

Weather and Air Quality: Reflection and Outlook During Smoke Conditions

Presenter: Megan Christiansen
Date: August 3, 2026

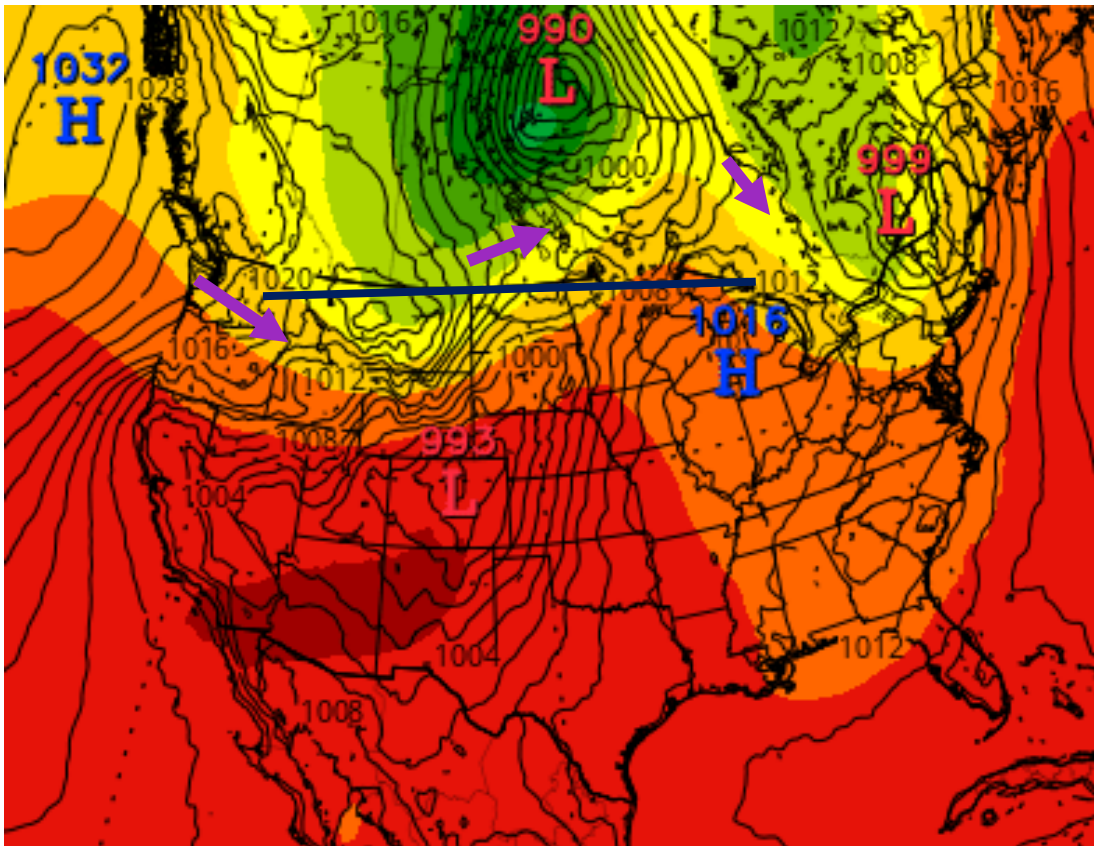


FireAQ is funded by NASA HAQ. We thank NASA GMAO and ECMWF for the model data products.

**EARTH SCIENCE
APPLIED SCIENCES**

Current Status: August 3, 2026

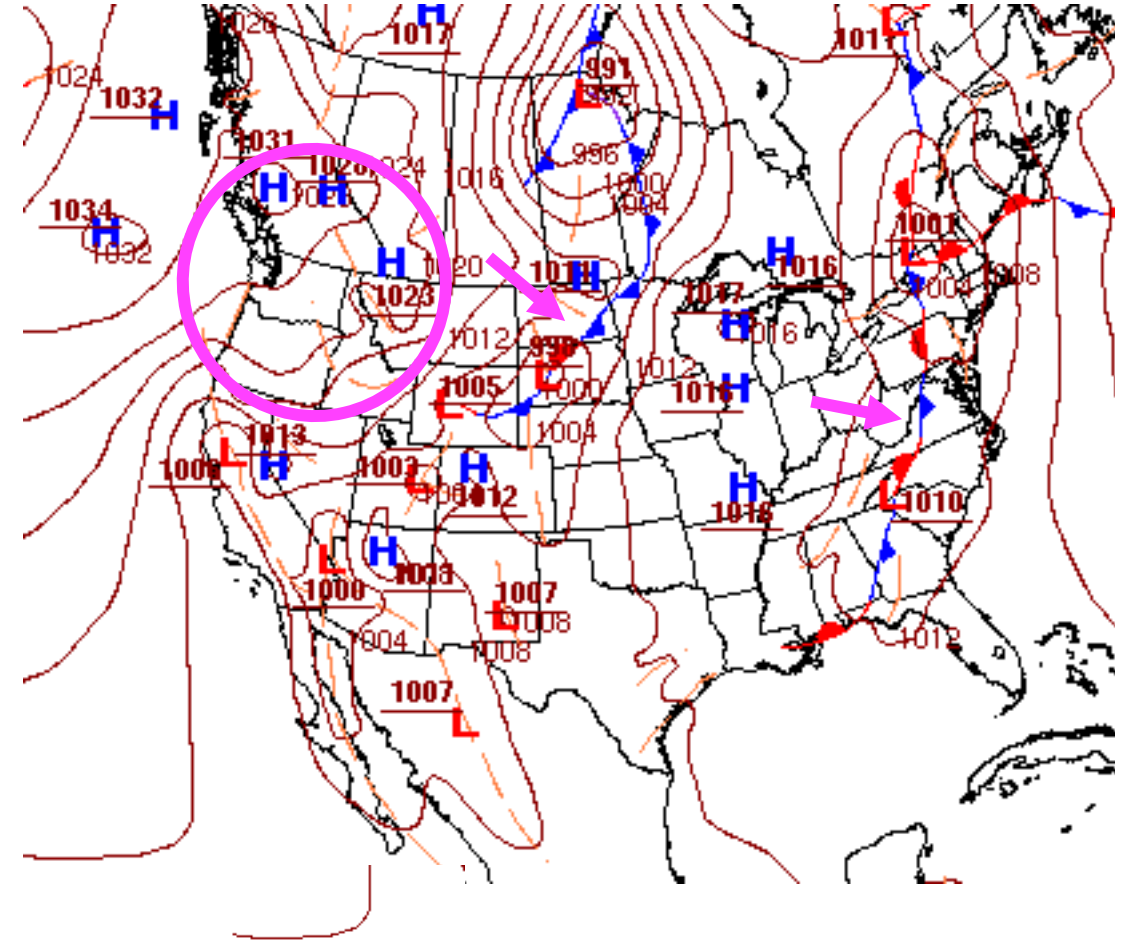
500 mb Contours



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

Init: 06z Aug 03 2026 Forecast Hour: [12] valid at 18z Mon, Aug 03 2026

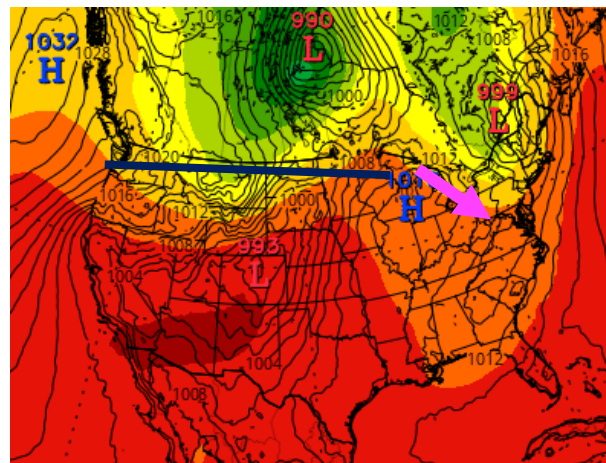
Surface Analysis



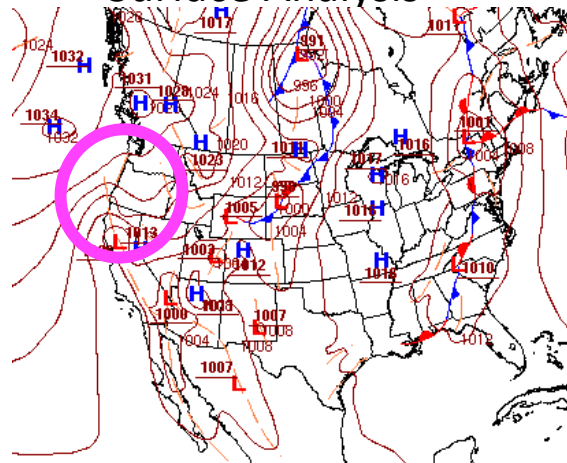
1200Z SURFACE ANALYSIS
DATE: MON AUG 03 2026
ISSUED: 1328Z MON AUG 03 2026
BY WPC ANALYST BLANCO-ALCALA
COLLABORATING CENTERS: WPC, NHC, OPC

Current Status: August 3, 2026

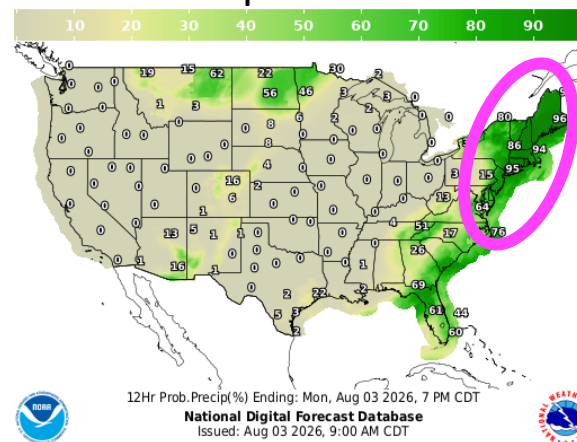
500 mb Contours



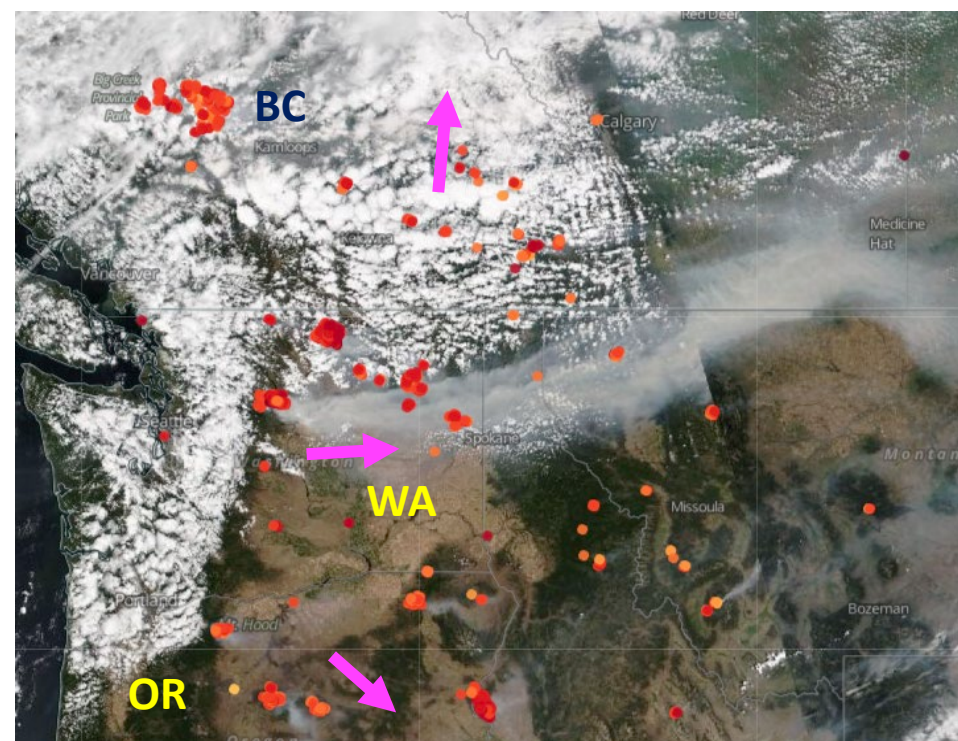
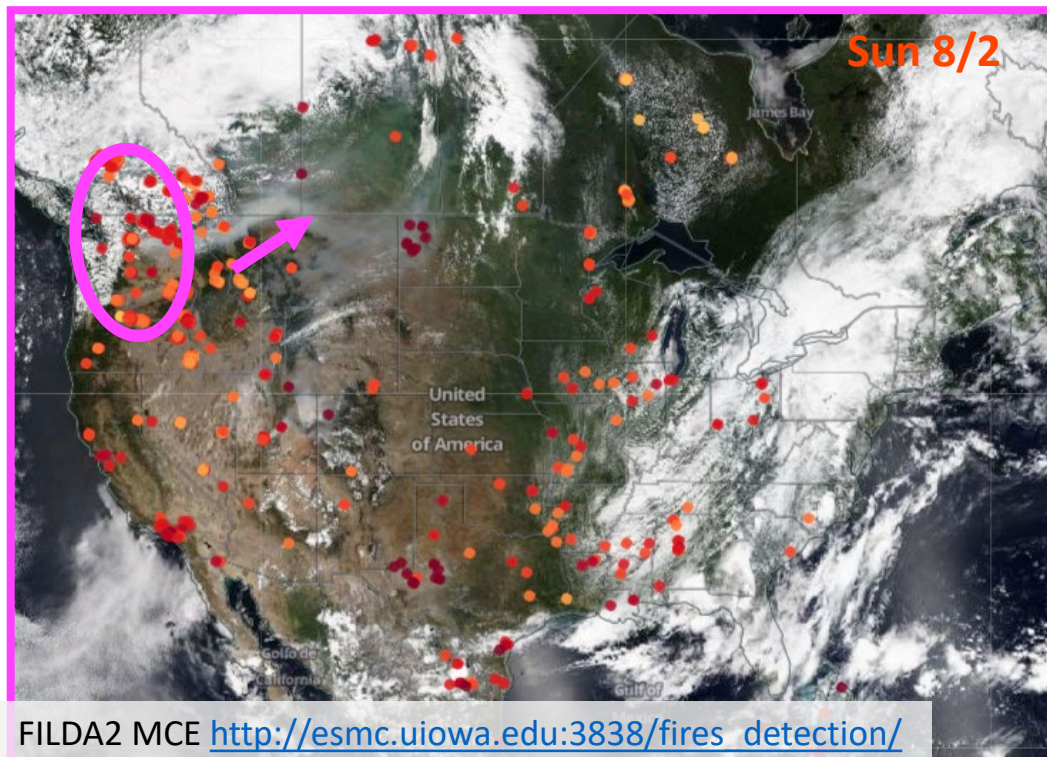
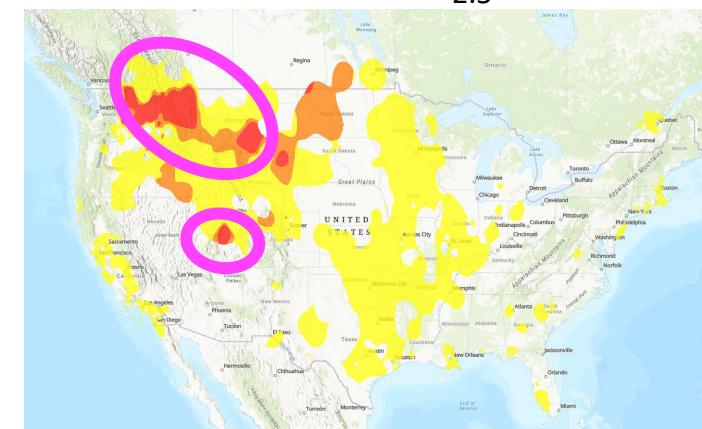
Surface Analysis



Precip. Prob.

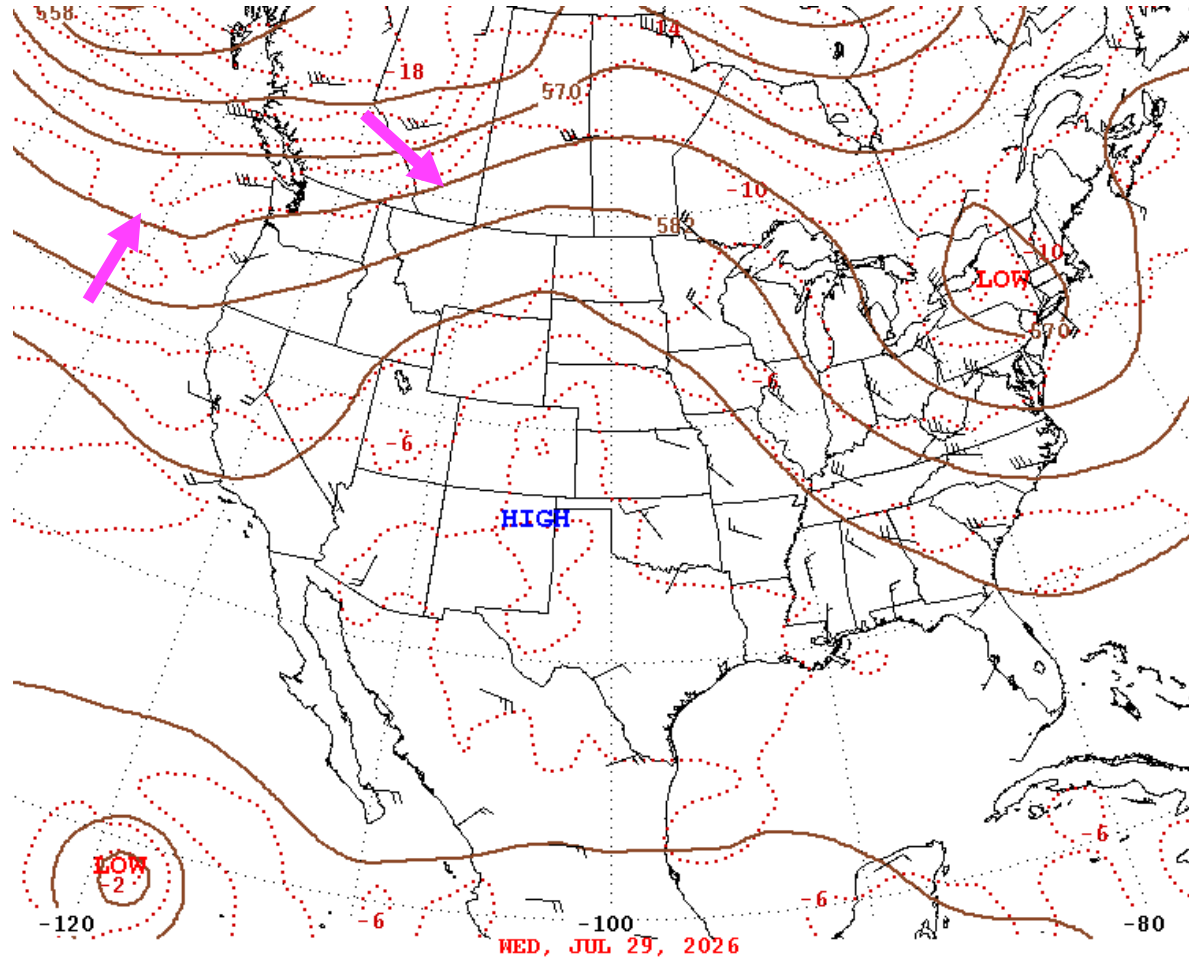


AirNow PM_{2.5} AQI



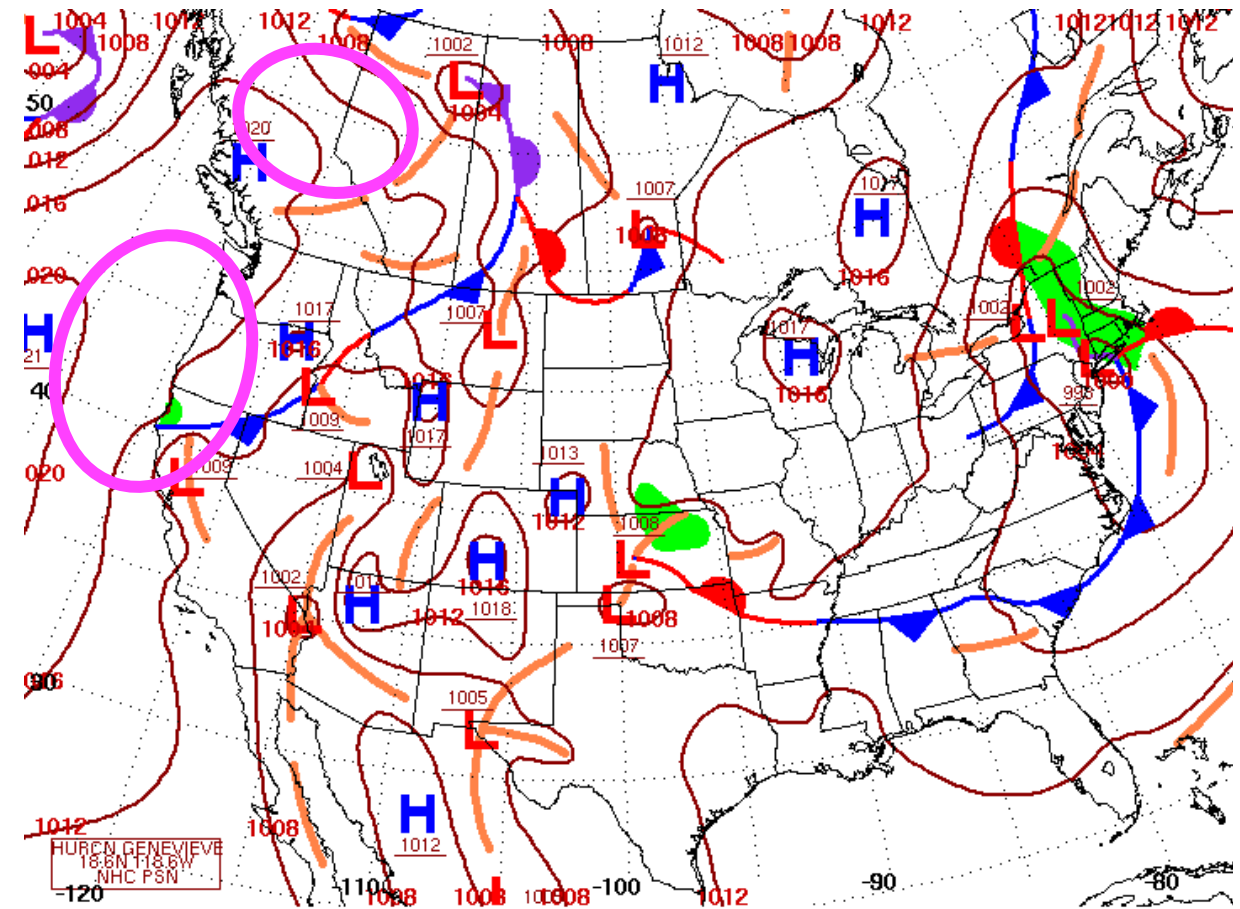
Air Quality Reflection: Wed July 29, 2026

500 mb Contours



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

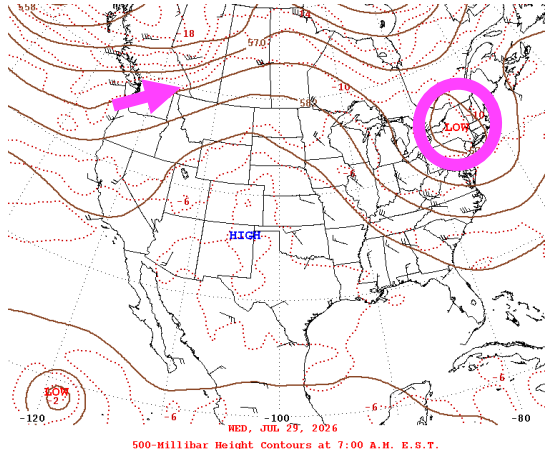
Surface Weather



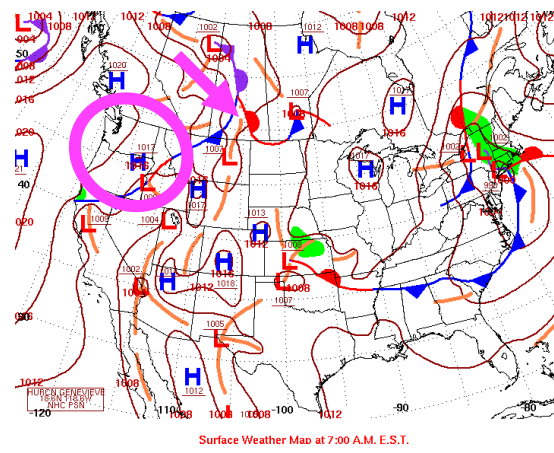
Surface Weather Map at 7:00 A.M. E.S.T.

Air Quality Reflection: Wed July 29, 2026

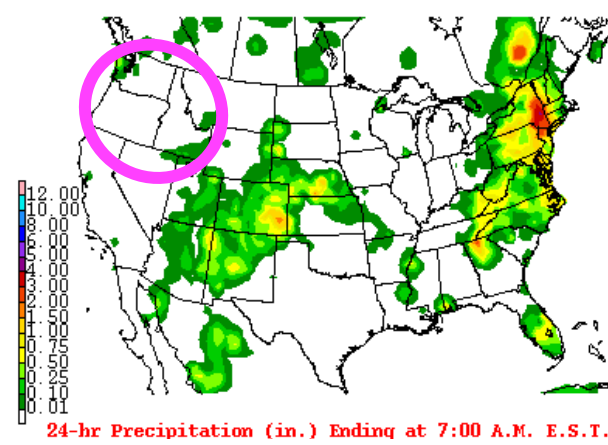
500 mb Contours



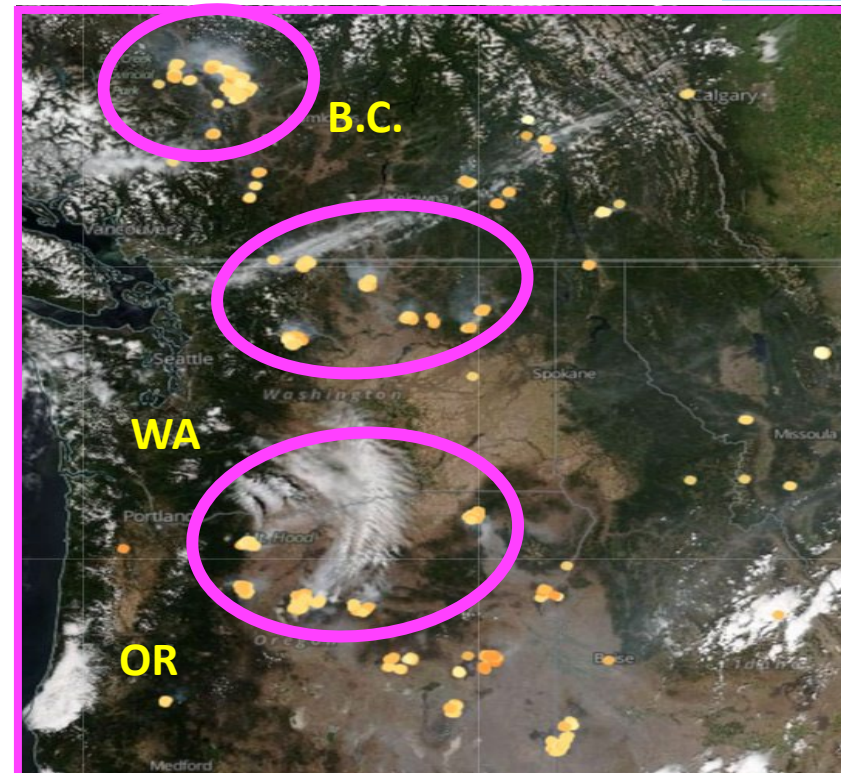
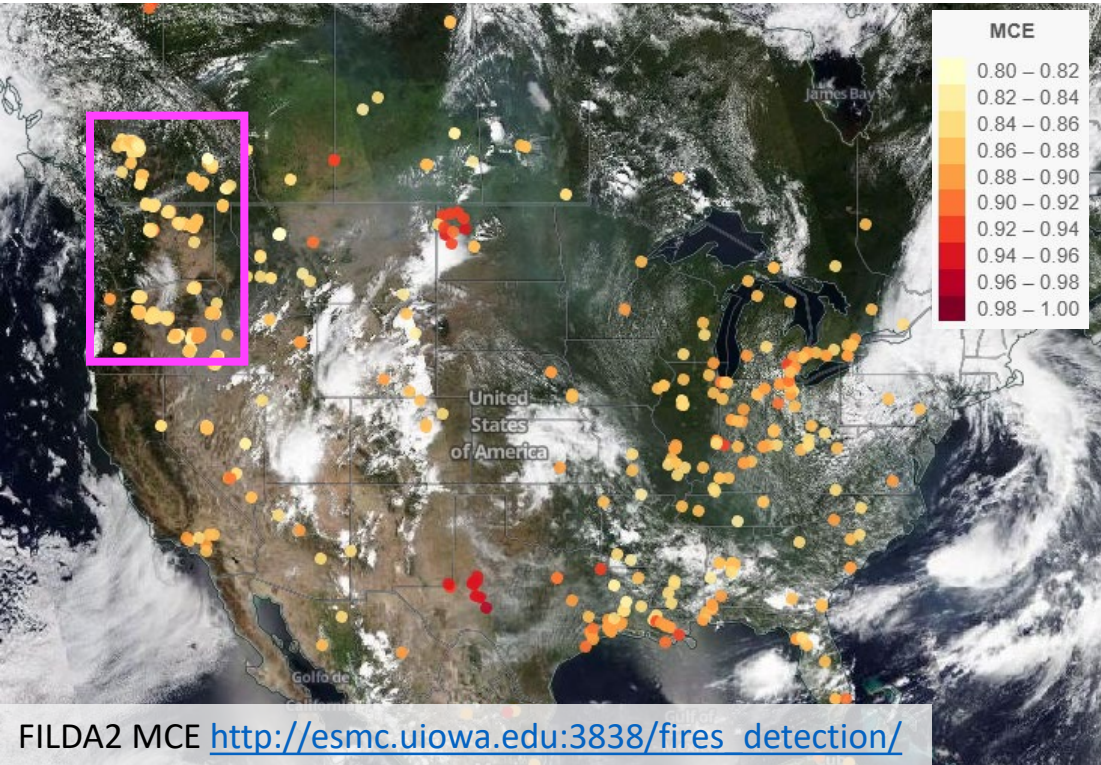
Surface Weather



Precipitation

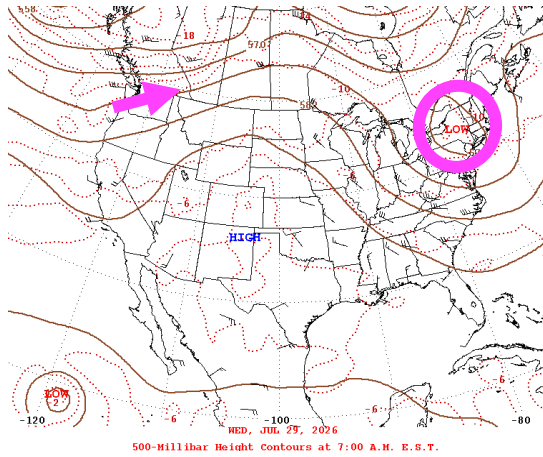


AirNow PM_{2.5} AQI

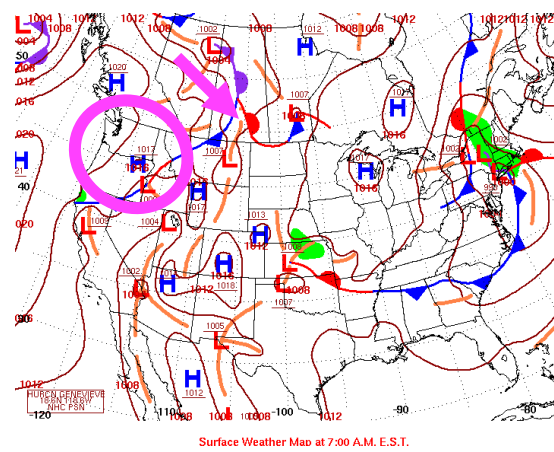


Air Quality Reflection: Wed July 29, 2026

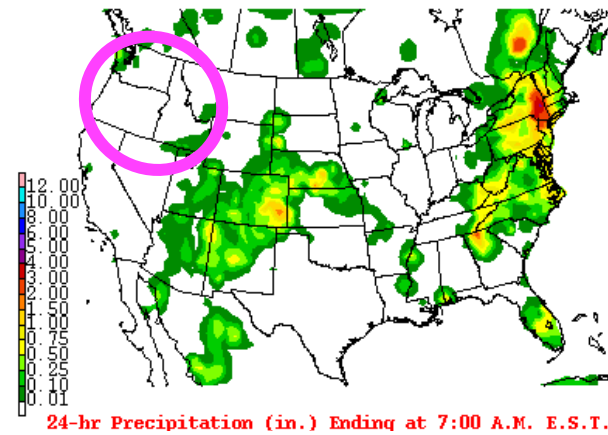
500 mb Contours



Surface Weather



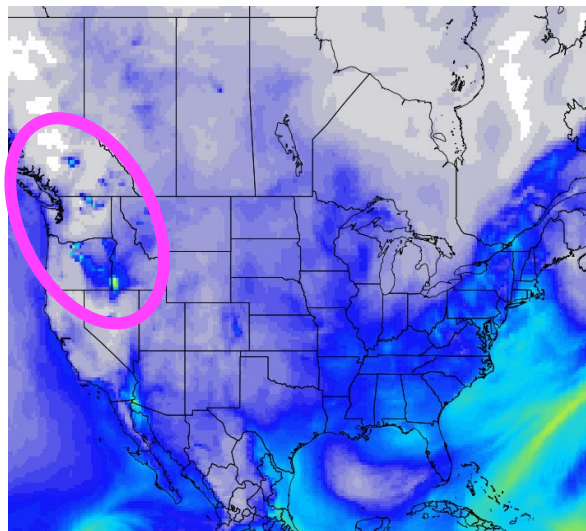
Precipitation



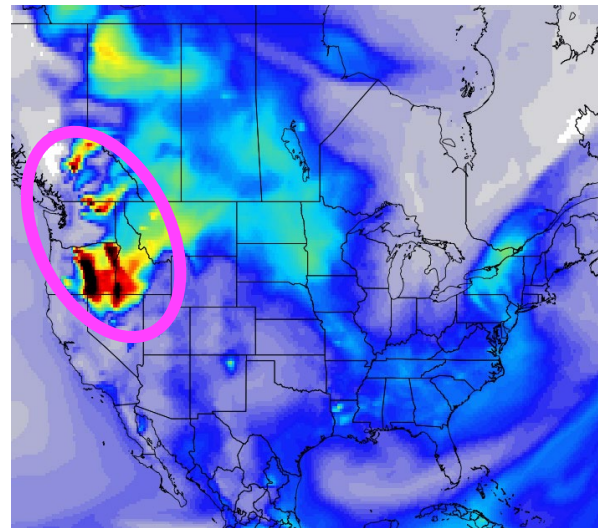
AirNow PM_{2.5} AQI



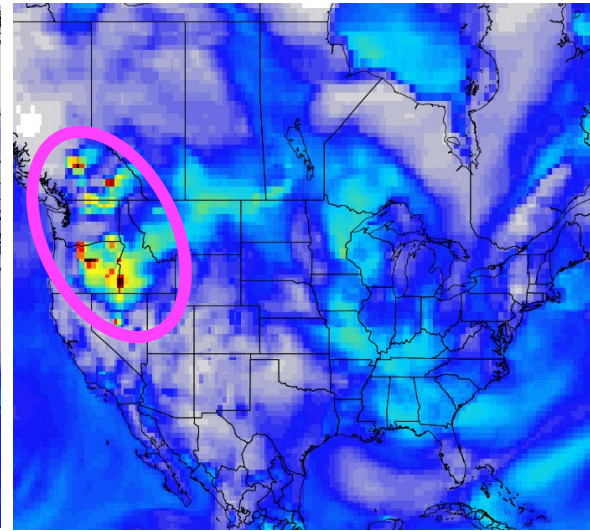
GEOS-FP



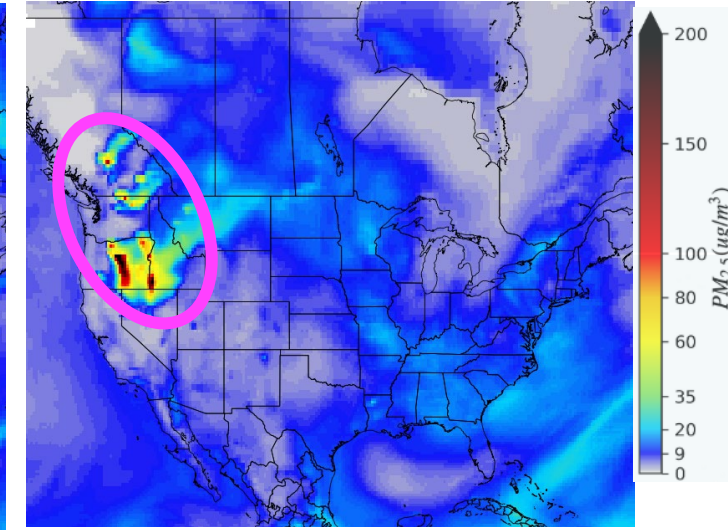
GEOS-CF



CAMS

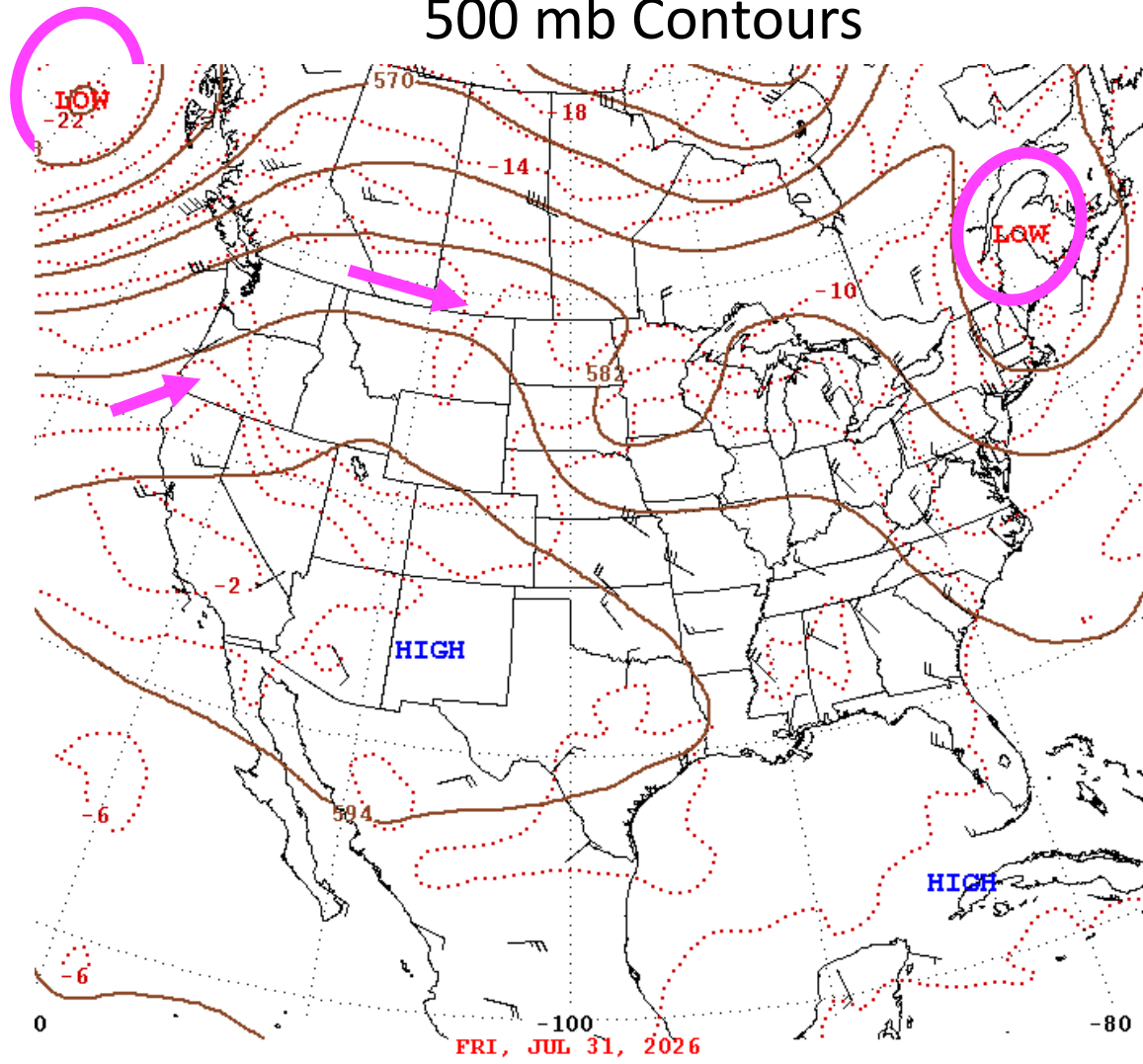


Ensemble



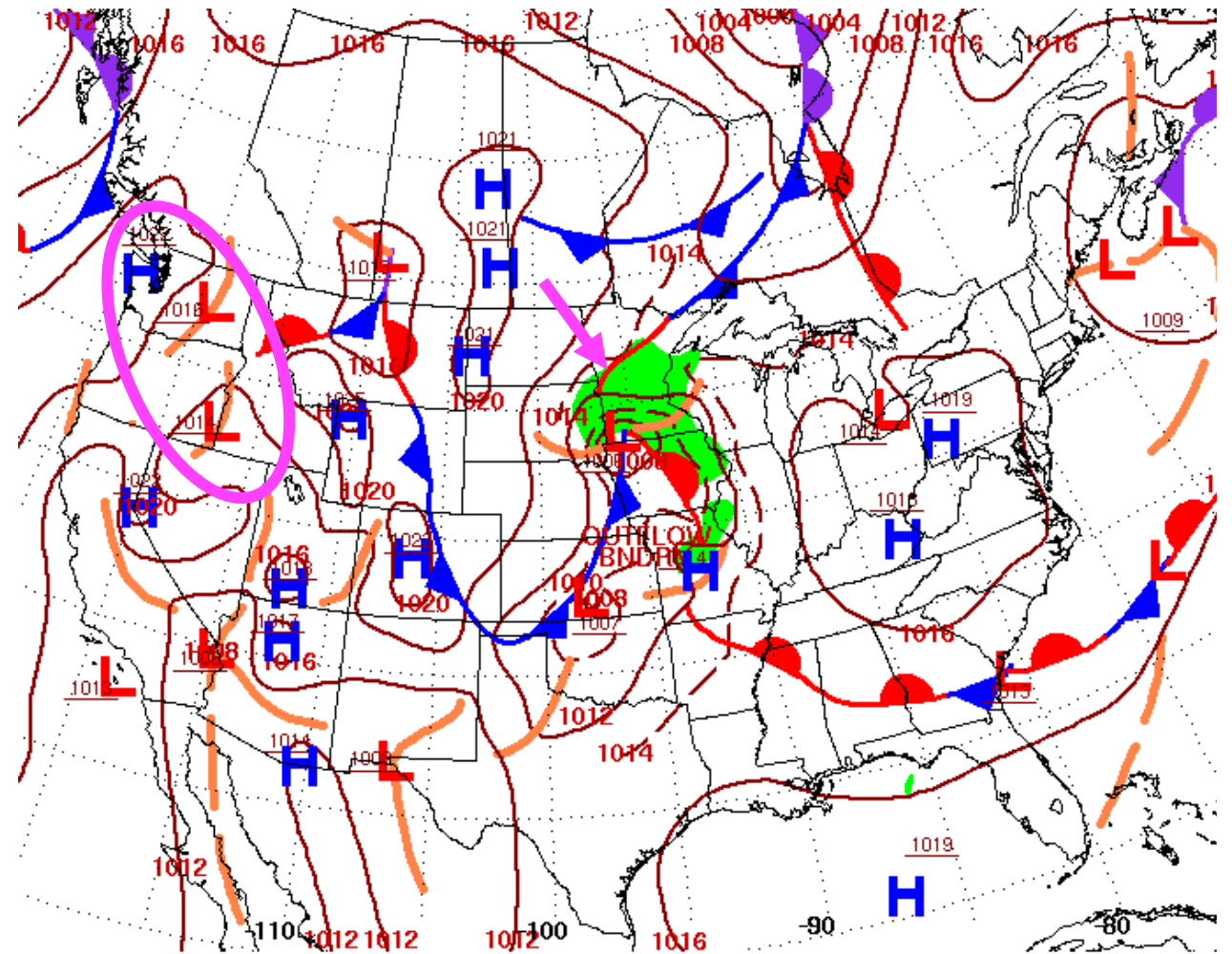
Air Quality Reflection: Friday July 31, 2026

500 mb Contours



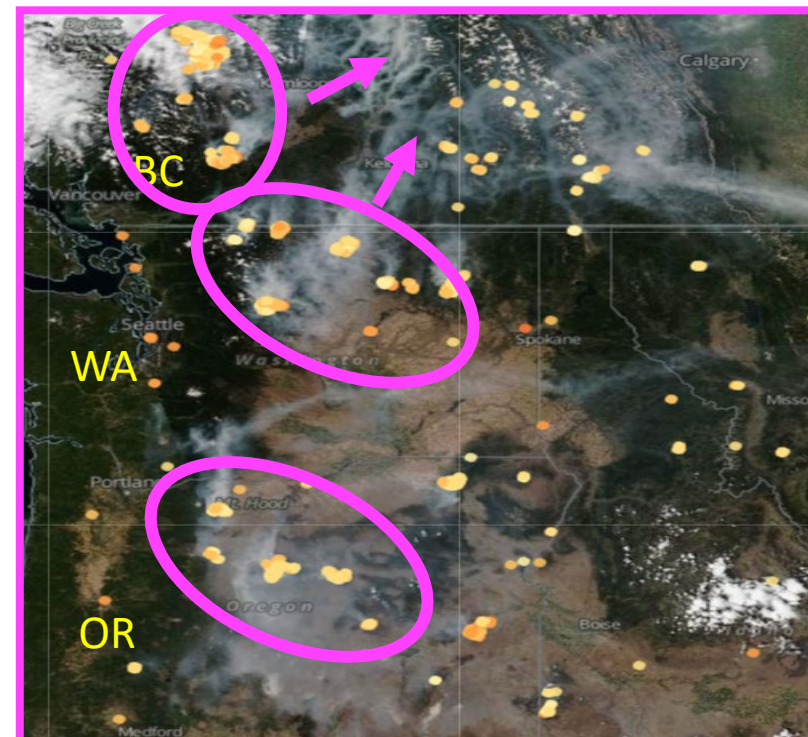
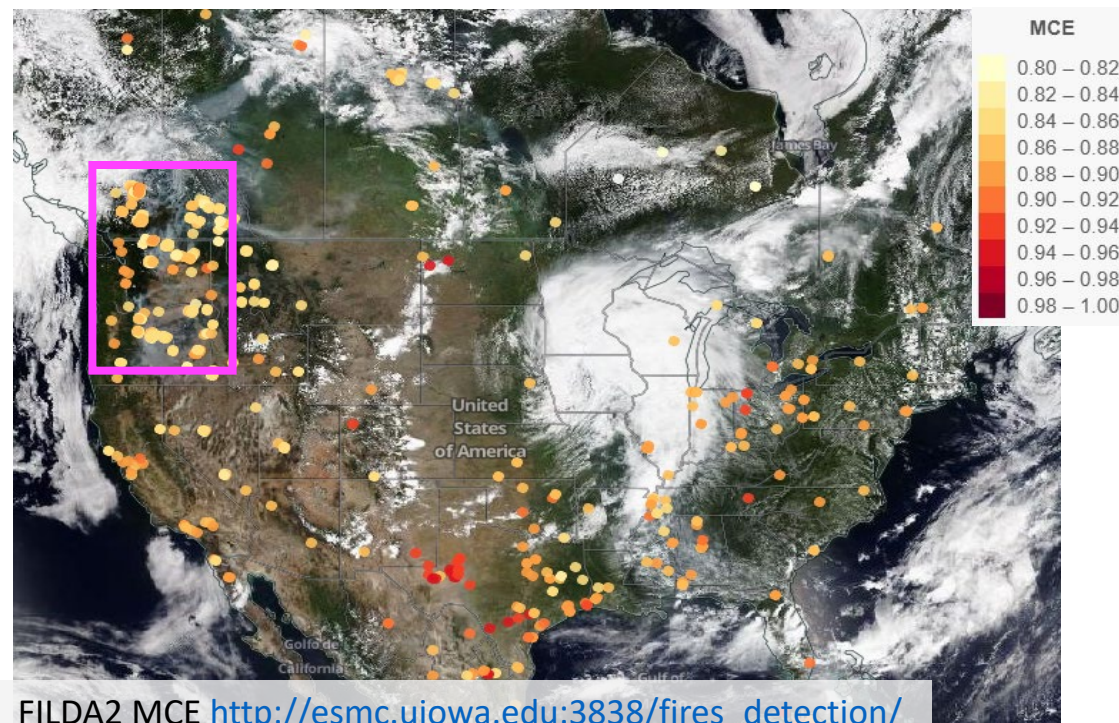
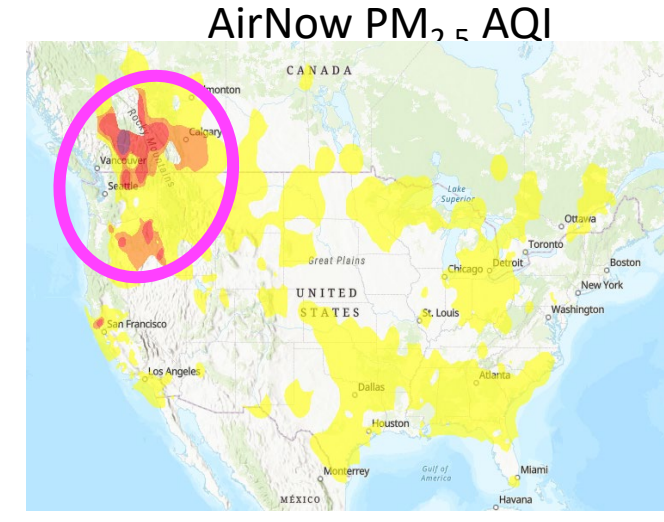
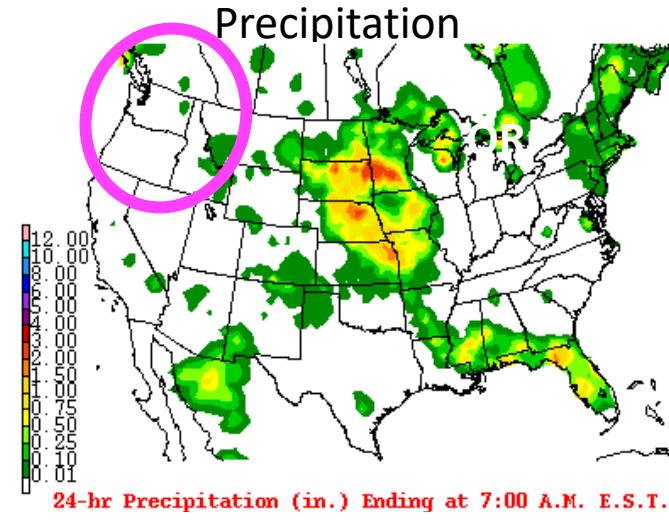
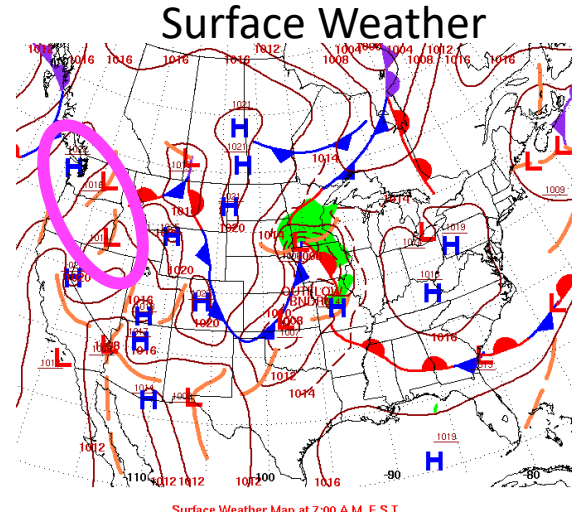
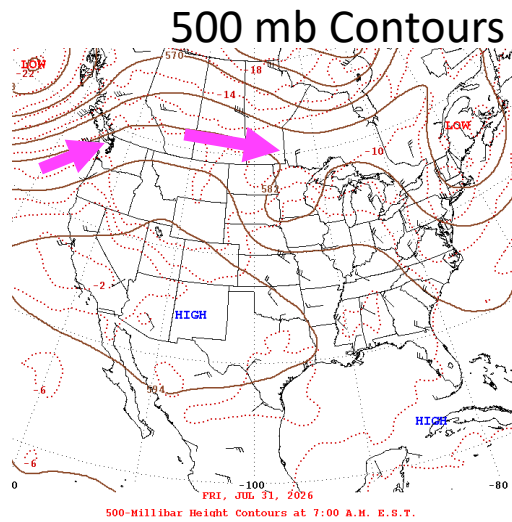
500-Millibar Height Contours at 7:00 A.M. E.S.T.

Surface Weather

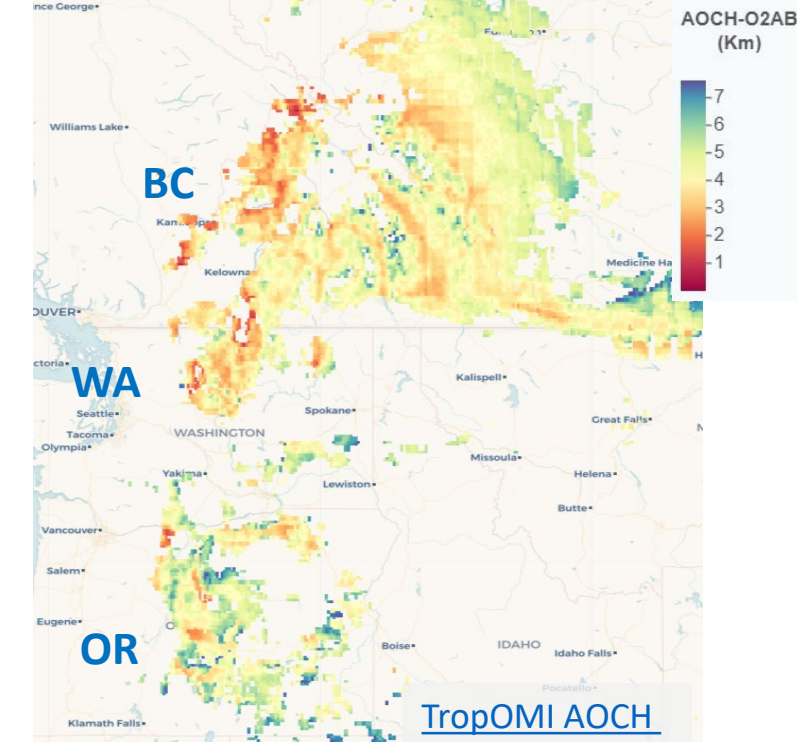
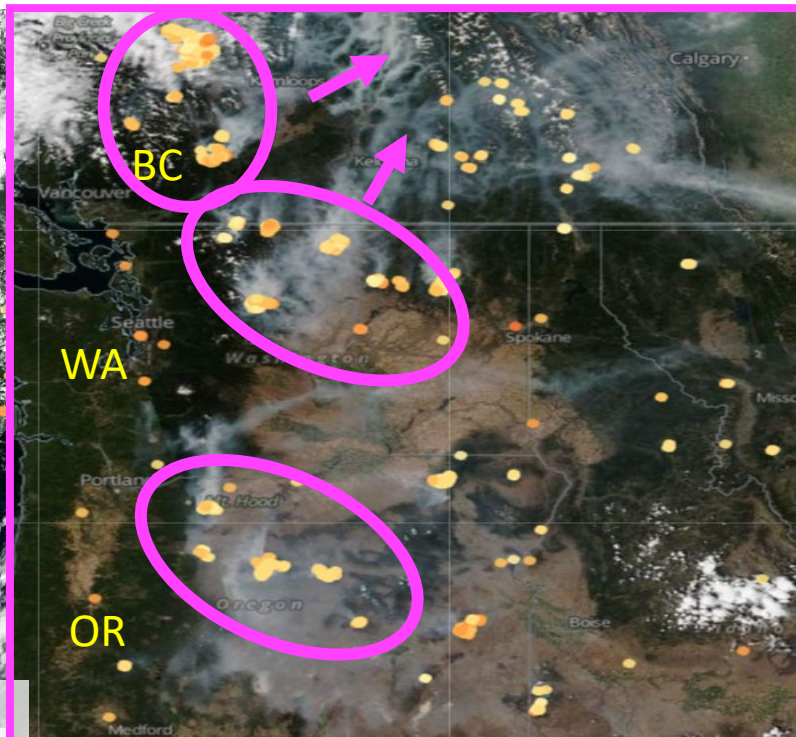
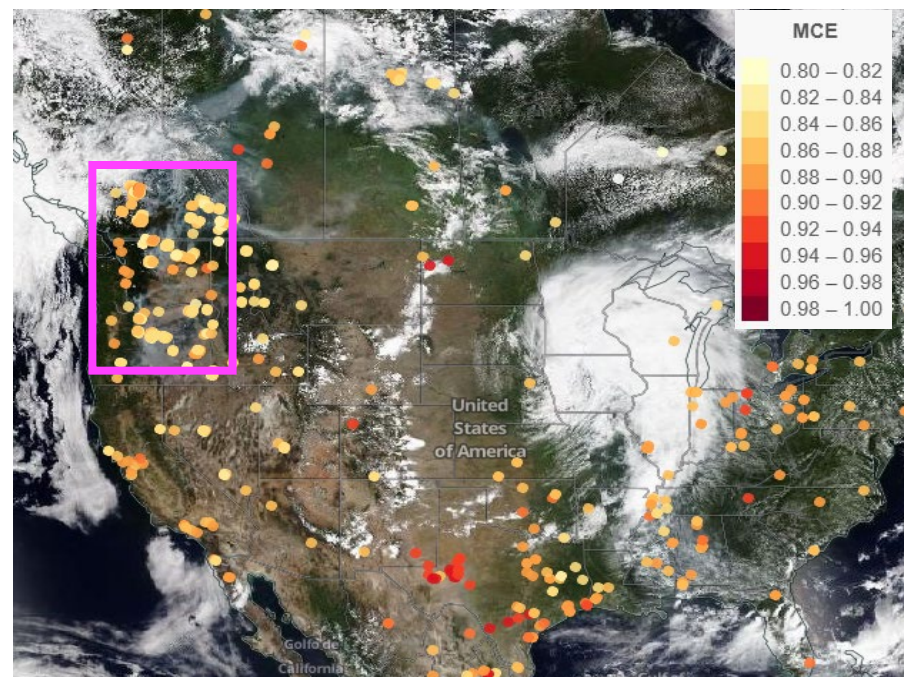
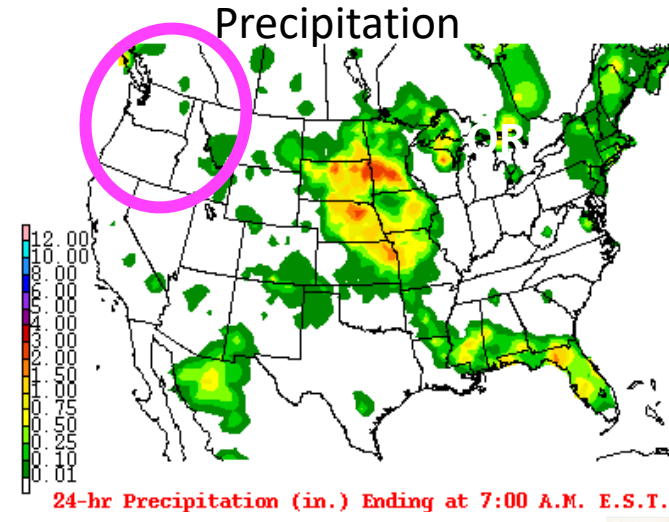
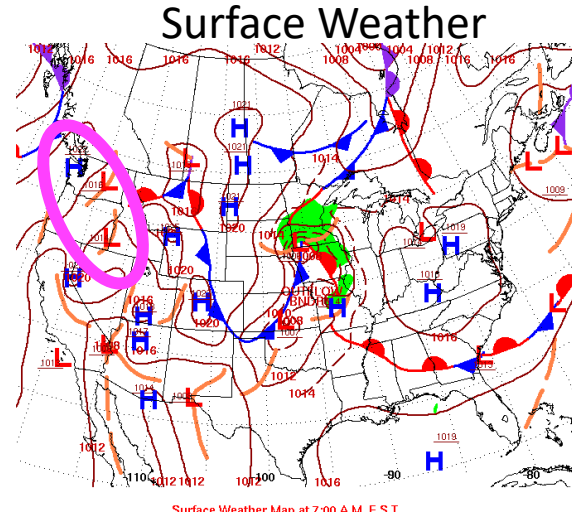
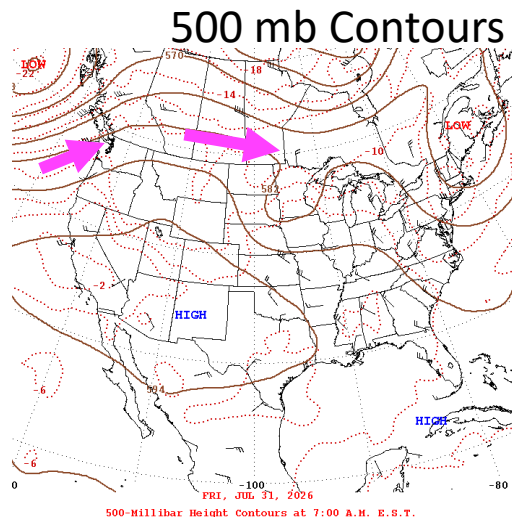


Surface Weather Map at 7:00 A.M. E.S.T.

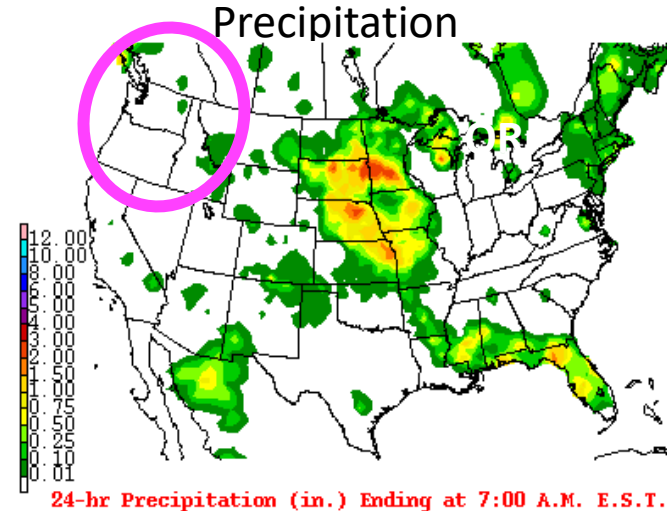
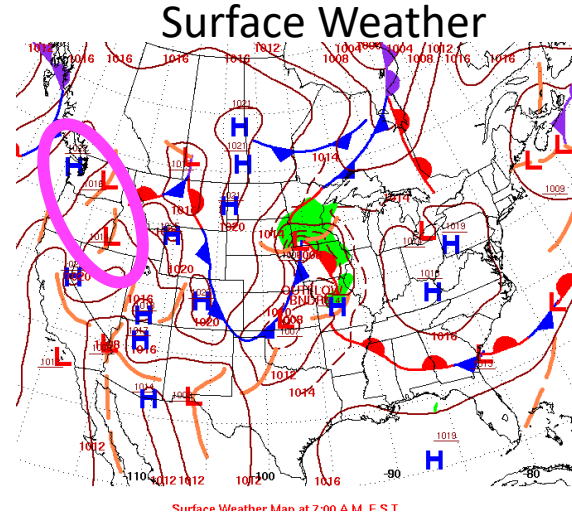
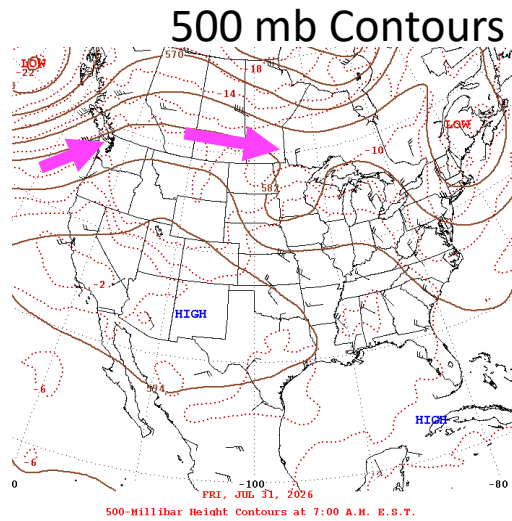
Air Quality Reflection: Friday July 31, 2026



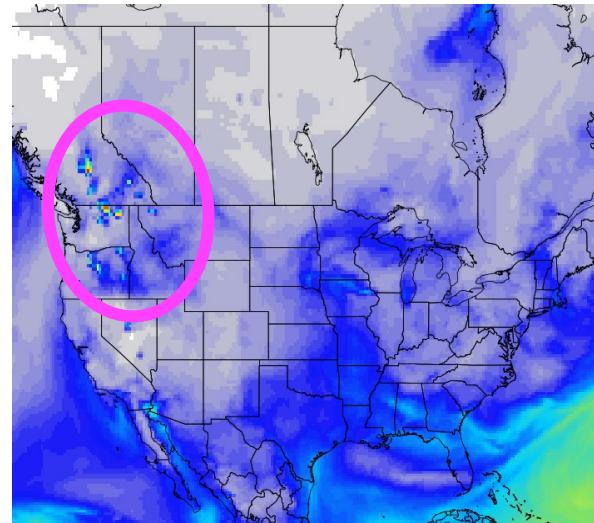
Air Quality Reflection: Friday July 31, 2026



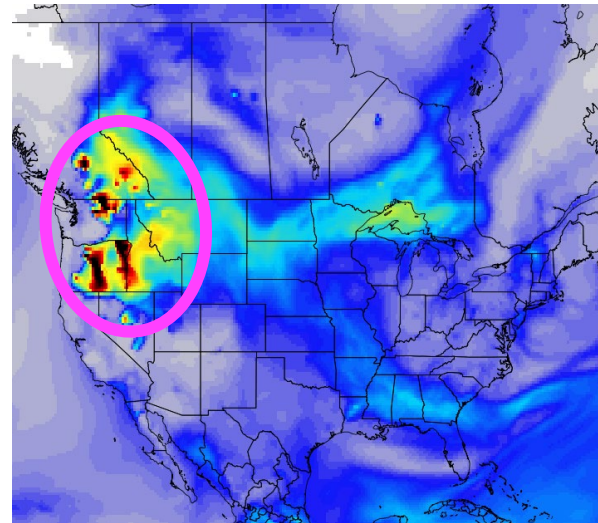
Air Quality Reflection: Friday July 31, 2026



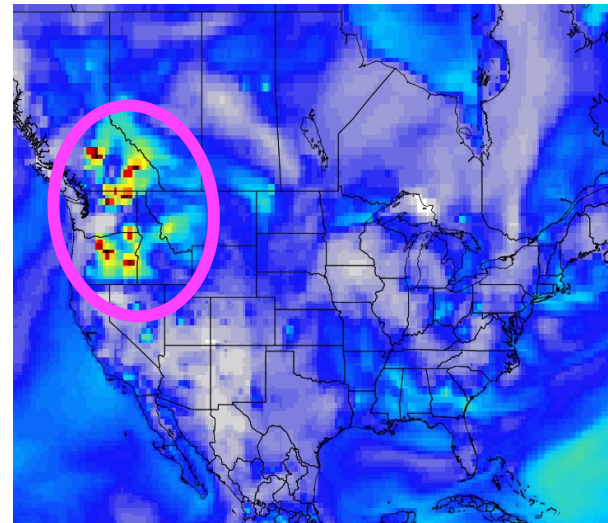
GEOS-FP



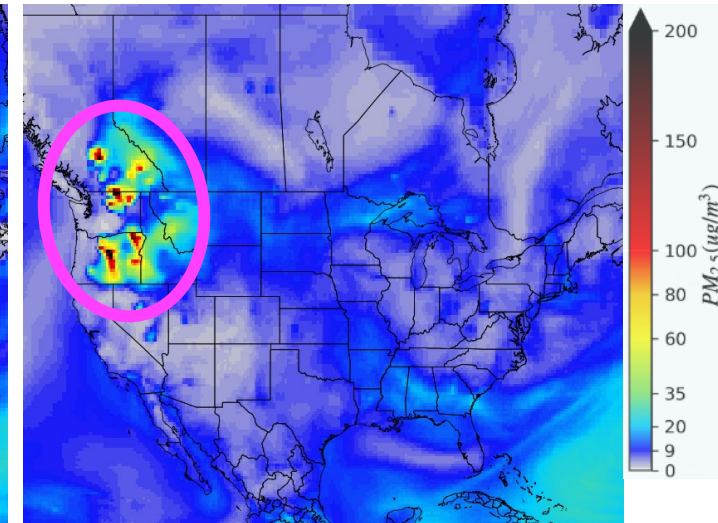
GEOS-CF



CAMS

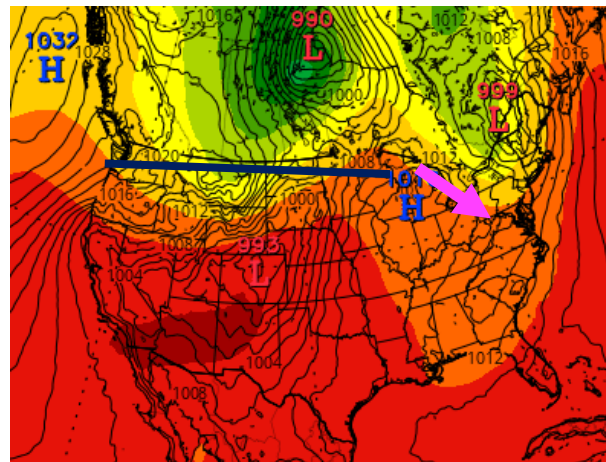


Ensemble

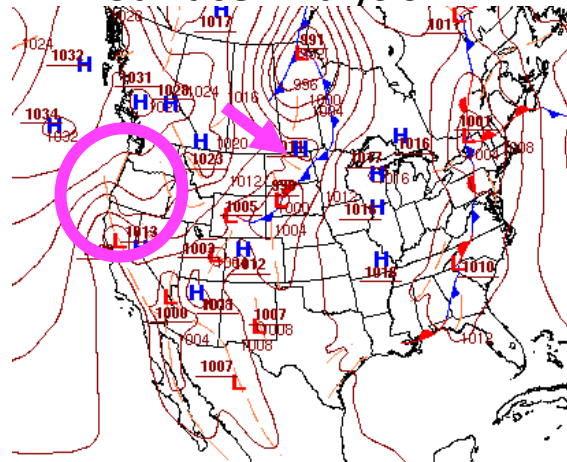


Current Status: August 3, 2026

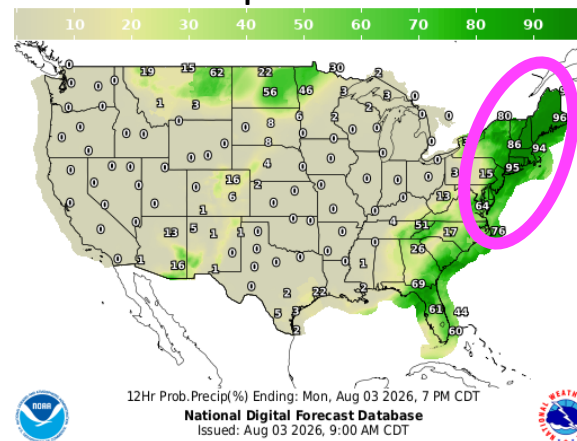
500 mb Contours



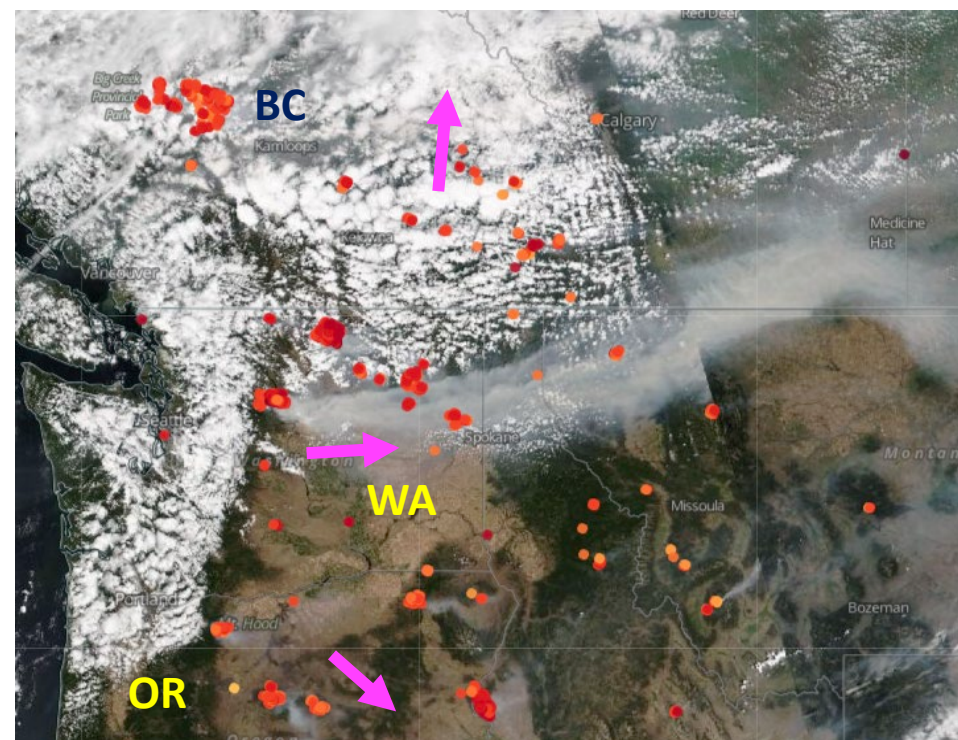
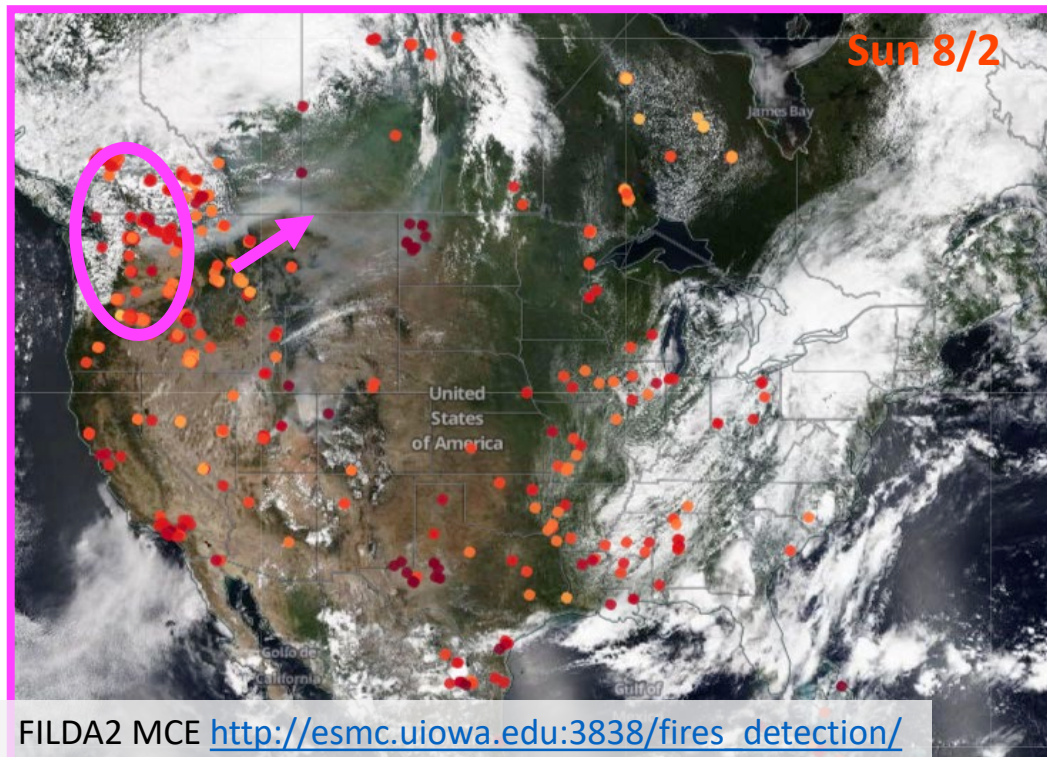
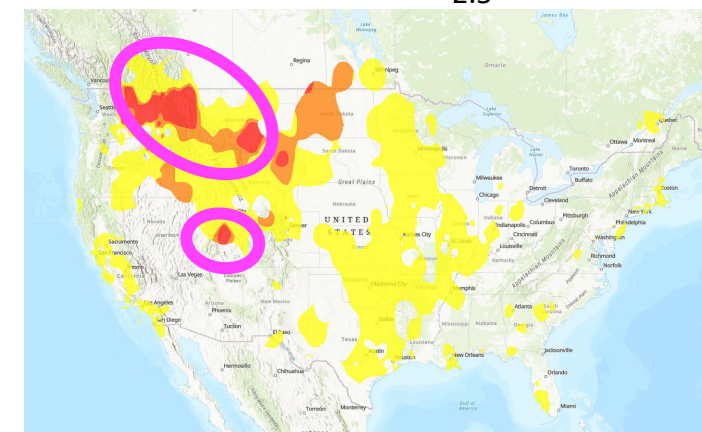
Surface Analysis



Precip. Prob.



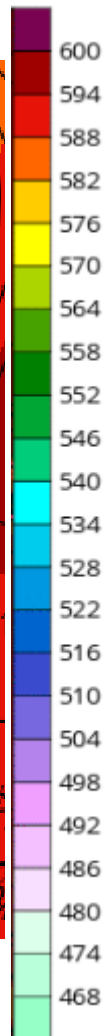
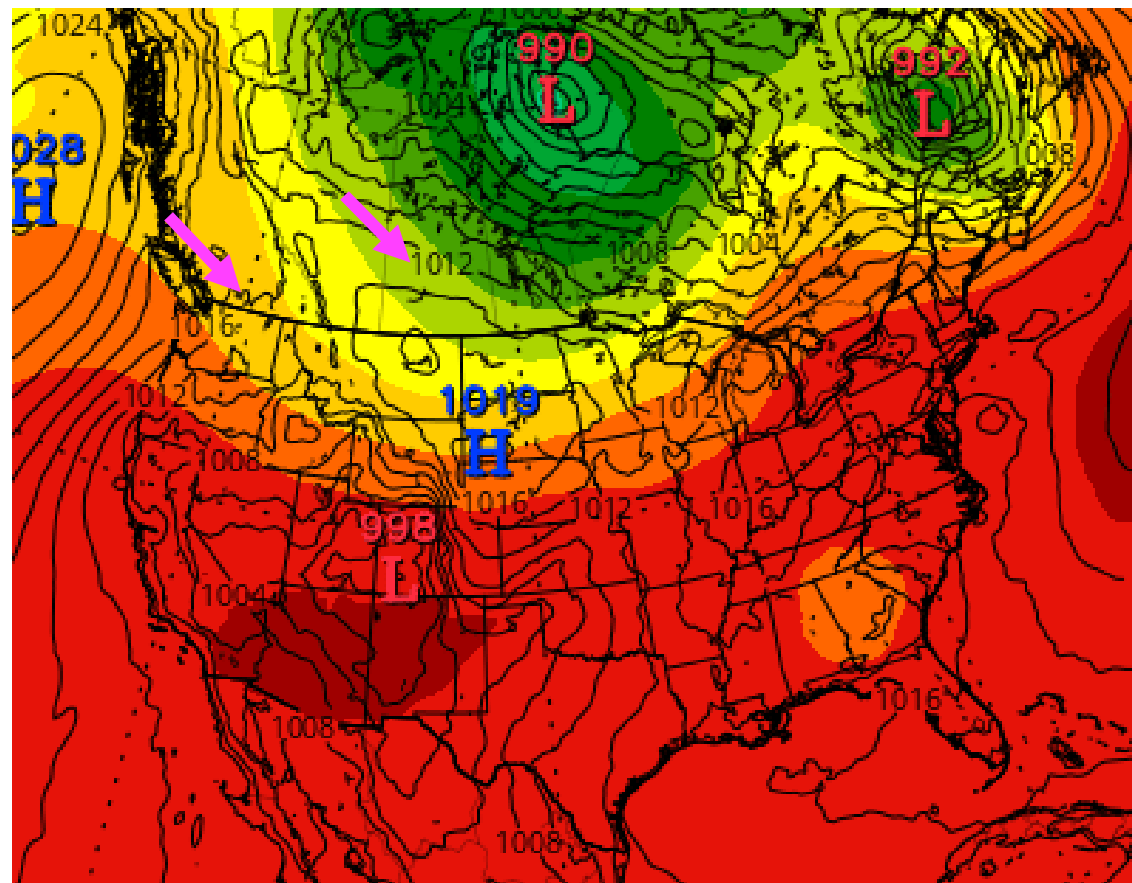
AirNow PM_{2.5} AQI



Outlook: Short Range (1–3 days)

(Forecast **Tuesday 8/4**)

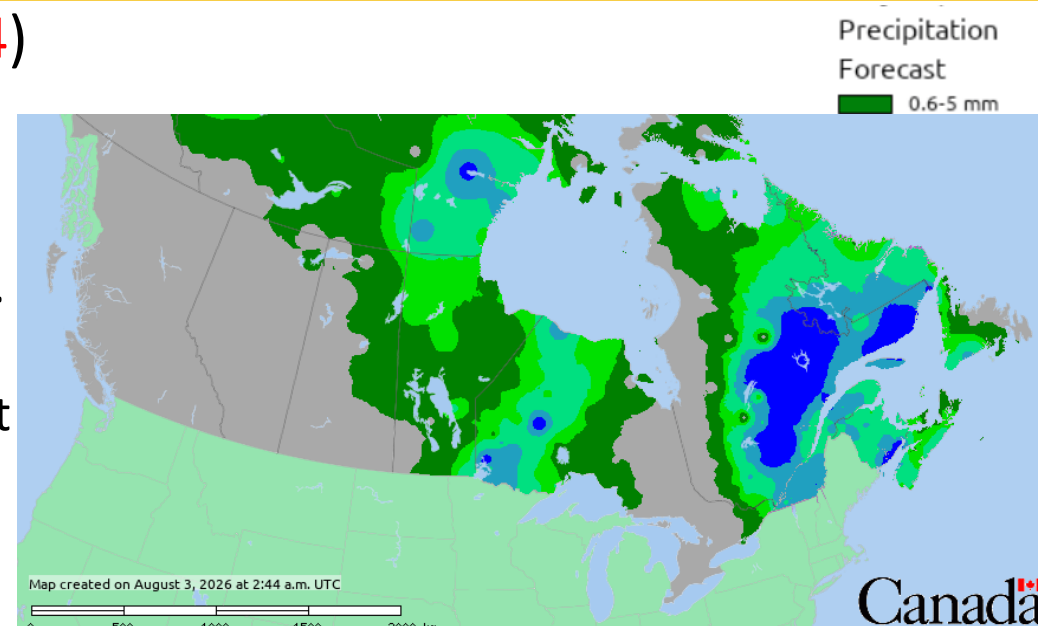
GFS 500 mb



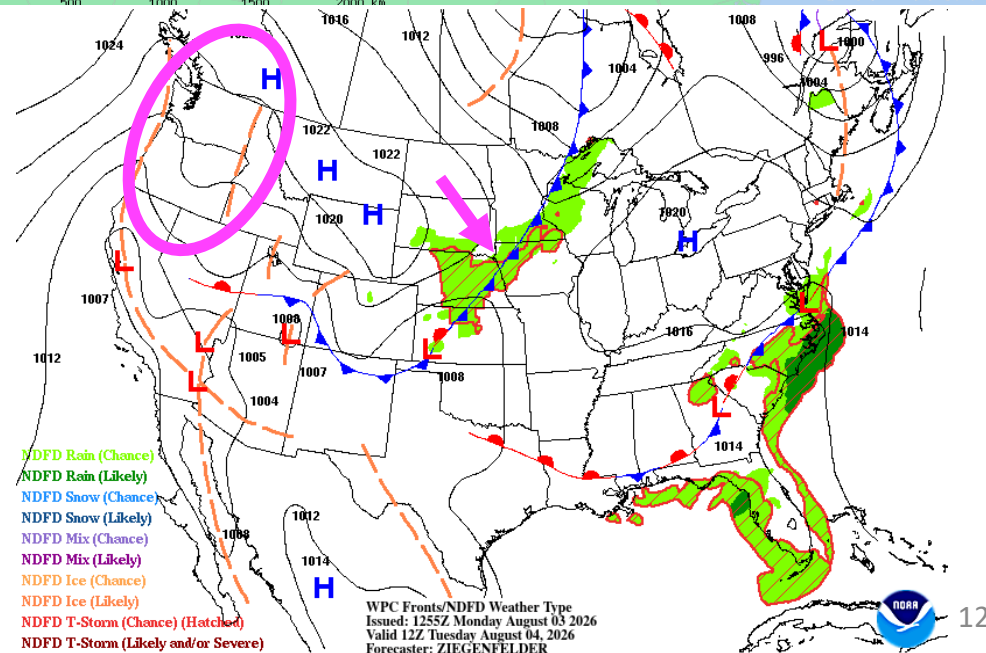
GFS 500mb Geopotential Height (dam) & MSLP (mb)

Init: 06z Aug 03 2026 Forecast Hour: [36] valid at 18z Tue, Aug 04 2026

Environ.
Canada
Forecast

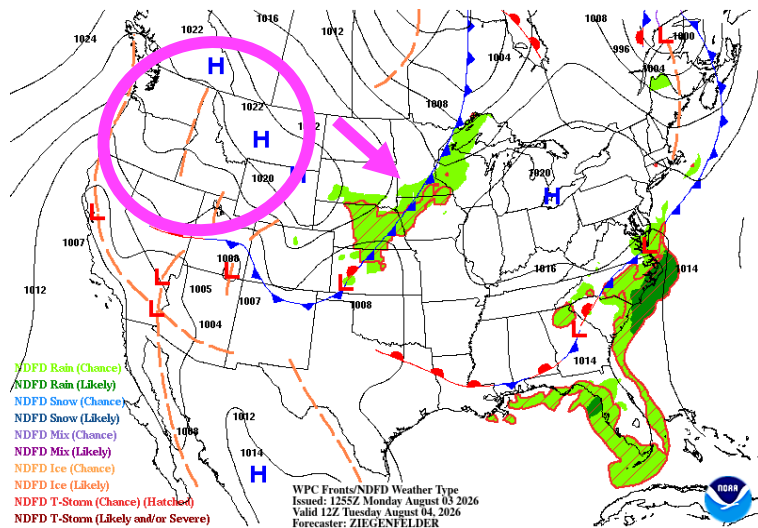


US NWS
Forecast

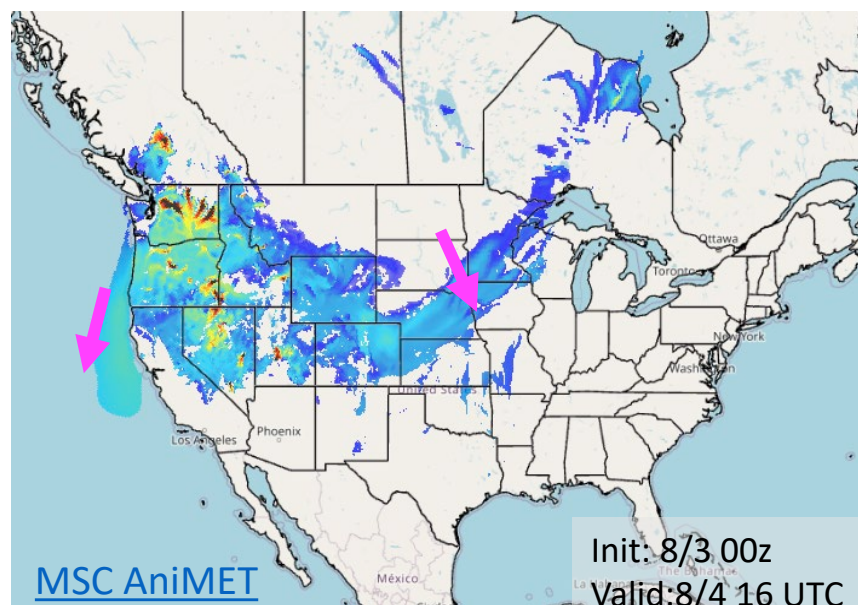


Outlook: Short Range (1–3 days)

Surface Forecast



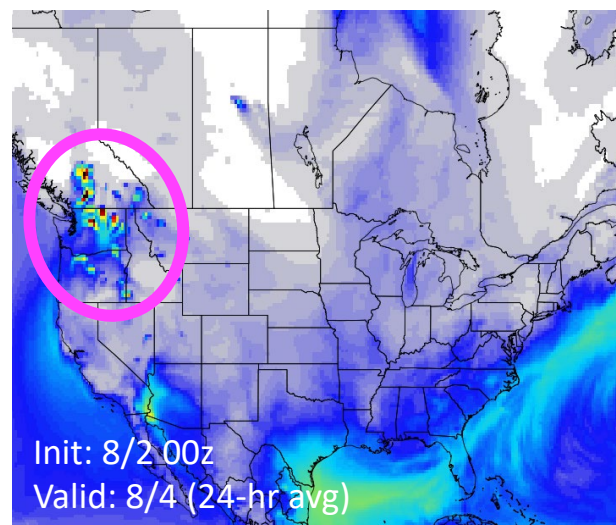
Canada MSC AniMET



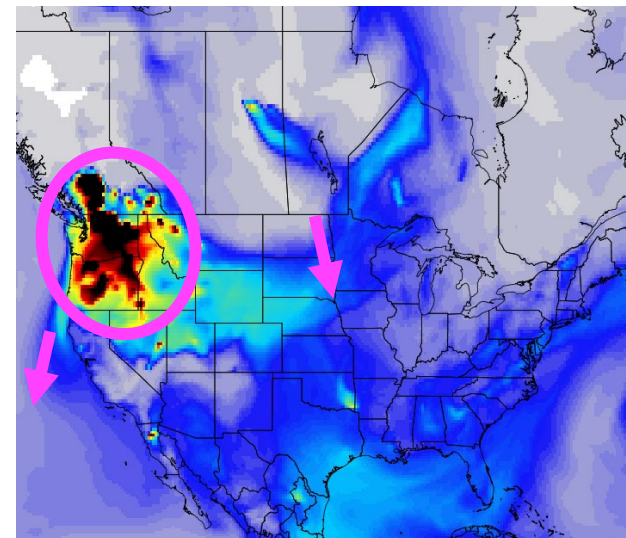
(Tuesday 8/4)

Model Means PM_{2.5}

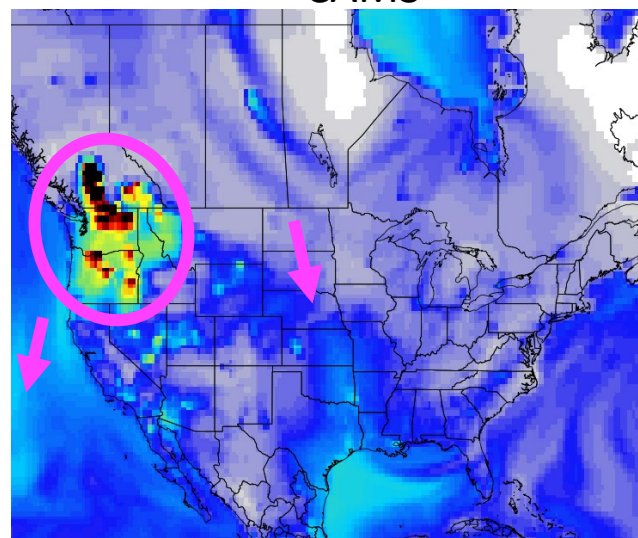
GEOS-FP



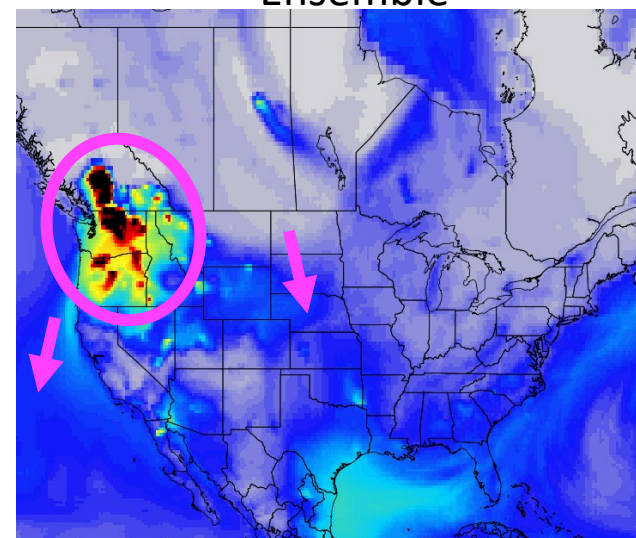
GEOS-CF



CAMS



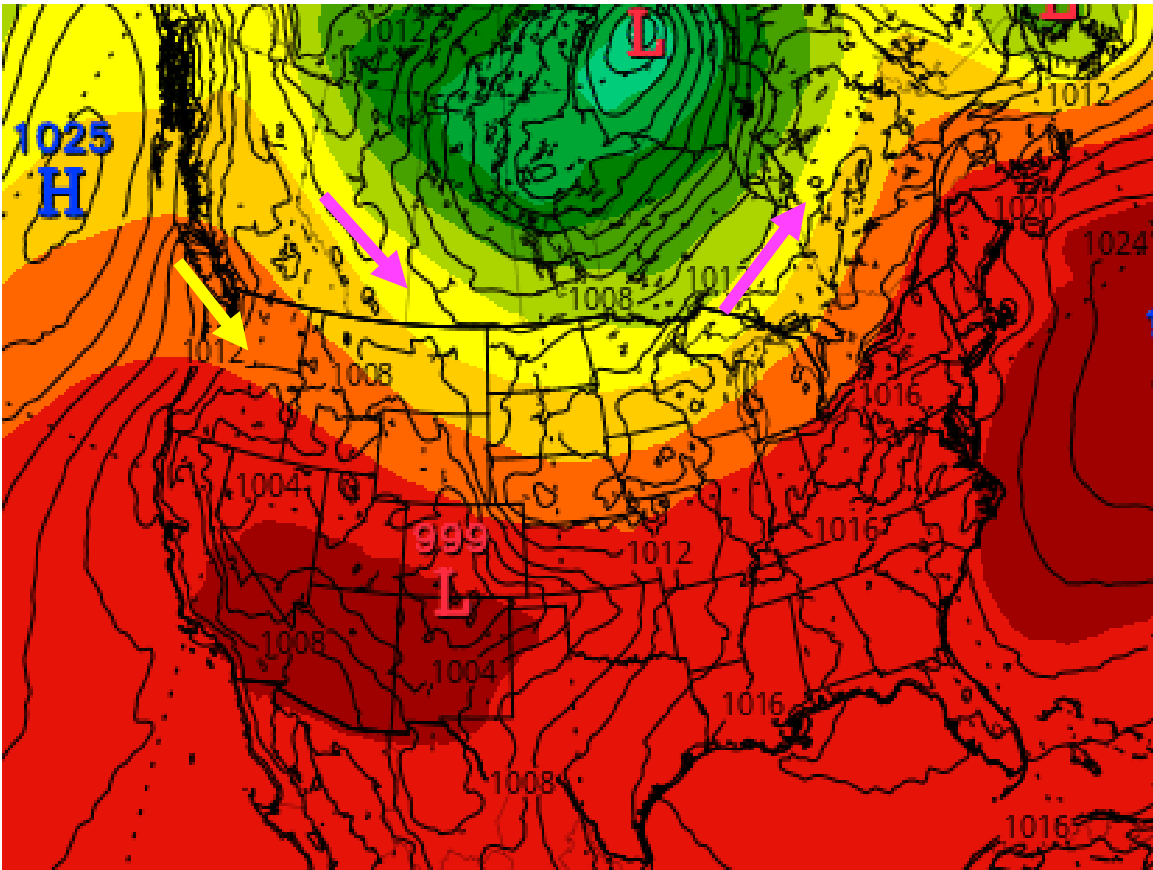
Ensemble



Outlook: Short Range (1–3 days)

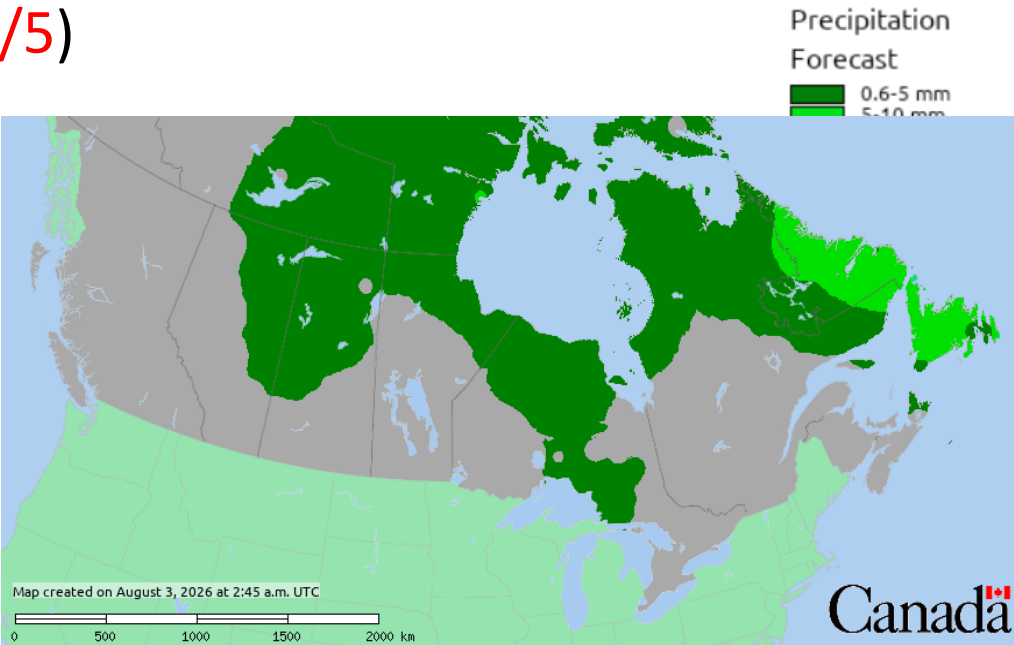
(Forecast **Wednesday 8/5**)

GFS 500 mb

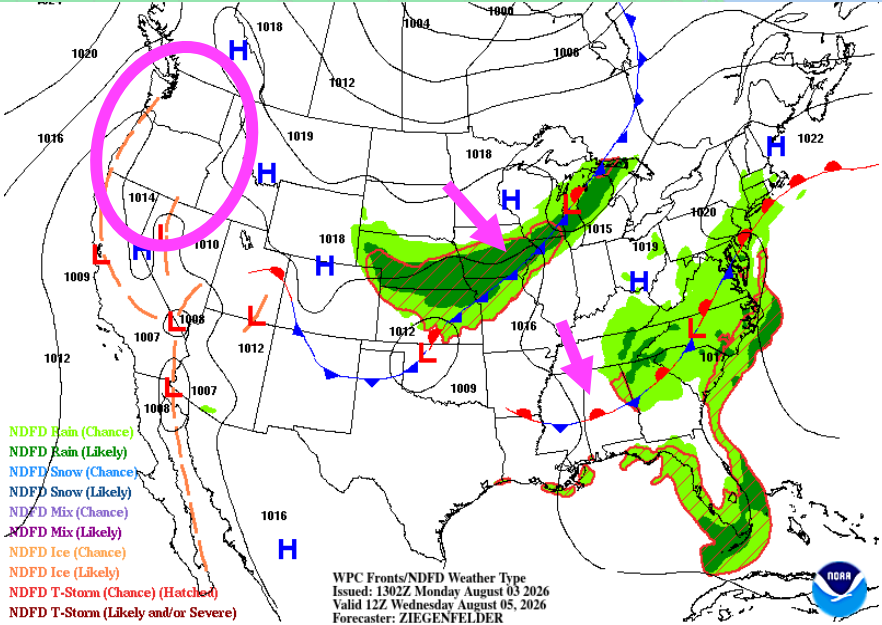


GFS 500mb Geopotential Height (dam) & MSLP (mb)
Init: 06z Aug 03 2026 Forecast Hour: [60] valid at 18z Wed, Aug 05 2026

Environ.
Canada
Forecast



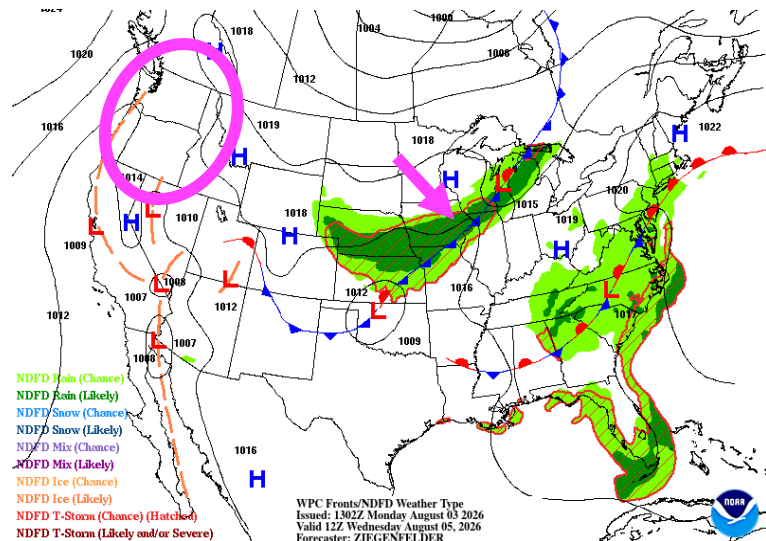
US NWS
Forecast



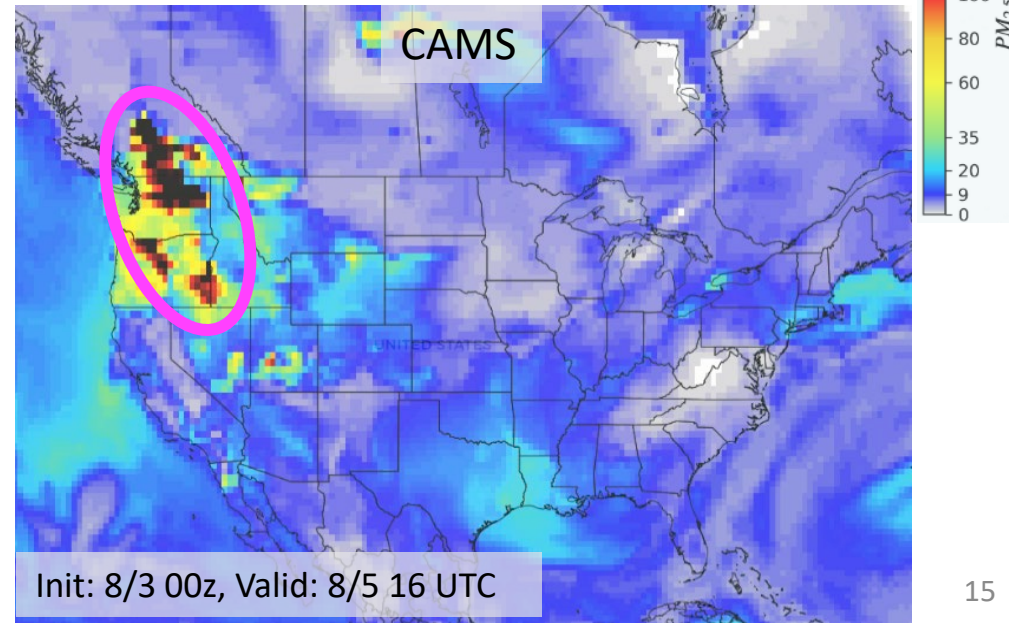
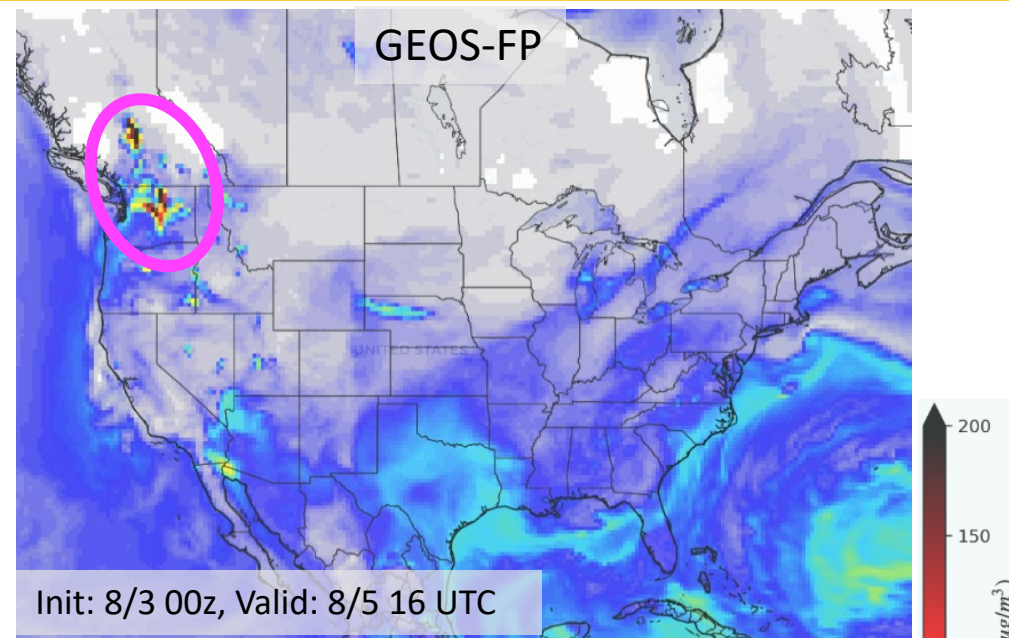
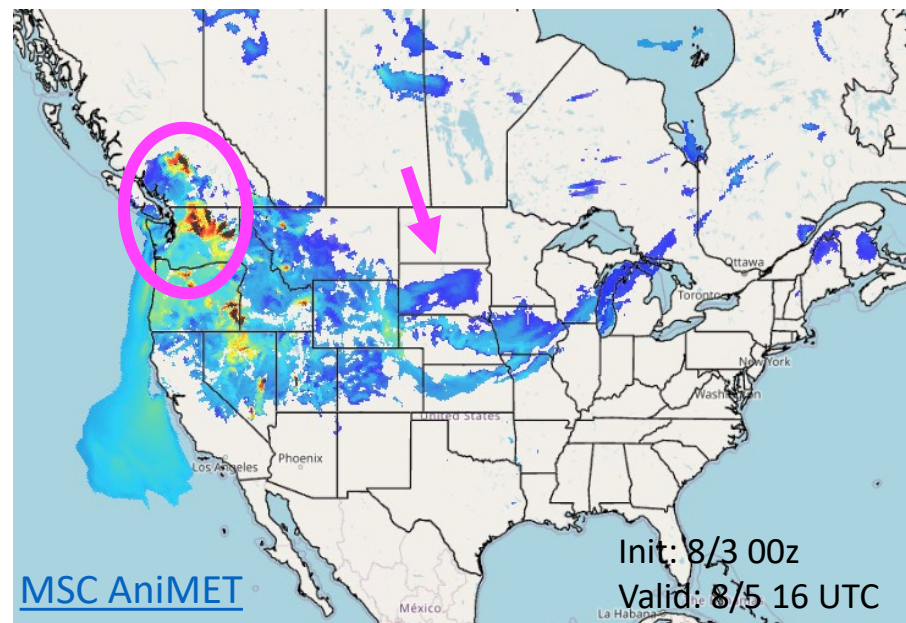
Outlook: Short Range (1–3 days)

Surface Forecast

(Wednesday 8/5)

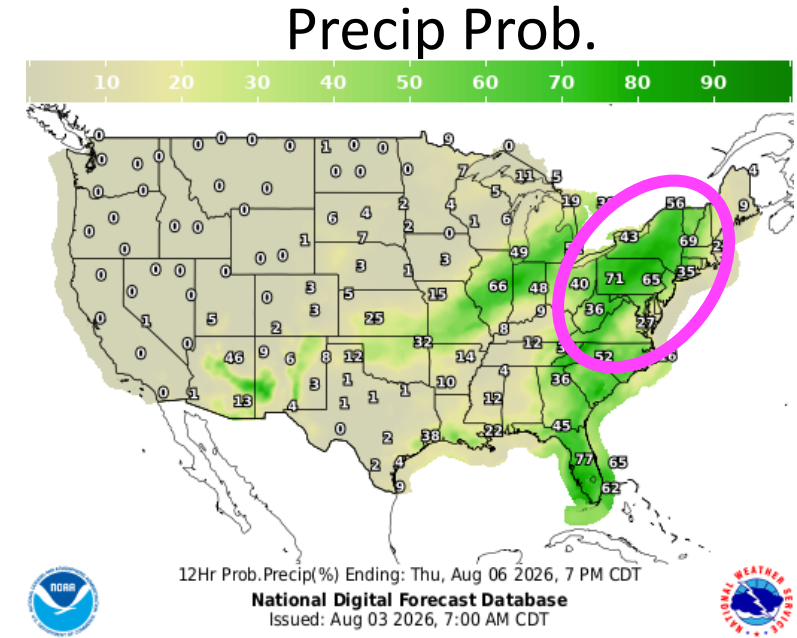
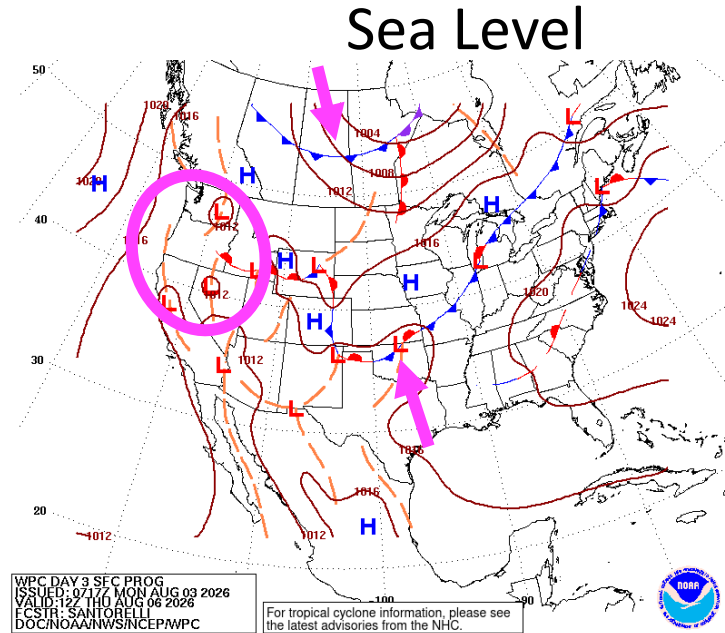
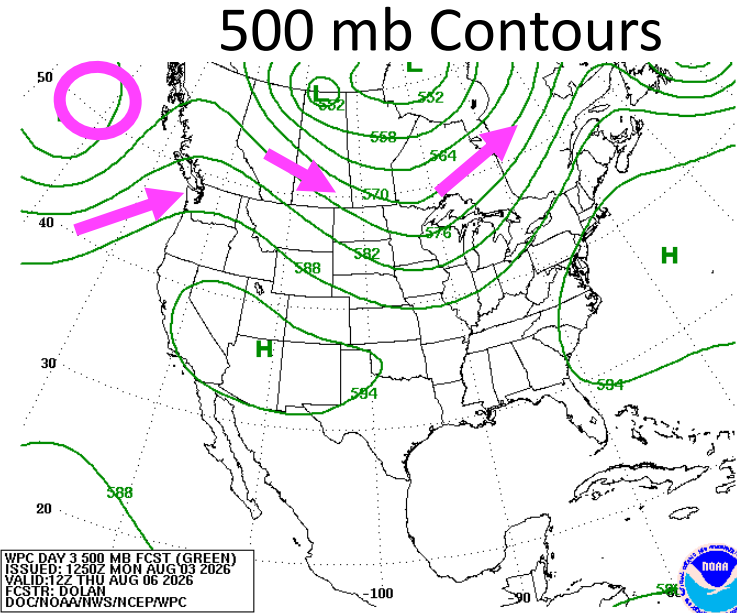


Canada MSC AniMET

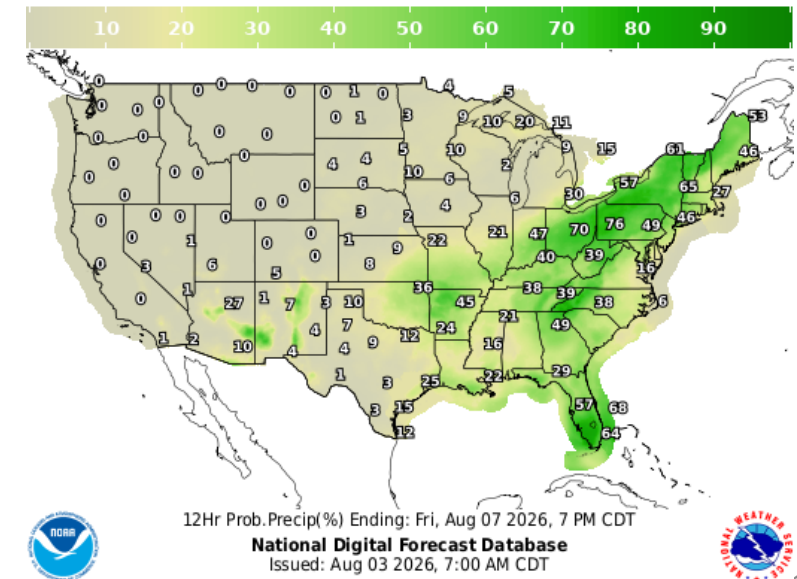
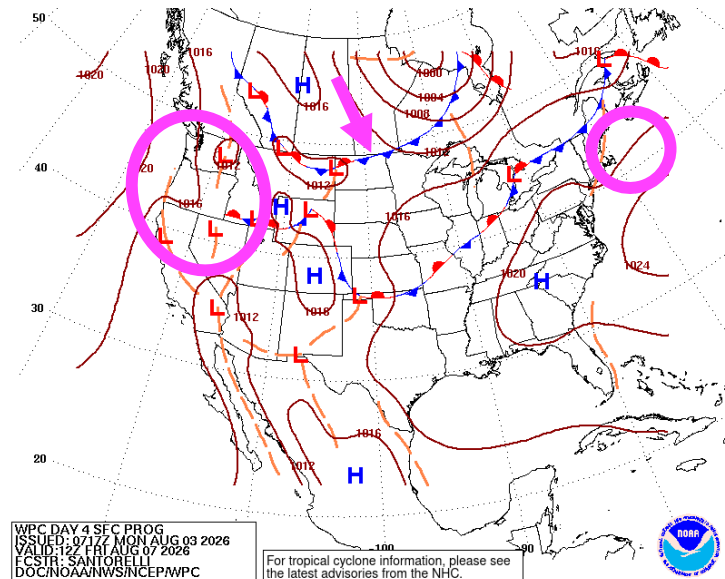
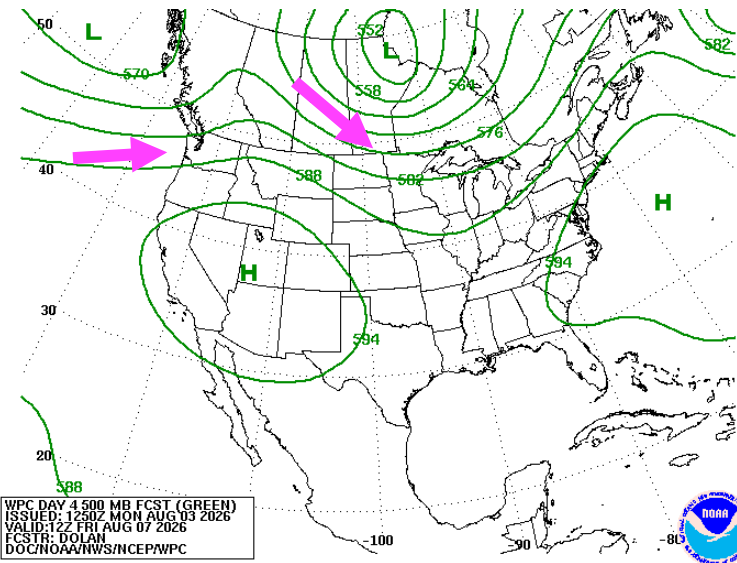


Outlook: Medium Range

Thurs
8/6



Friday
8/7



Summary

Monday: Wildfires in the PNW and central Utah are contributing to unhealthy AQI from PNW to Northern US and Utah respectively.

T → W: Smoke from the PNW fires continue to impact air quality towards the Midwest US behind a cold front. 500 mb contours support transport towards the Midwest should fires develop in southern AB, MB, SK Canada.

Th → F: Conditions from Tues/Wed persist. A cold front moves into the Northern US and potentially helps clear out aged smoke at the surface.

