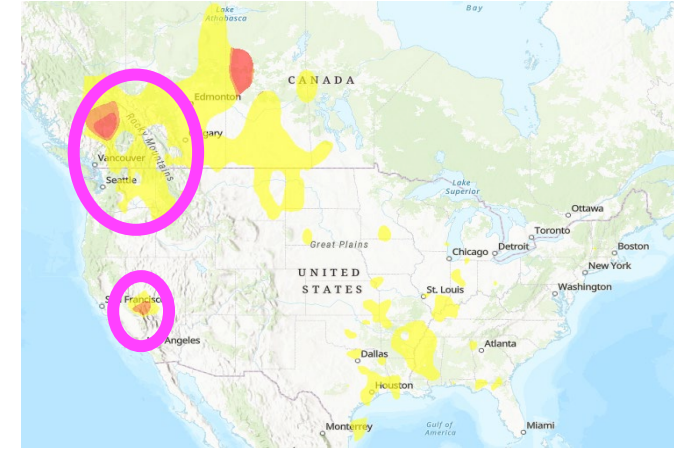
Surface Weather



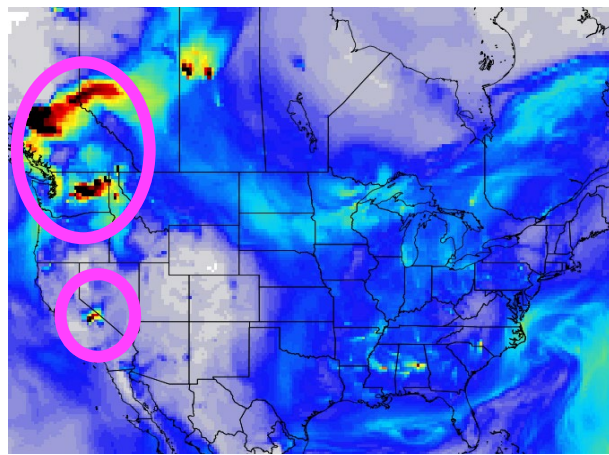
Precipitation



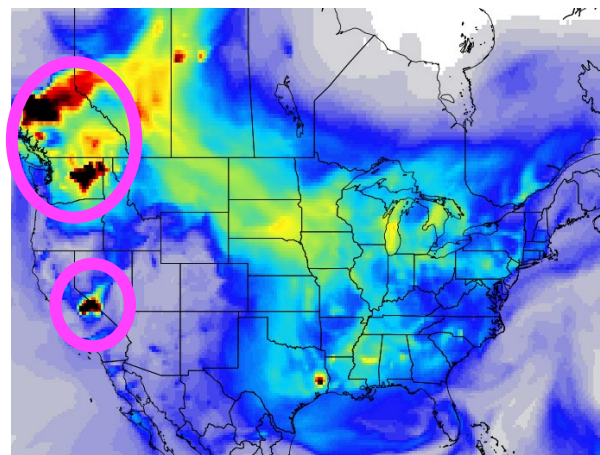
AirNow PM_{2.5} AQI



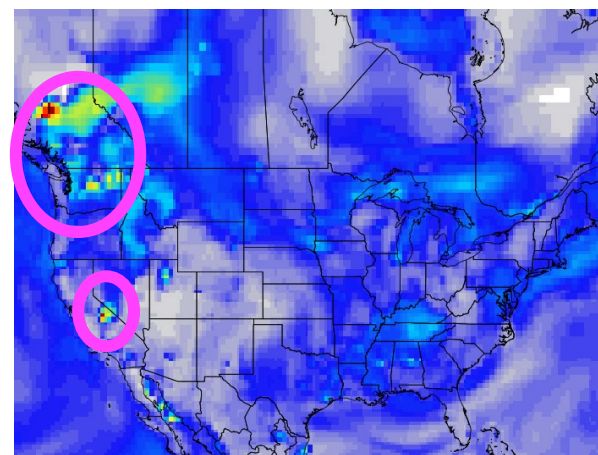
GEOS-FP



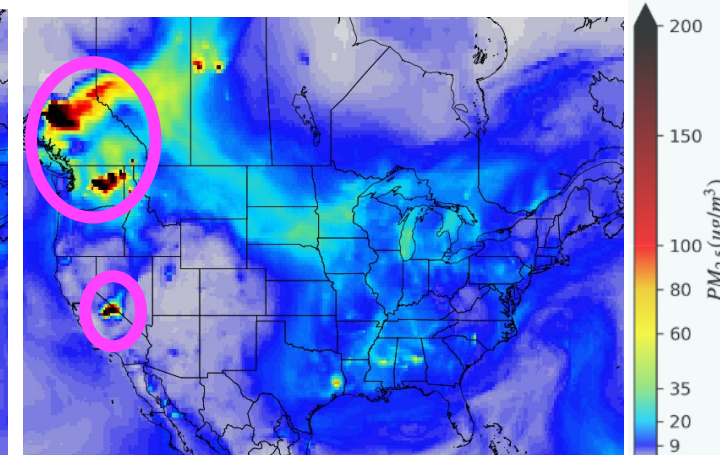
GEOS-CF



CAMS



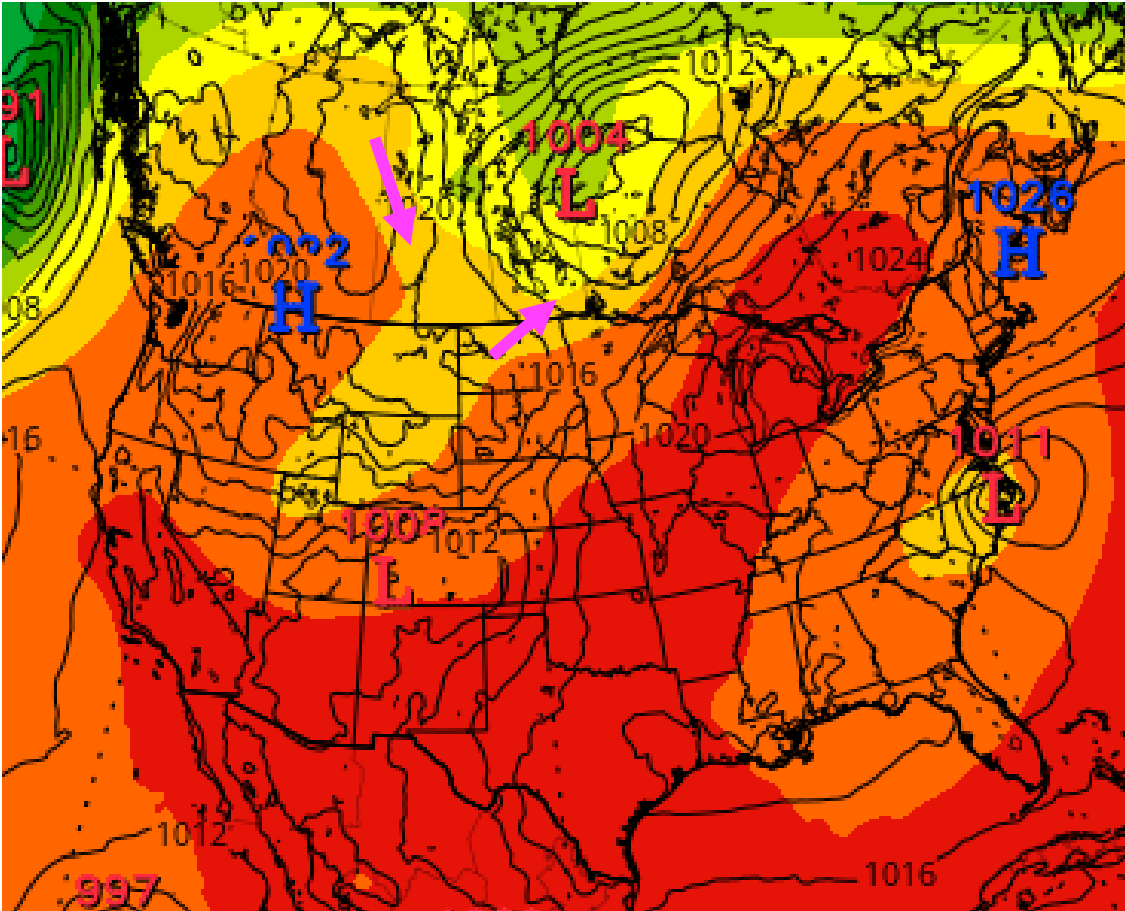
Ensemble



Outlook: Short Range (1–3 days)

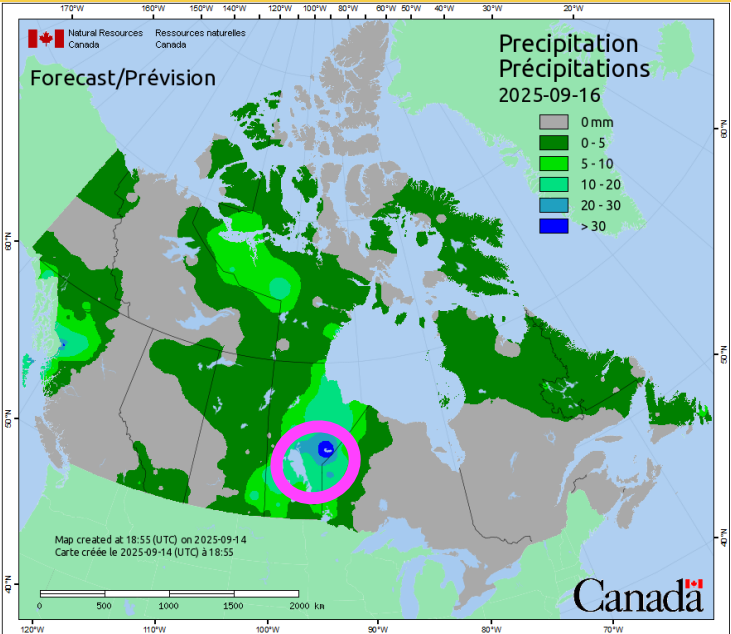
(Forecast **Tuesday 9/16**)

GFS 500 mb

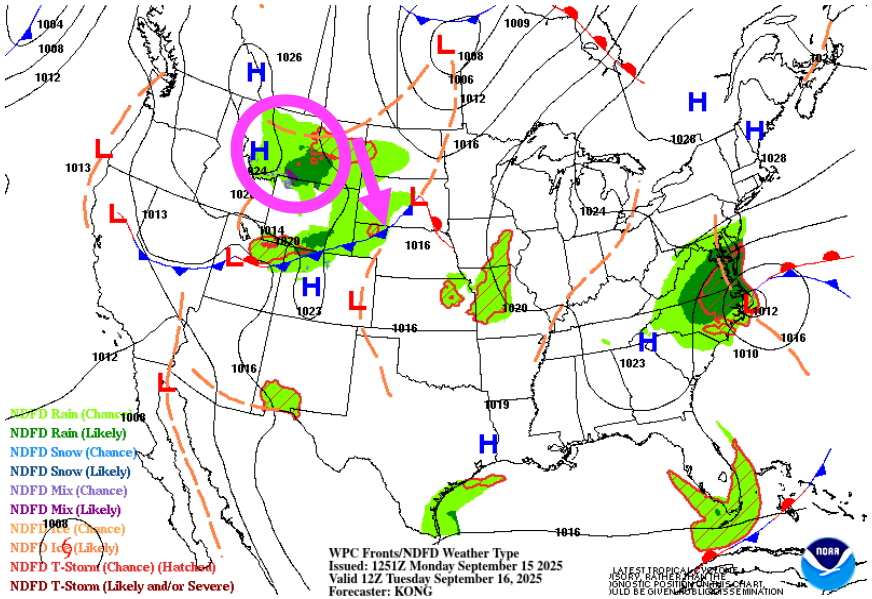


GFS 500mb Geopotential Height (dam) & MSLP (mb)
Init: 06z Sep 15 2025 Forecast Hour: [36] valid at 18z Tue, Sep 16 2025

Environment
Canada
Forecast

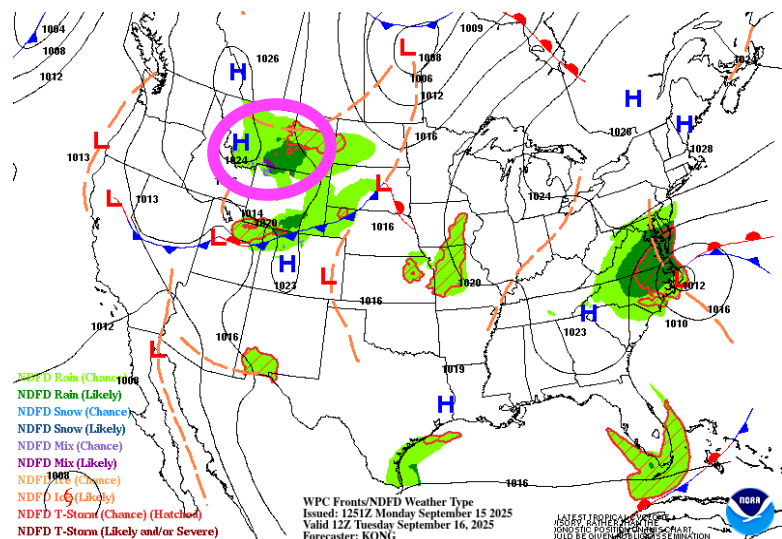


US NWS
Forecast

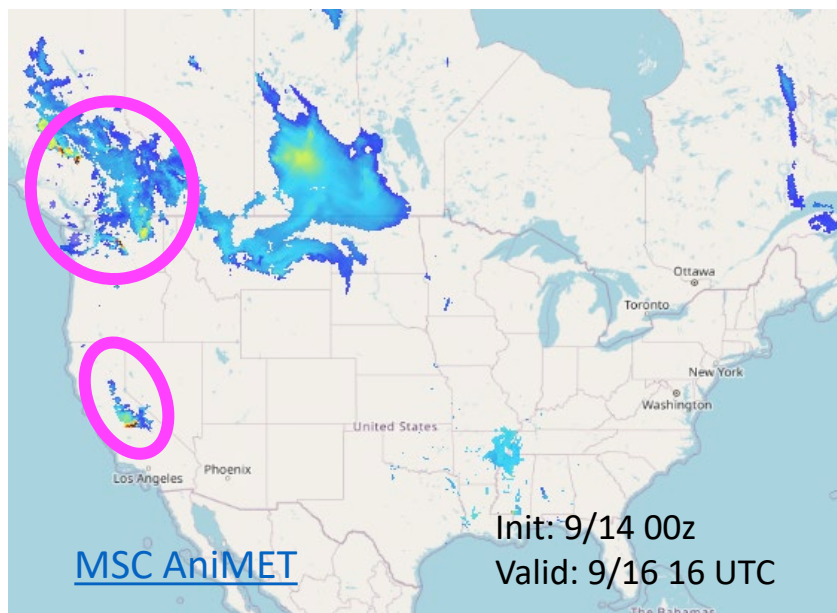


Outlook: Short Range (1–3 days)

Surface Forecast



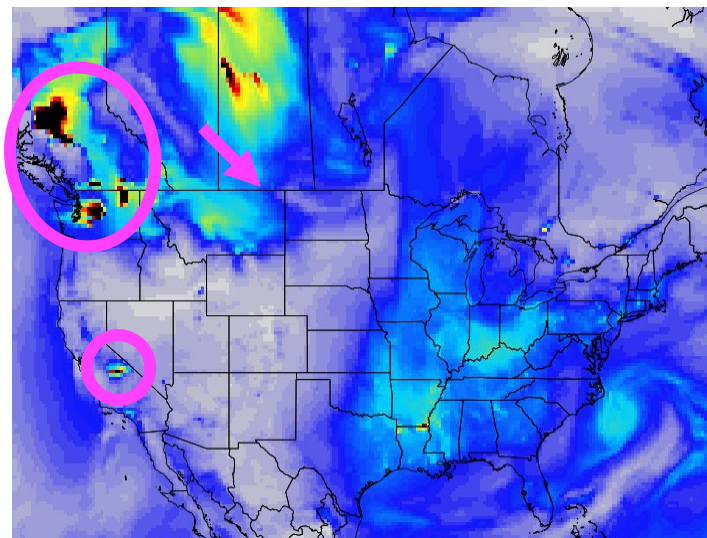
Canada MSC AniMET



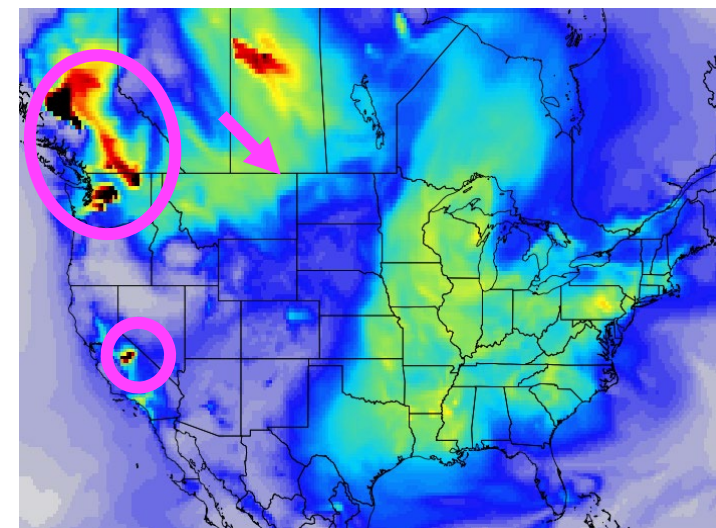
(Tuesday 9/16)

Model Means $\text{PM}_{2.5}$

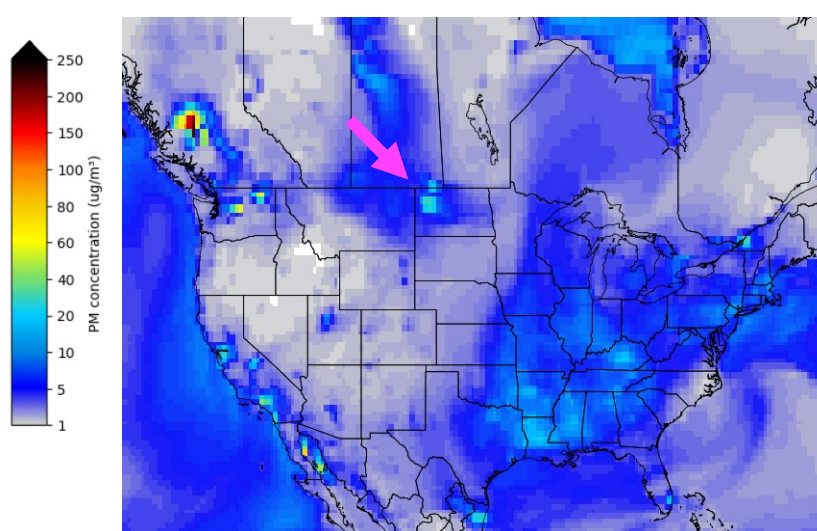
GEOS-FP



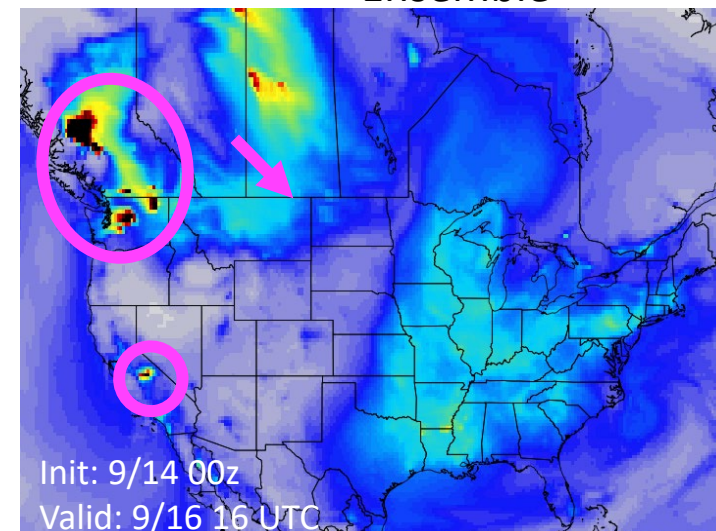
GEOS-CF



CAMS



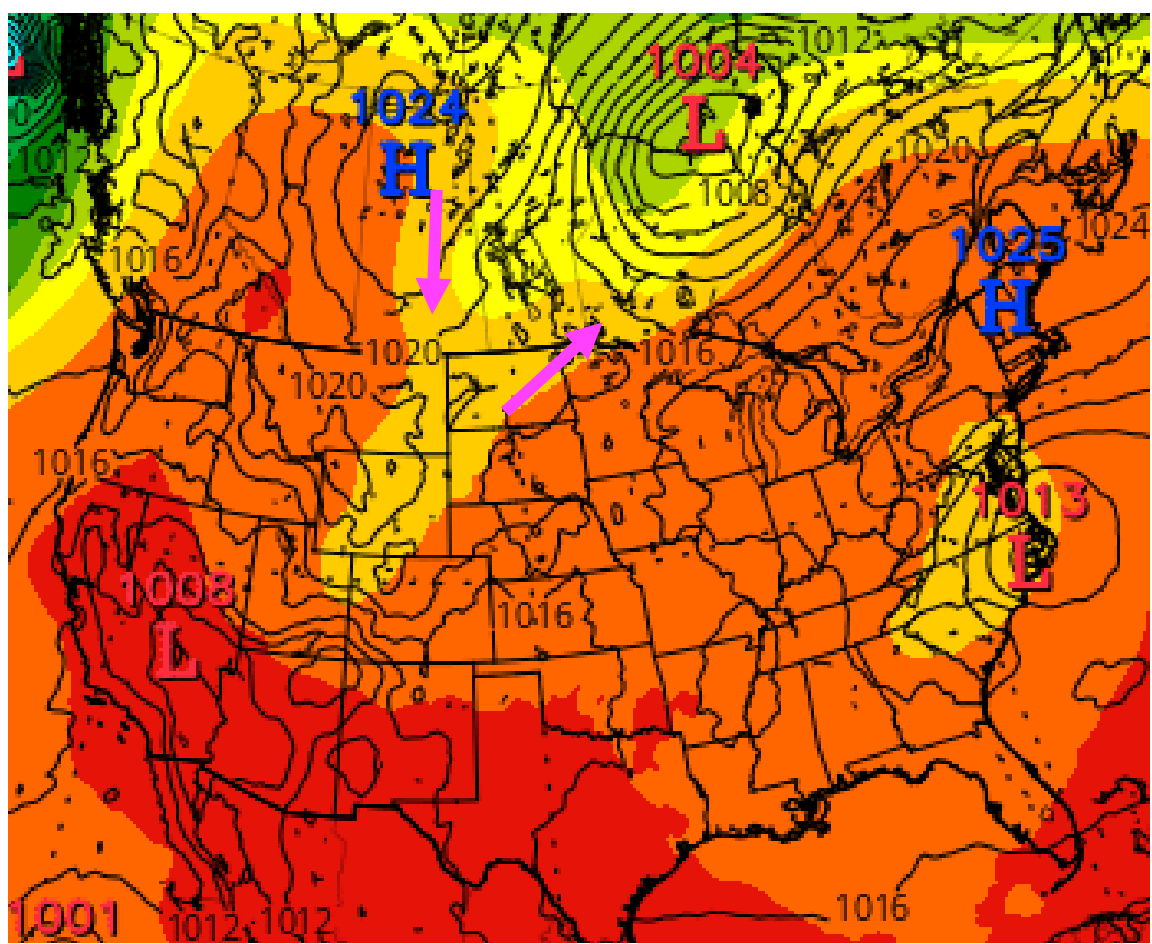
Ensemble



Outlook: Short Range (1–3 days)

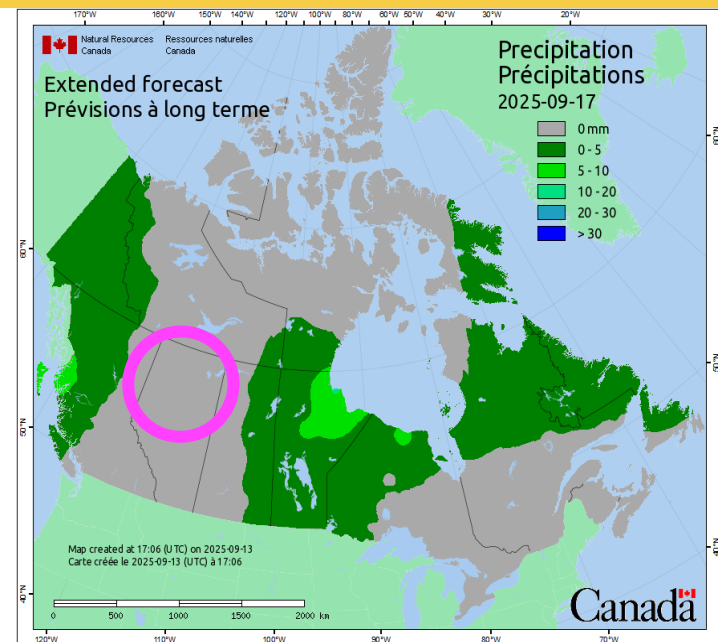
(Forecast **Wednesday 9/17**)

GFS 500 mb

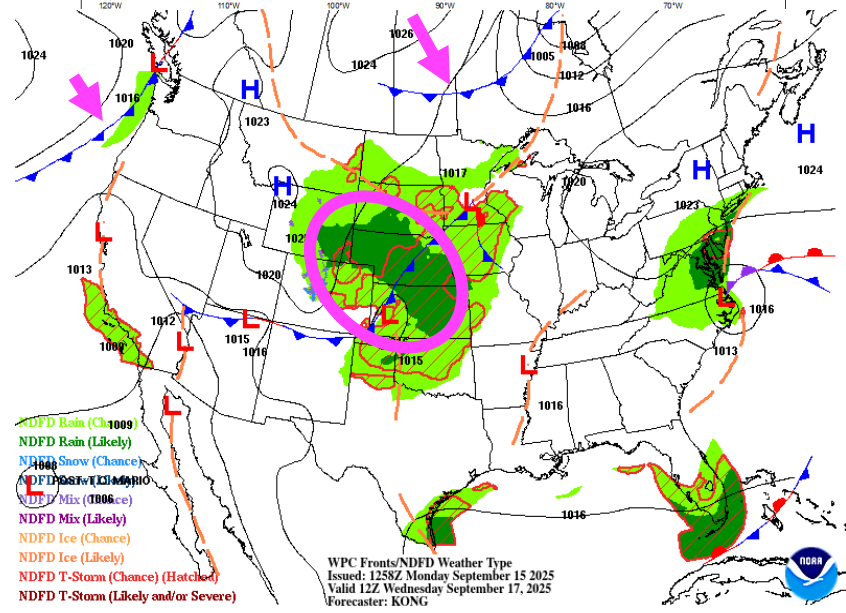


GFS 500mb Geopotential Height (dam) & MSLP (mb)
Init: 06z Sep 15 2025 Forecast Hour: [48] valid at 06z Wed, Sep 17 2025

Environment
Canada
Forecast



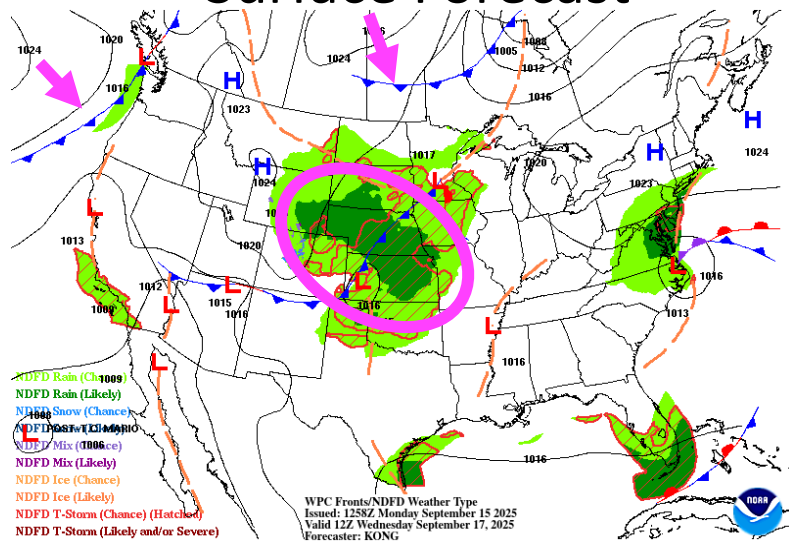
US NWS
Forecast



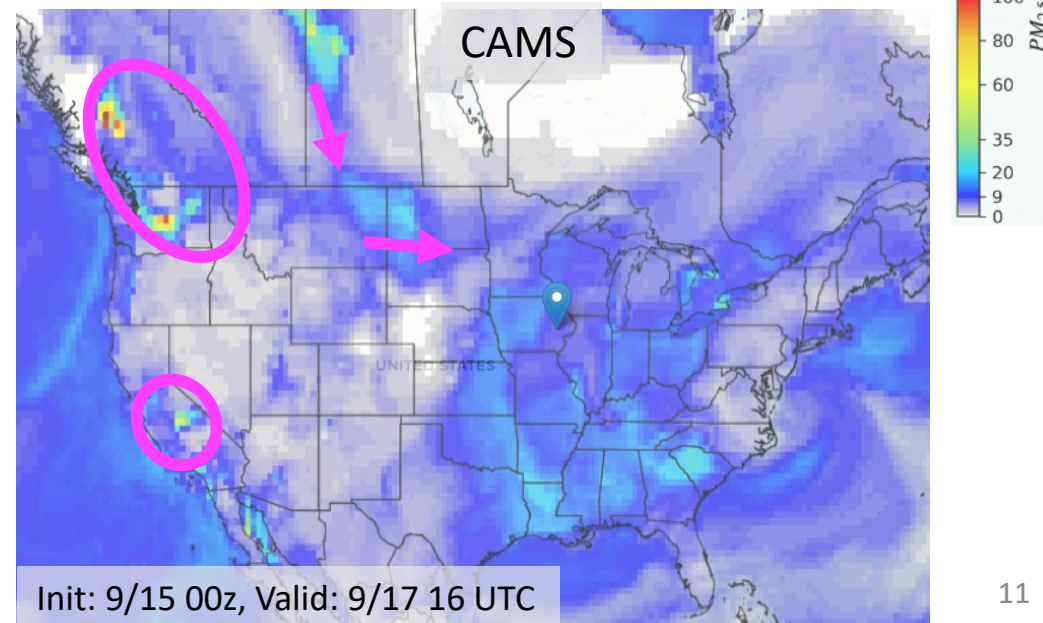
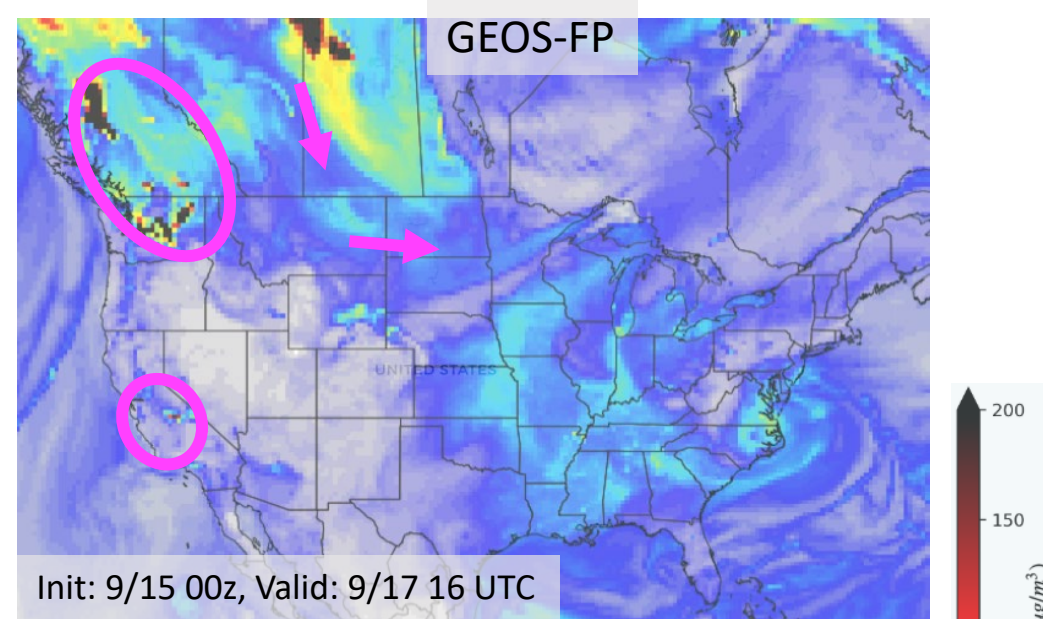
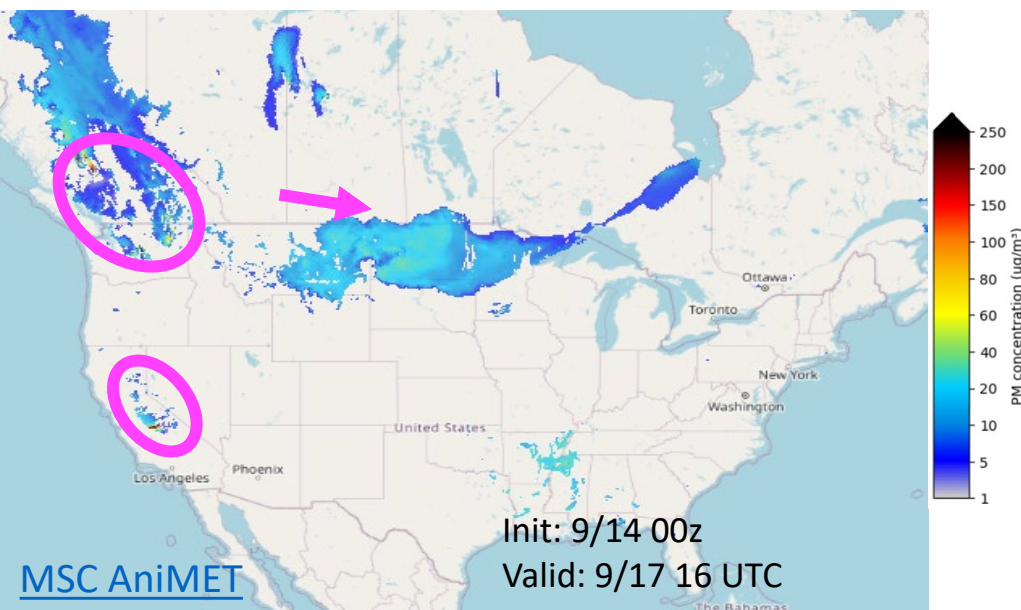
Outlook: Short Range (1–3 days)

Surface Forecast

(Wednesday 9/17)

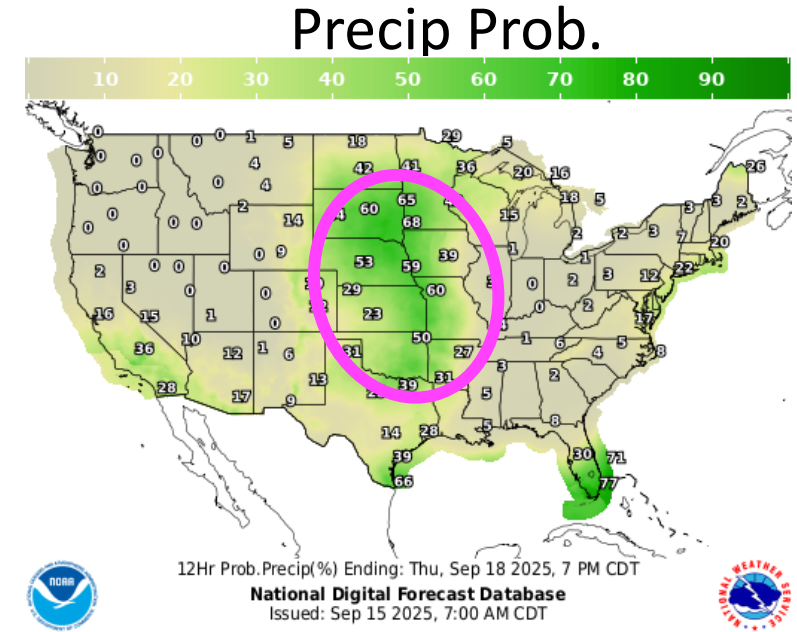
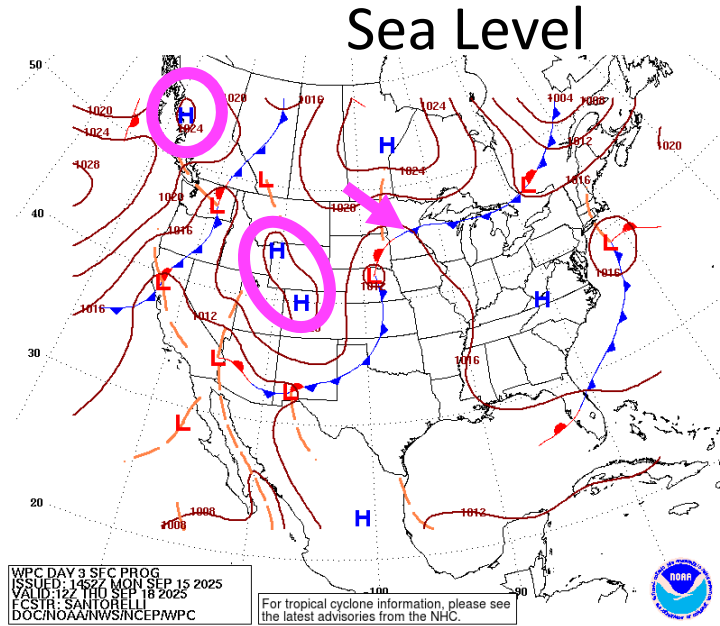
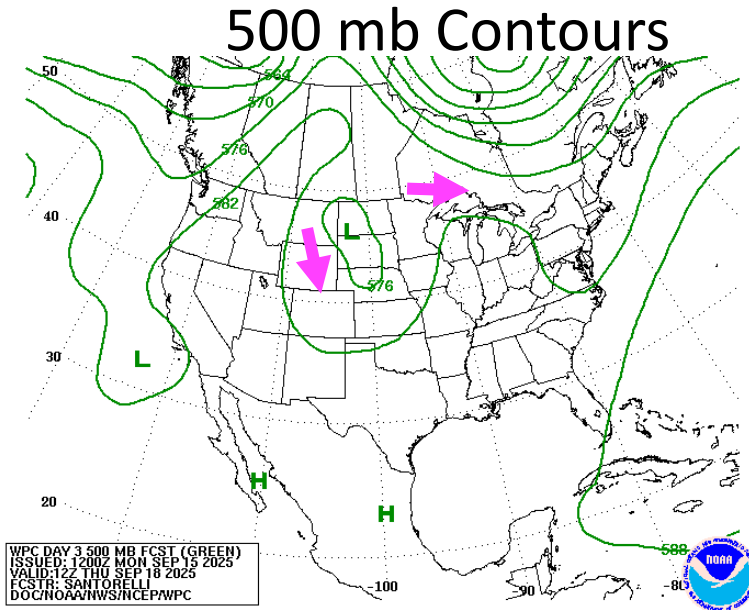


Canada MSC AniMET



Outlook: Medium Range

Thurs
9/11



Friday
9/12

