

Weather and Air Quality: Reflection and Outlook During Smoke Conditions

Presenter: Megan Christiansen
Date: July 13, 2026

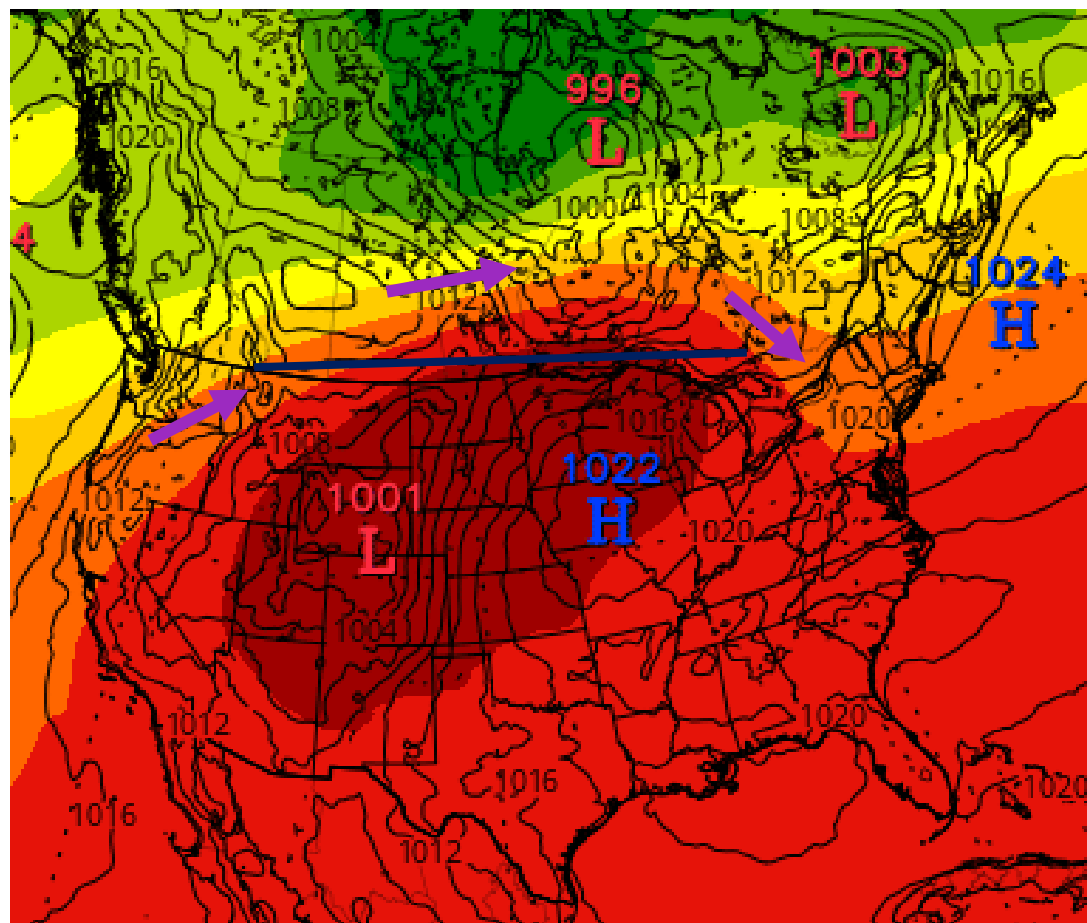


FireAQ is funded by NASA HAQ. We thank NASA GMAO and ECMWF for the model data products.

EARTH SCIENCE
APPLIED SCIENCES

Current Status: July 13, 2026

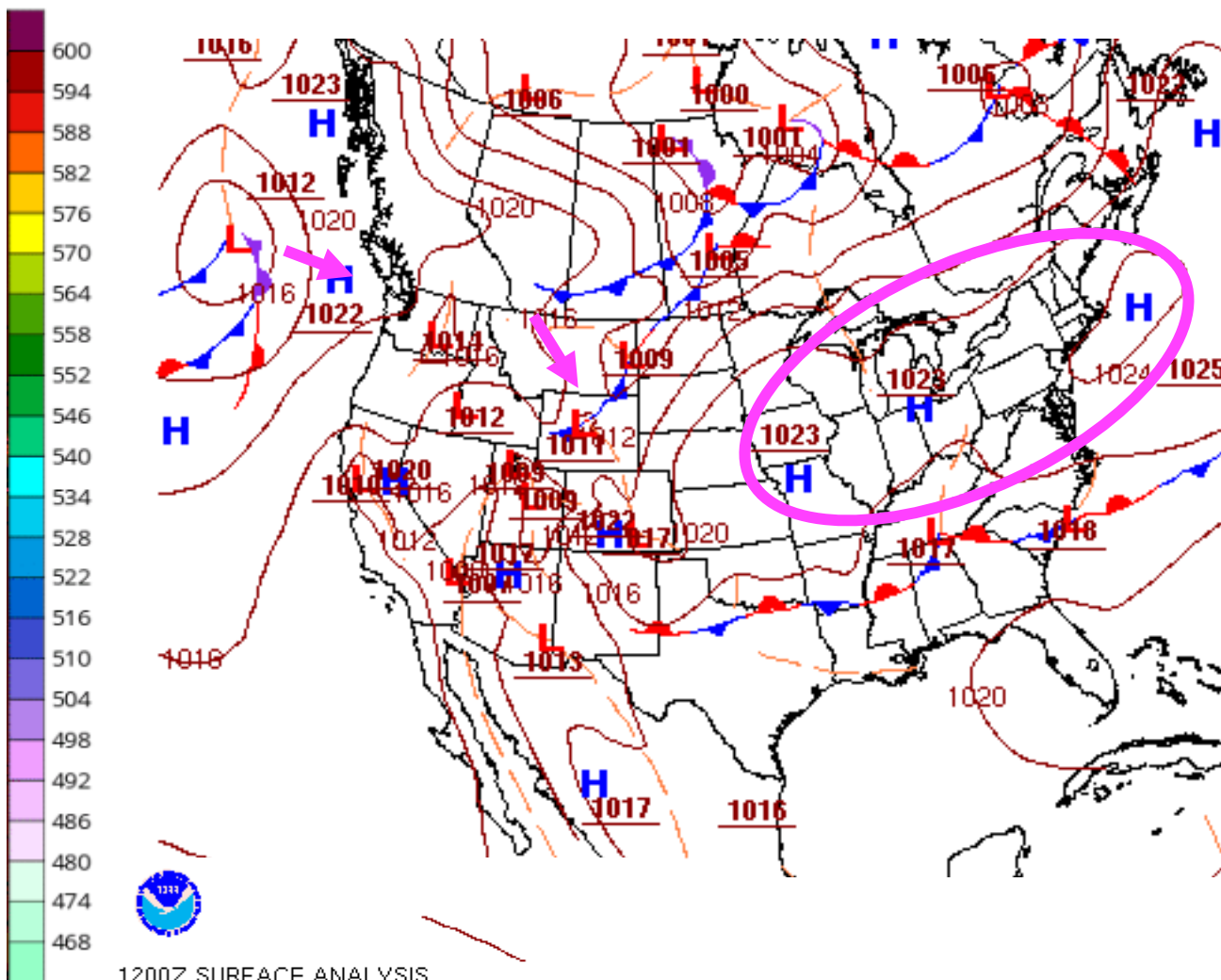
500 mb Contours



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

Init: 06z Jul 13 2026 Forecast Hour: [12] valid at 18z Mon, Jul 13 2026

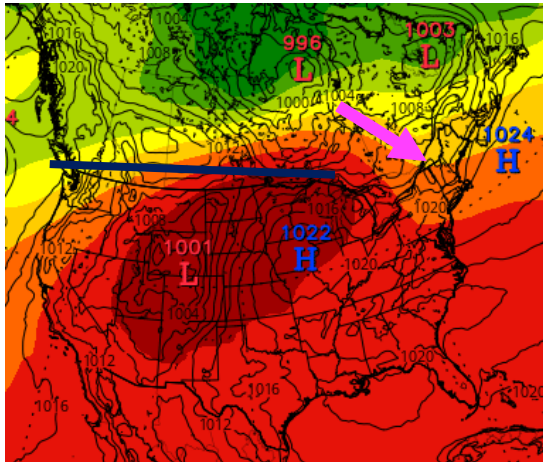
Surface Analysis



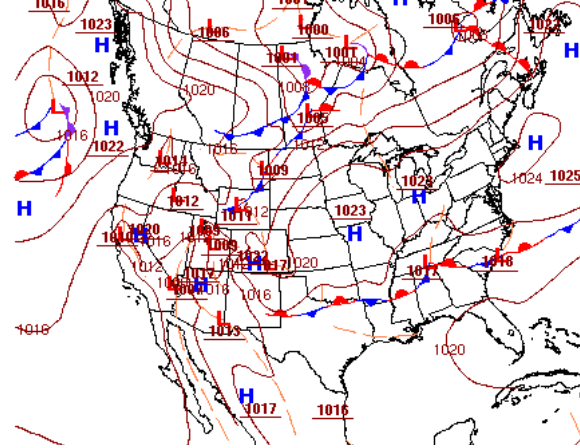
1200Z SURFACE ANALYSIS
DATE: MON JUL 13 2026
ISSUED: 1330Z MON JUL 13 2026
BY WPC ANALYST ASHERMAN
COLLABORATING CENTERS: WPC, NHC, OPC

Current Status: July 13, 2026

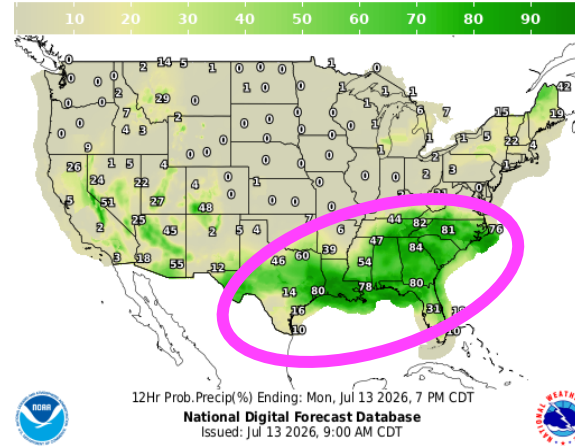
500 mb Contours



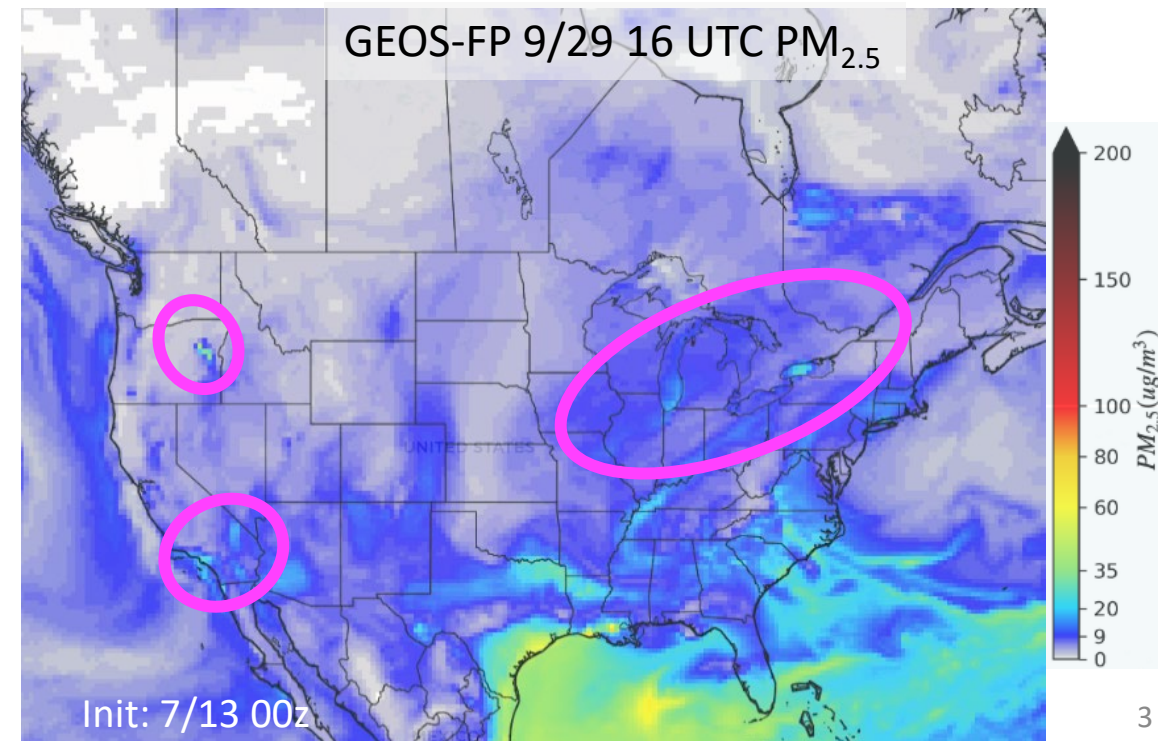
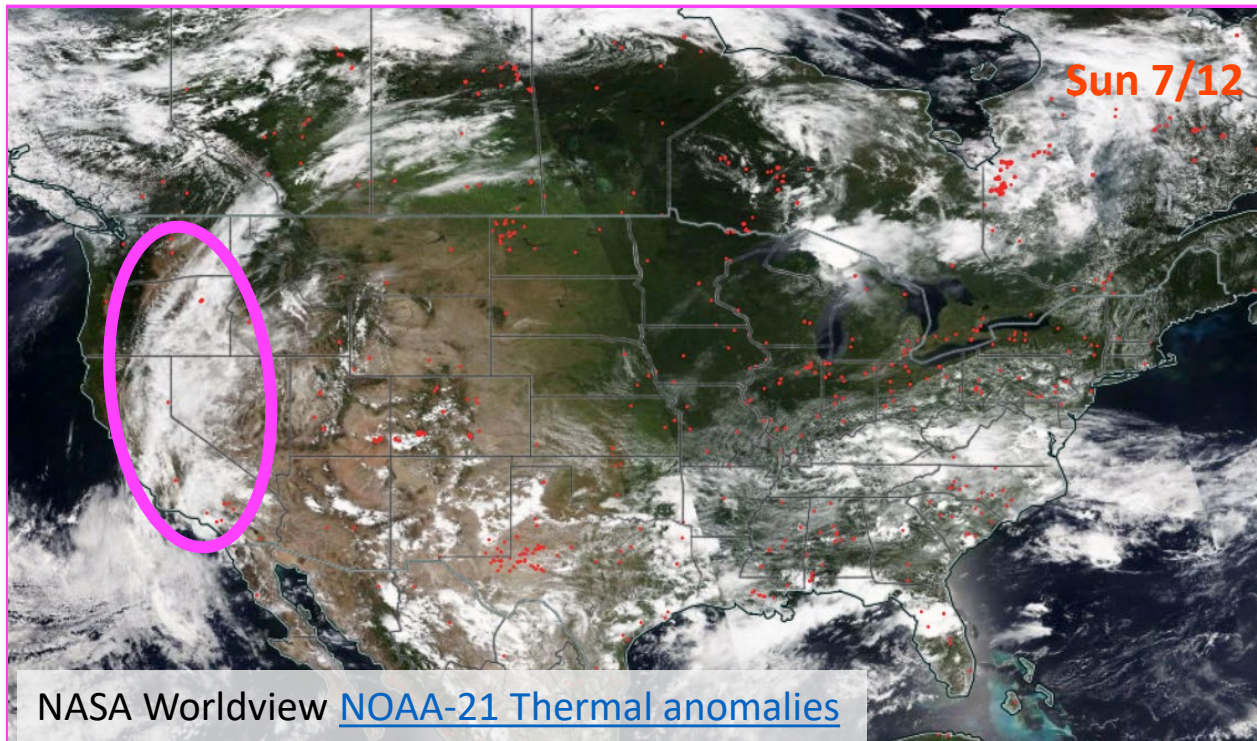
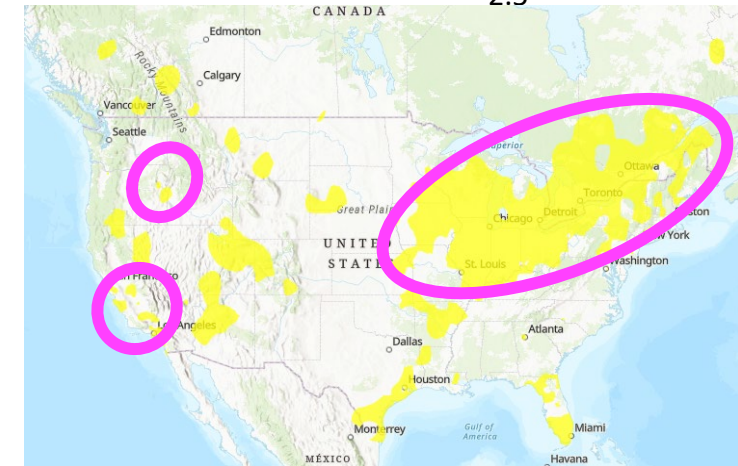
Surface Analysis



Precip. Prob.



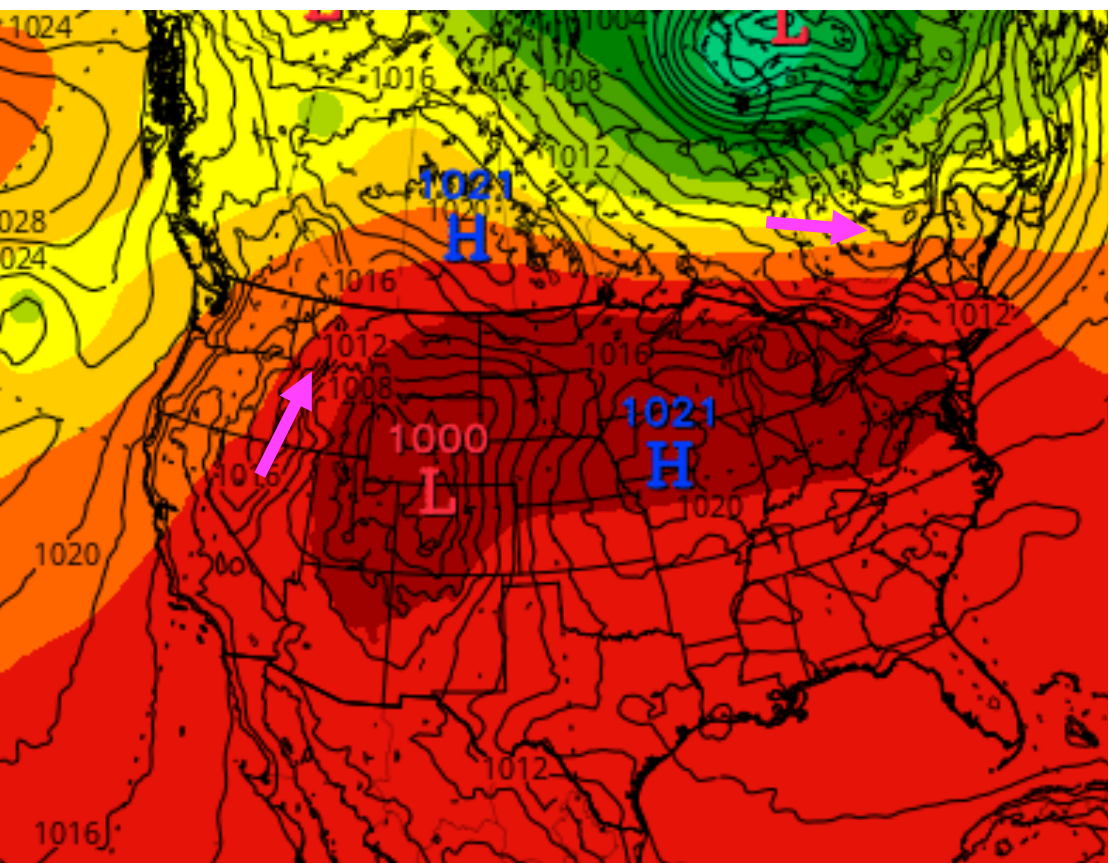
AirNow PM_{2.5} AQI



Outlook: Short Range (1-3 days)

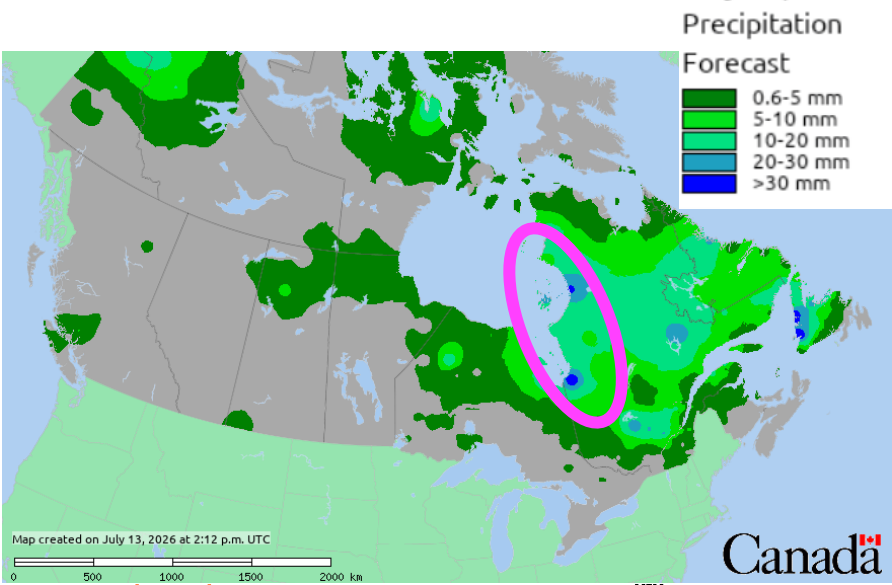
(Forecast **Tuesday 7/14**)

GFS 500 mb

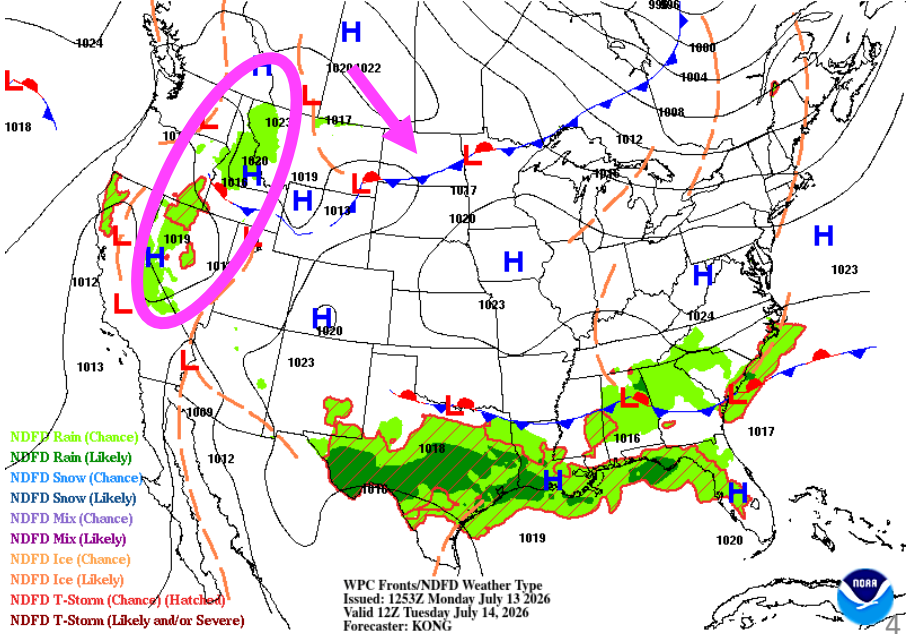


GFS 500mb Geopotential Height (dam) & MSLP (mb)
Init: 06z Jul 13 2026 Forecast Hour: [36] valid at 18z Tue, Jul 14 2026

Environment
Canada
Forecast

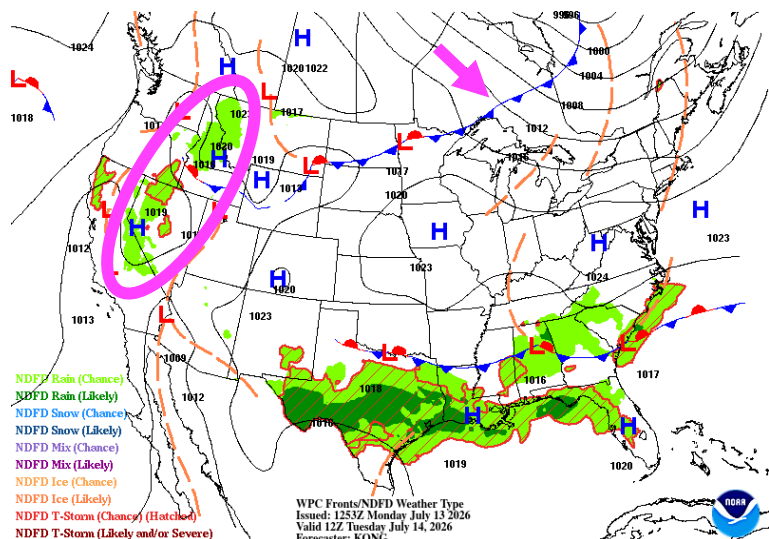


US NWS
Forecast

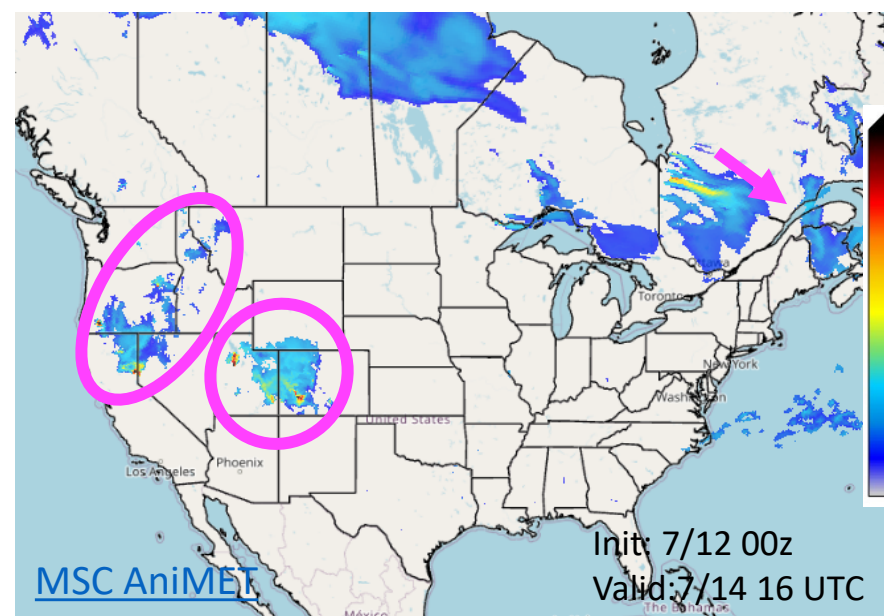


Outlook: Short Range (1–3 days)

Surface Forecast



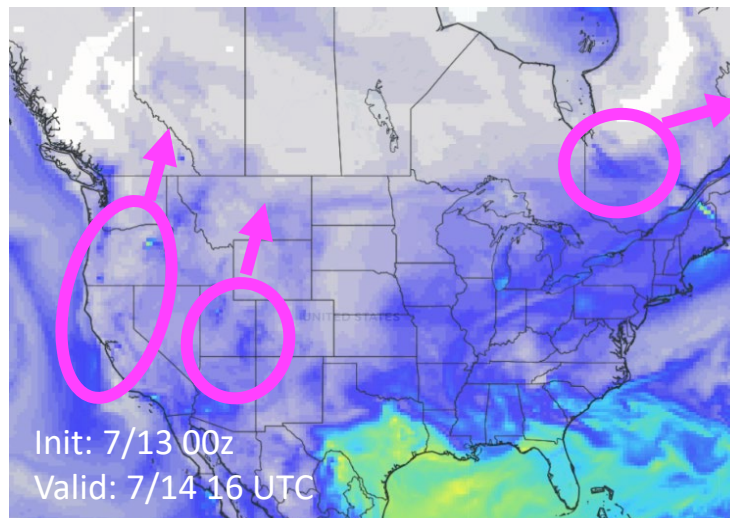
Canada MSC AniMET



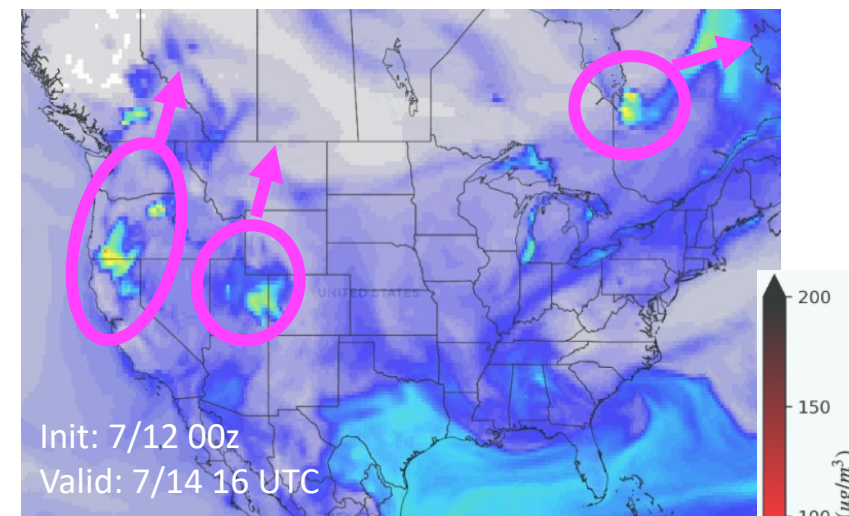
(Tuesday 7/14)

Model Means PM_{2.5}

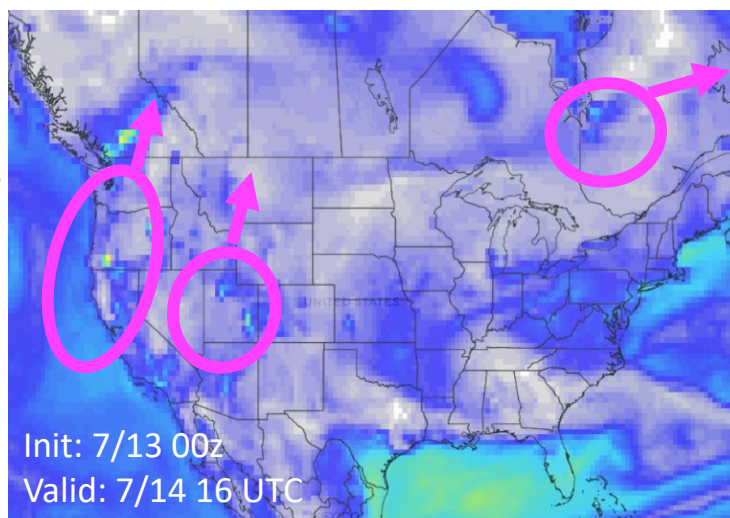
GEOS-FP



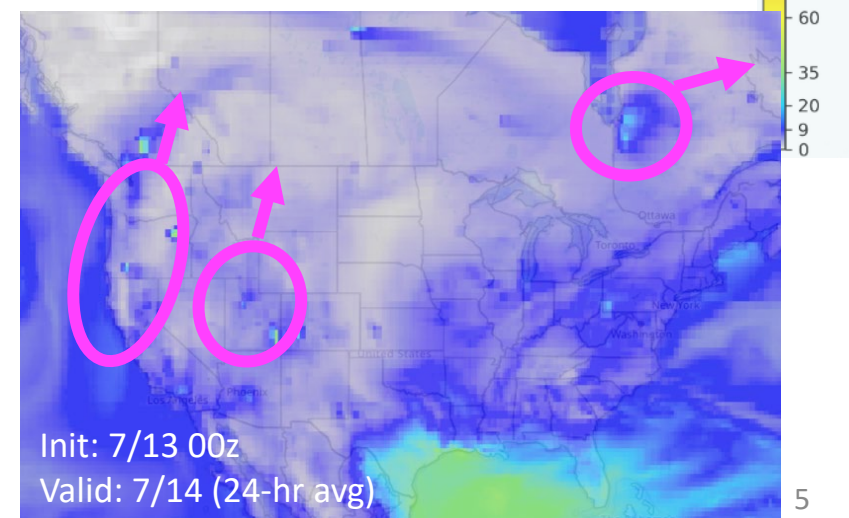
GEOS-CF



CAMS



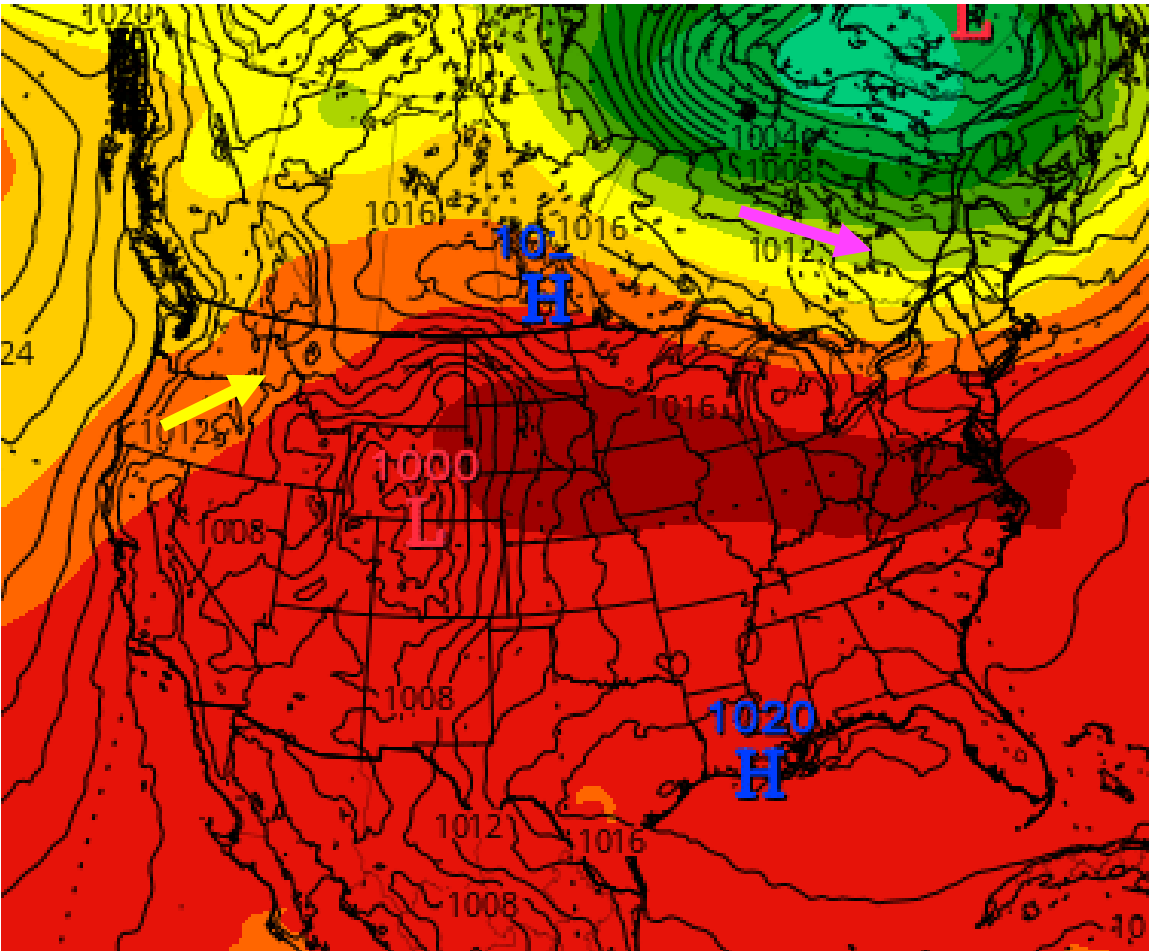
Ensemble



Outlook: Short Range (1–3 days)

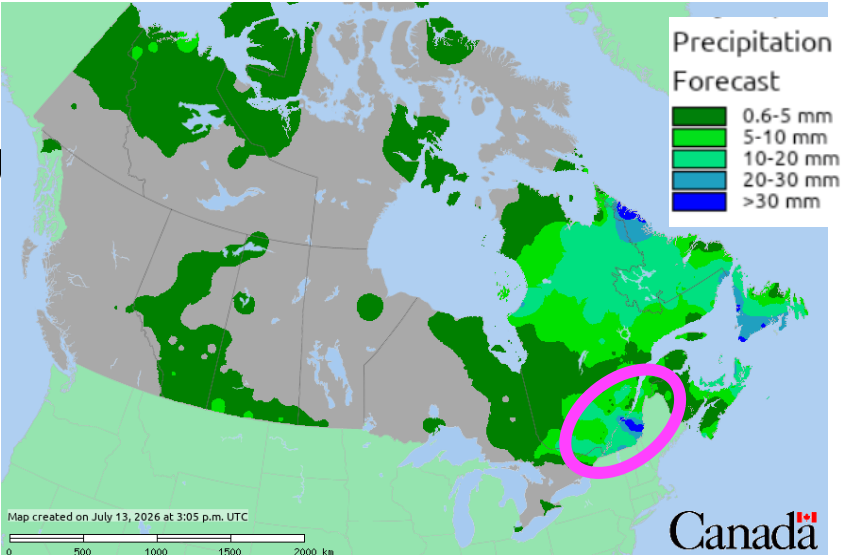
(Forecast **Wednesday 7/15**)

GFS 500 mb

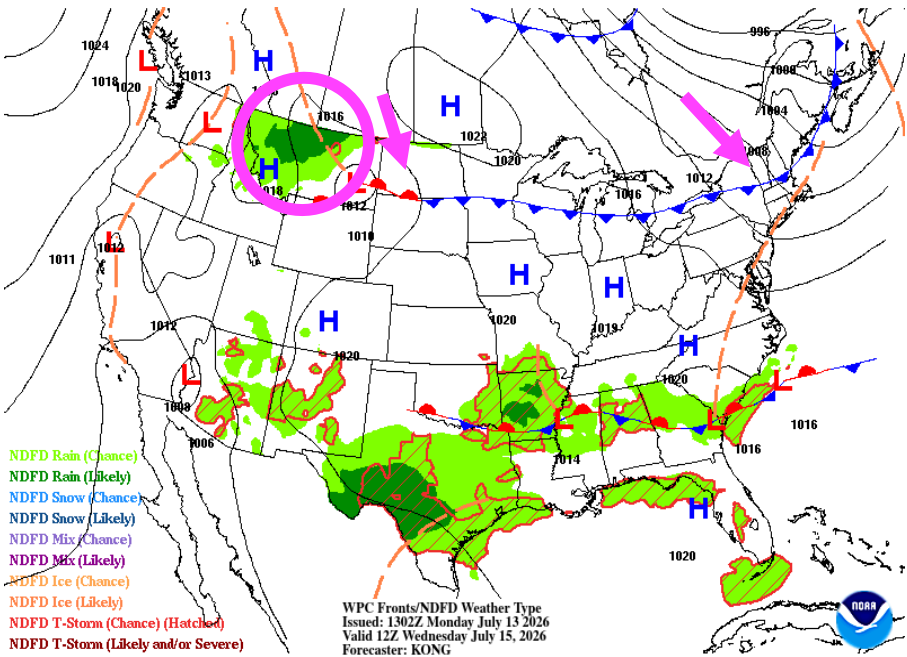


GFS 500mb Geopotential Height (dam) & MSLP (mb)
Init: 06z Jul 13 2026 Forecast Hour: [60] valid at 18z Wed, Jul 15 2026

Environment
Canada
Forecast



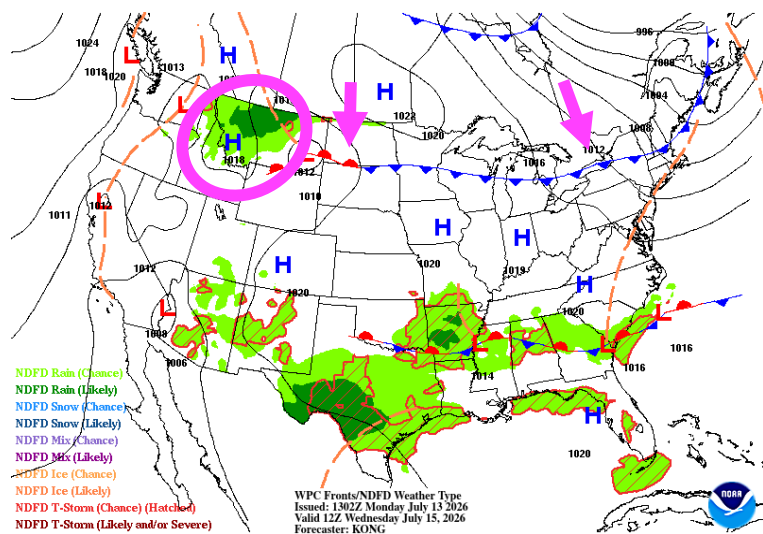
US NWS
Forecast



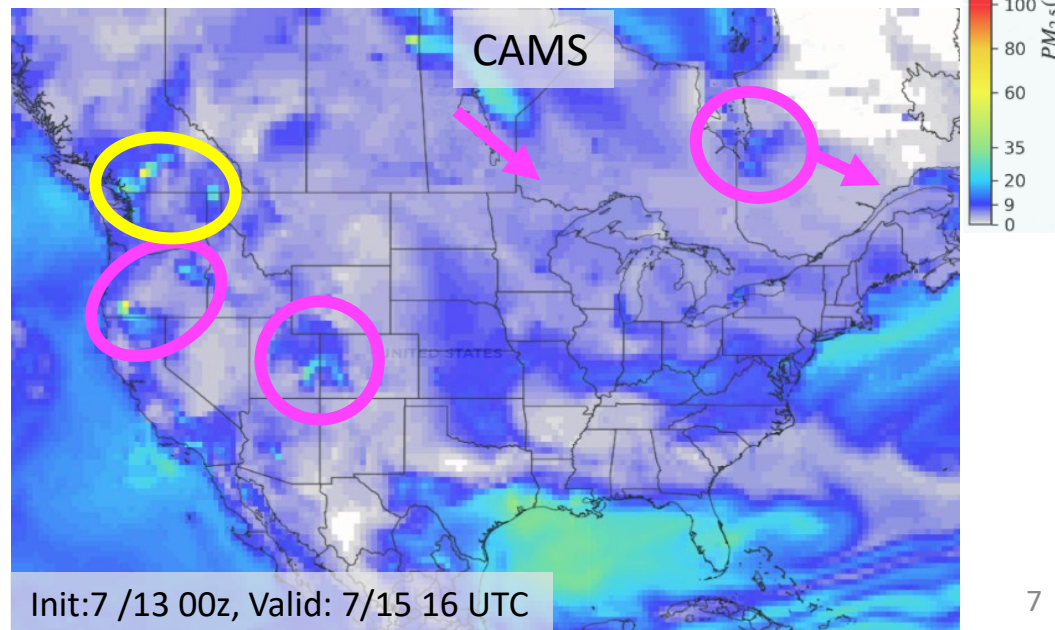
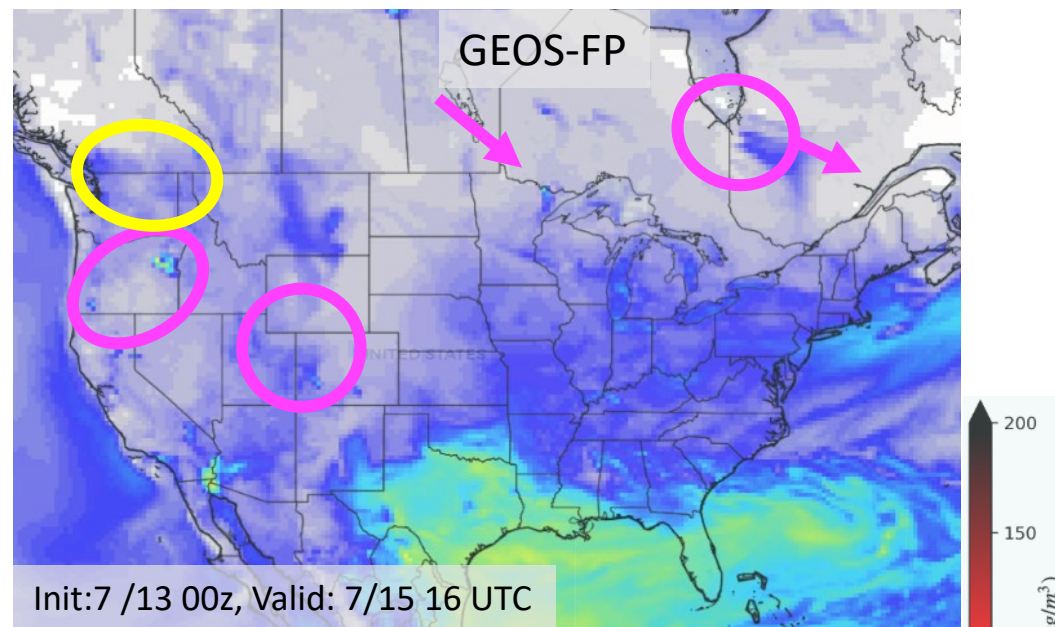
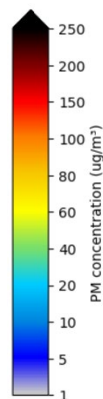
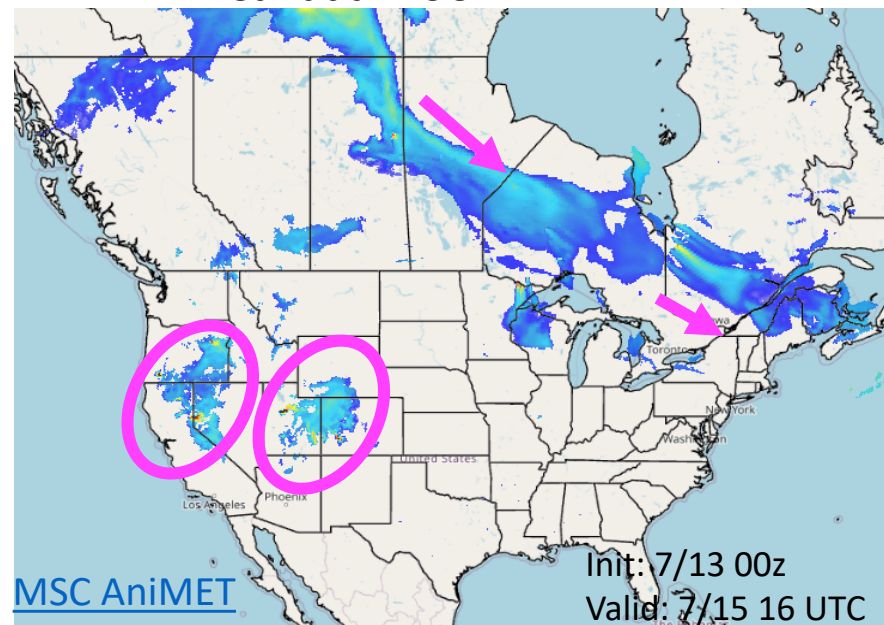
Outlook: Short Range (1–3 days)

Surface Forecast

(Wednesday 7/15)

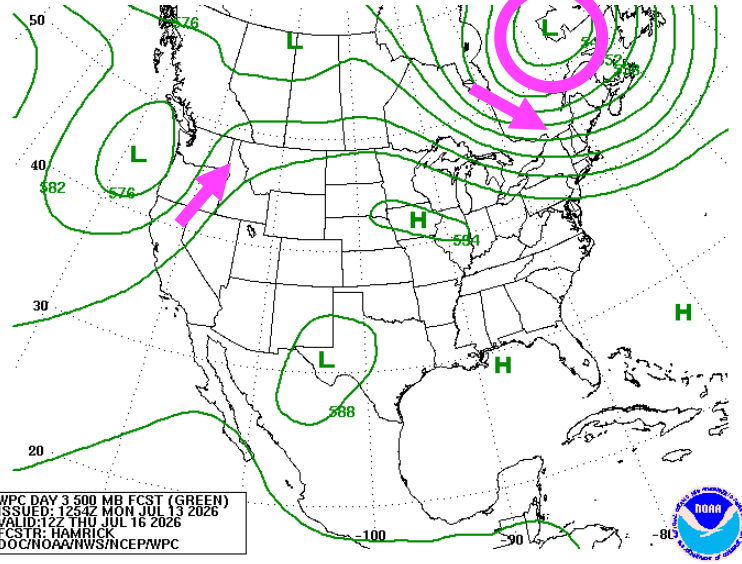


Canada MSC AniMET

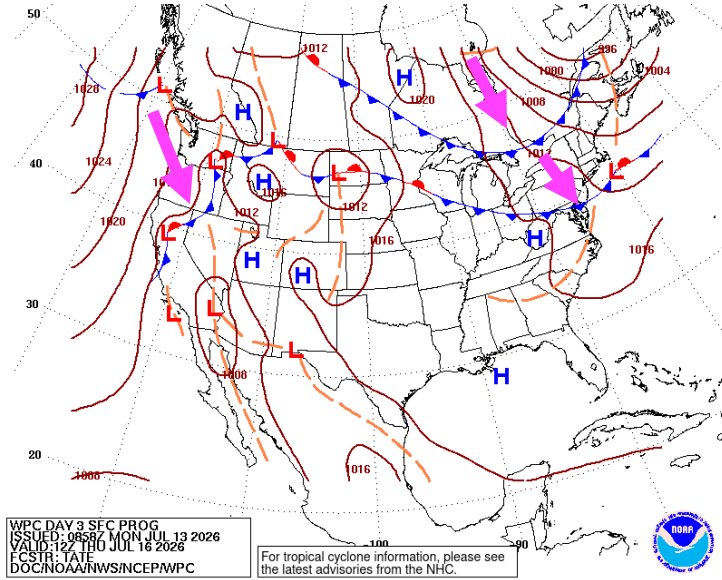


Outlook: Medium Range

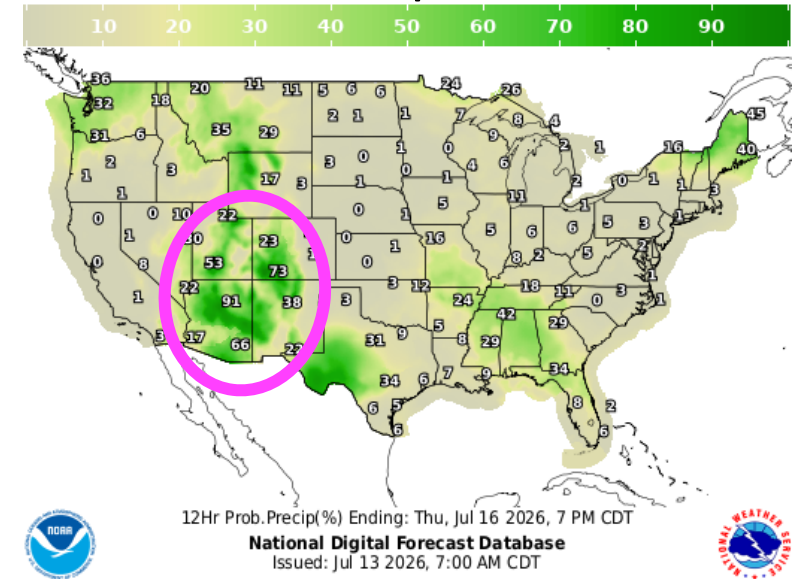
500 mb Contours



Sea Level

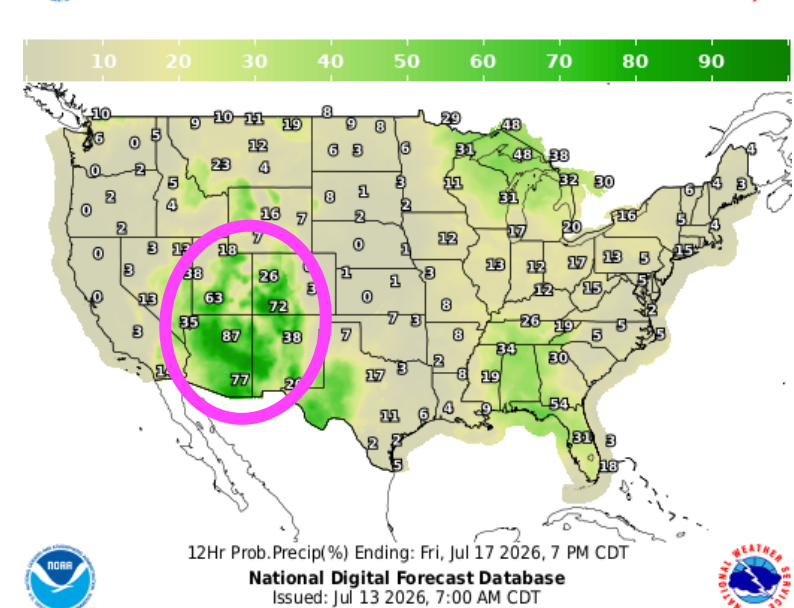
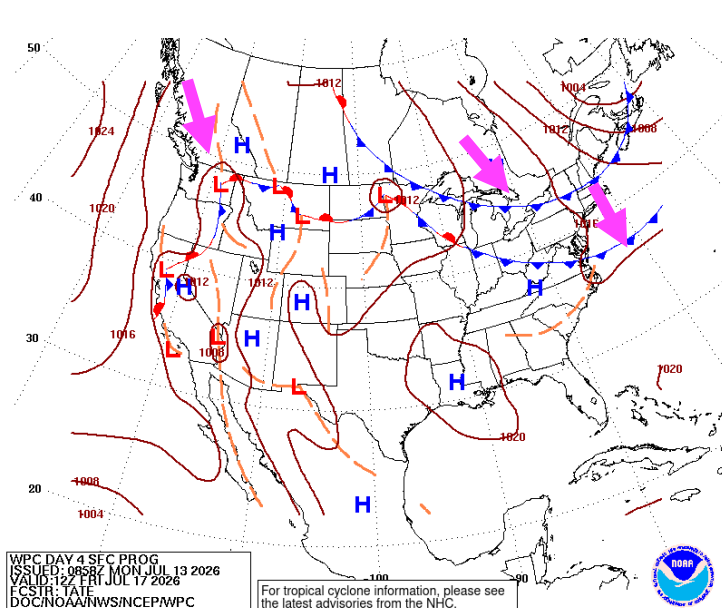
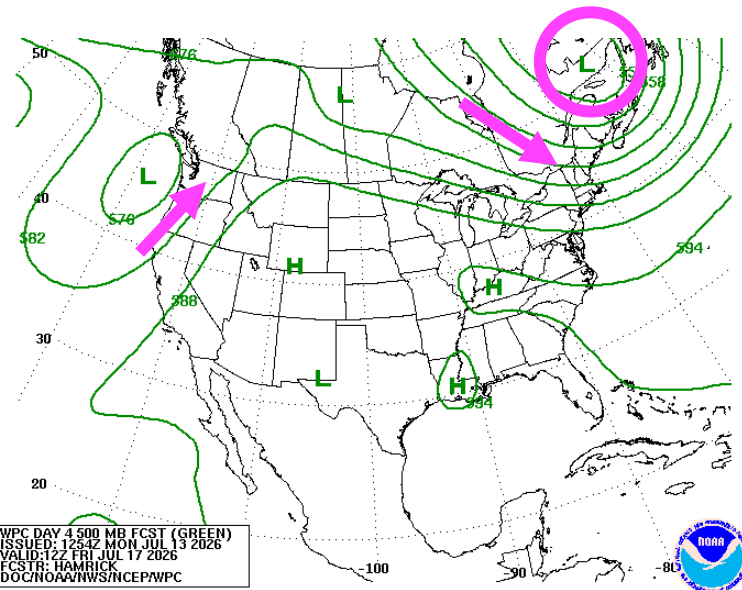


Precip Prob.



Thurs
7/16

Friday
7/17



Summary

Monday : Aged wildfire smoke potentially contributing to the moderate AQI in the upper Midwest, Northeastern and pockets of the Western US. Active wildfires in the Northwest Territories and Quebec Canada.

T → W : Wildfire smoke from Western US fires (CA, OR) reaching the upper atmosphere will have northerly transport along the 500mb high pressure. NT and QC Canada wildfire smoke will be transported easterly towards the Northeast US along a strong low pressure at 500 mb and behind a surface cold front.

Th → F: Little change in the upper atmosphere conditions, stable high over the US and strong low pressure over QC/NL Canada. Smoke transport towards Northeastern US will continue, coupled with surface high pressure following the cold front.

