

Weather and Air Quality: Reflection and Outlook During Smoke Conditions

Presenter: Megan Christiansen
Date: July 15, 2024

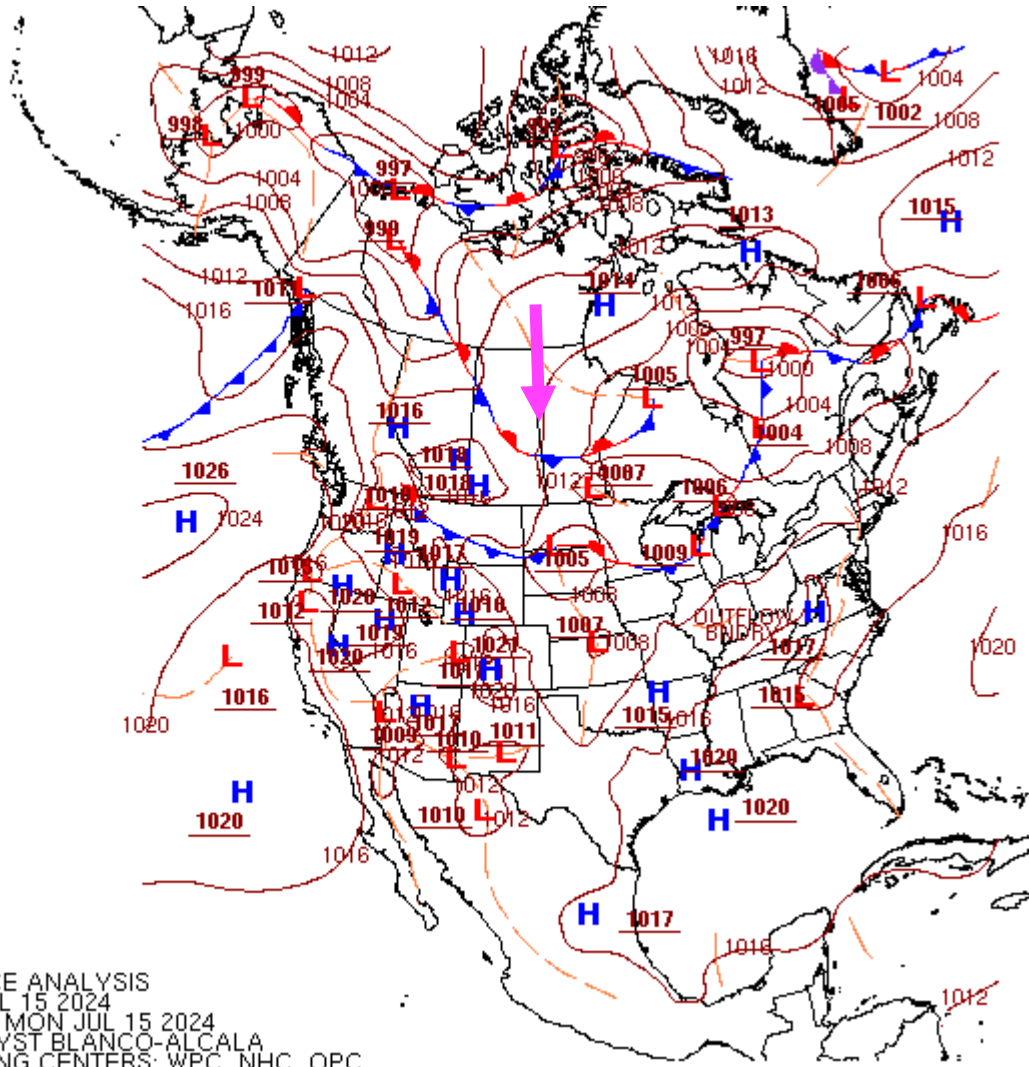


FireAQ is funded by NASA HAQ. We thank NASA GMAO and
NRL for the model data products.

EARTH SCIENCE
APPLIED SCIENCES

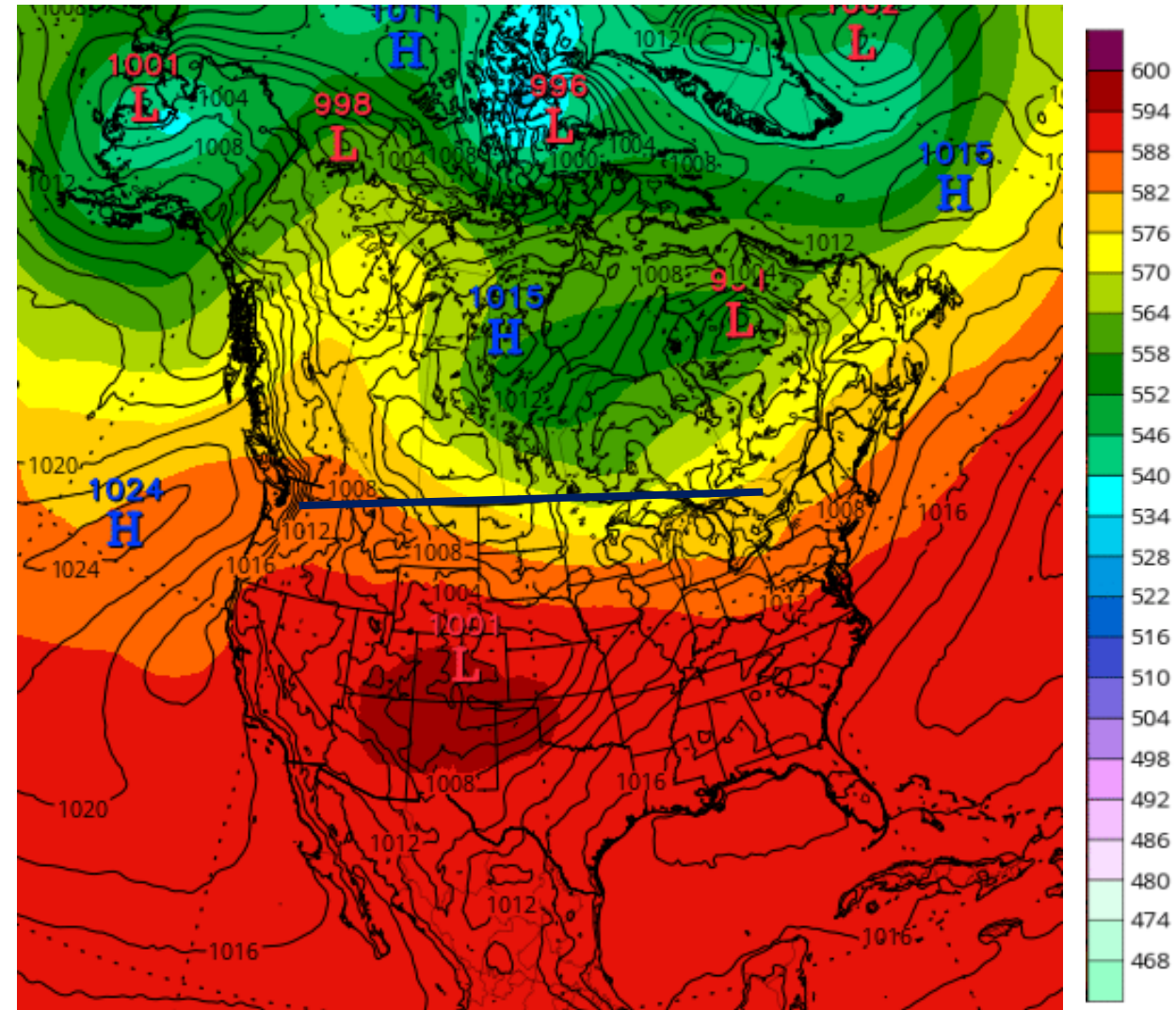
Current Status: July 15, 2024

Surface Analysis



0900Z SURFACE ANALYSIS
DATE: MON JUL 15 2024
ISSUED: 1026Z MON JUL 15 2024
BY WPC ANALYST BLANCO-ALCALA
COLLABORATING CENTERS: WPC, NHC, OPC

500 mb Contours

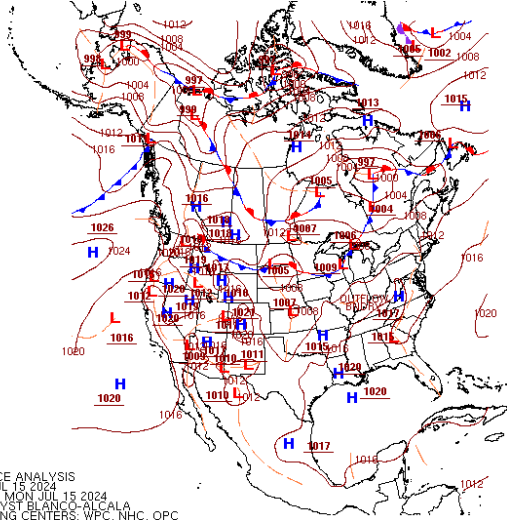


GFS 500mb Geopotential Height (dam) & MSLP (mb)

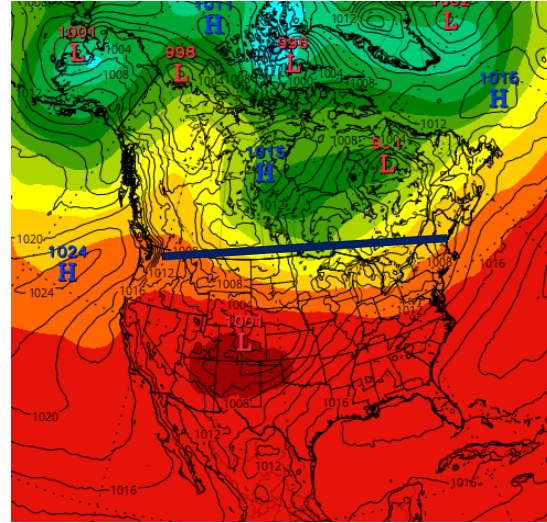
Init: 06z Jul 15 2024 Forecast Hour: 121 valid at 18z Mon. Jul 15 2024

Current Status: July 15, 2024

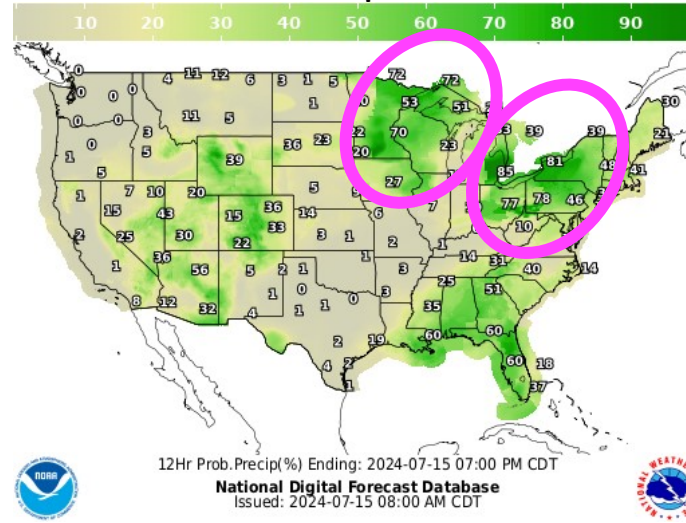
Surface Analysis



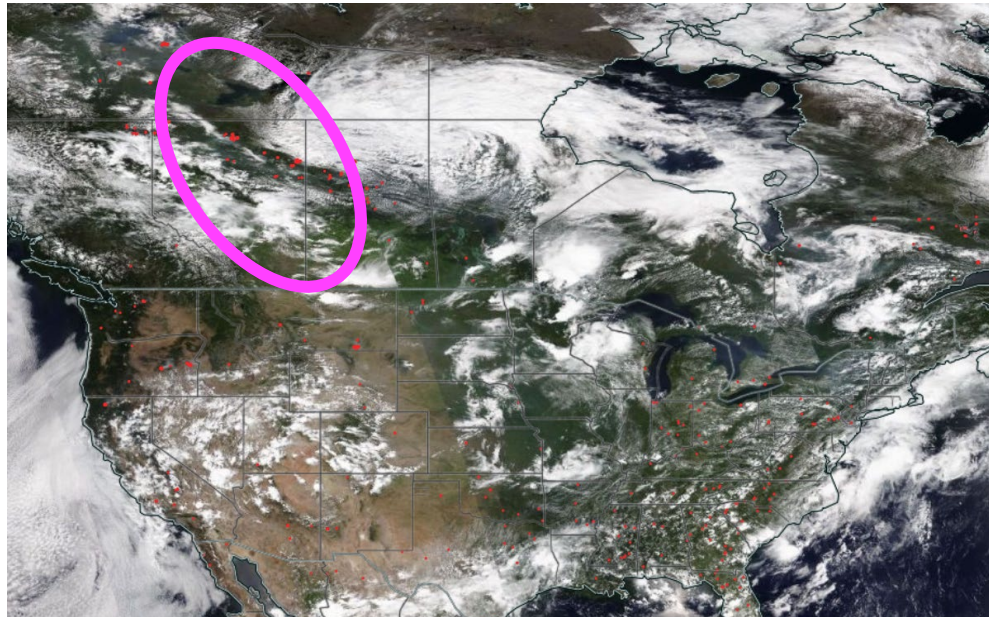
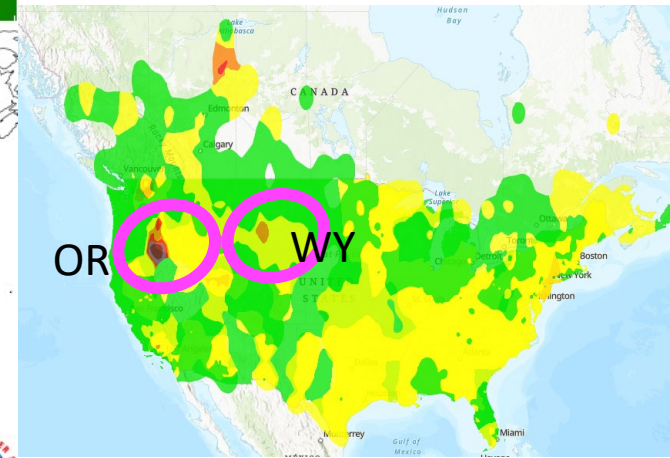
500 mb Contours



Precip. Prob.

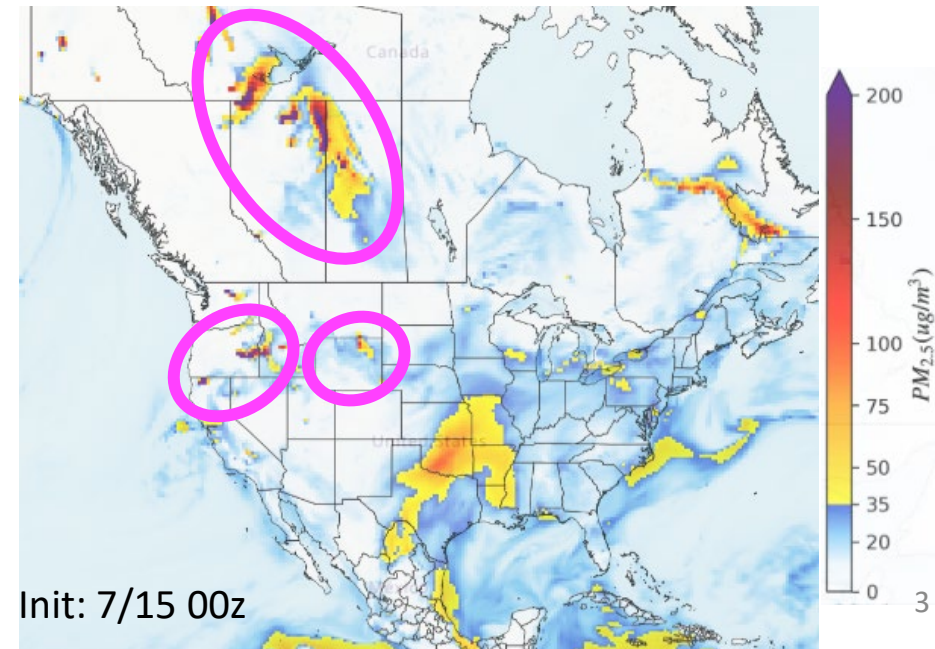


AirNow PM_{2.5} AQI



Sun 7/14

GEOS-FP 7/15 16 UTC PM_{2.5}

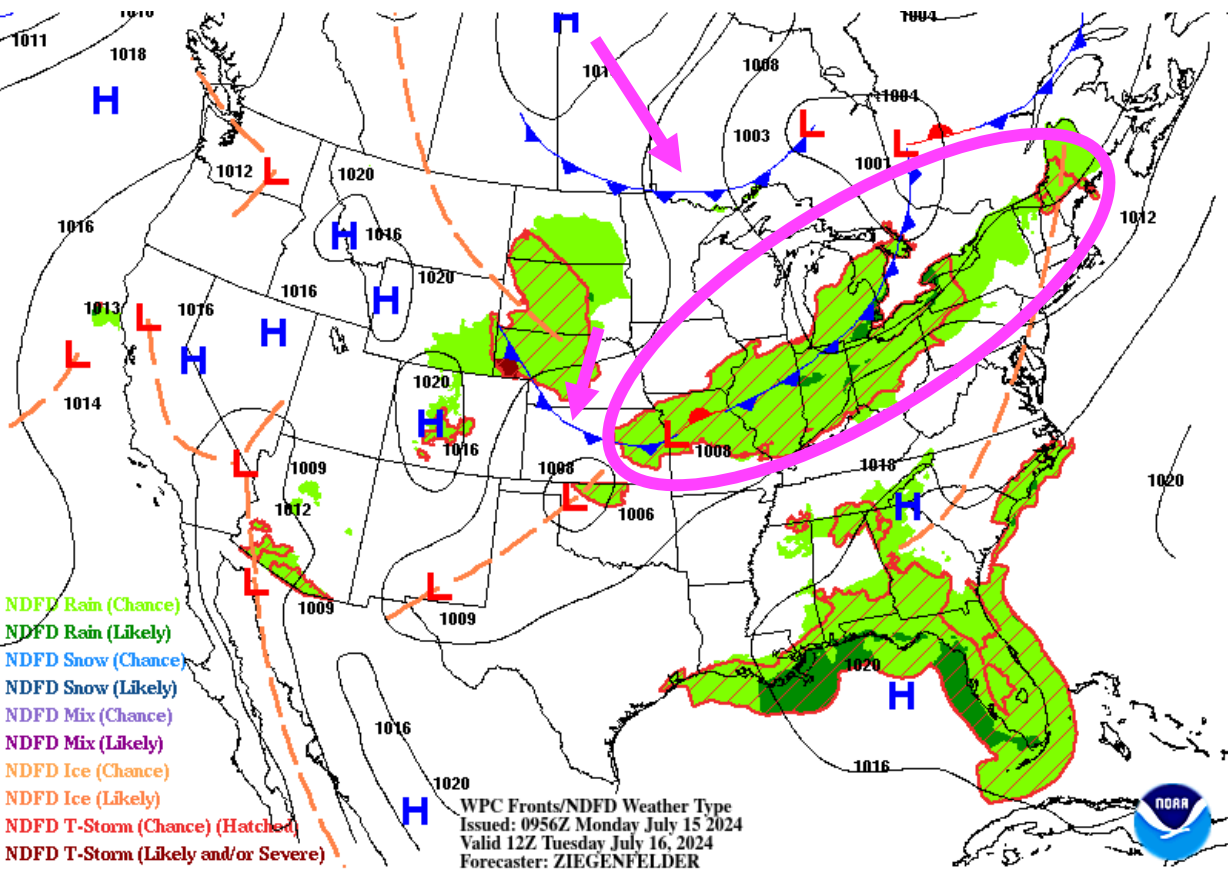


VIIRS NOAA 20 True Color: <https://worldview.earthdata.nasa.gov>

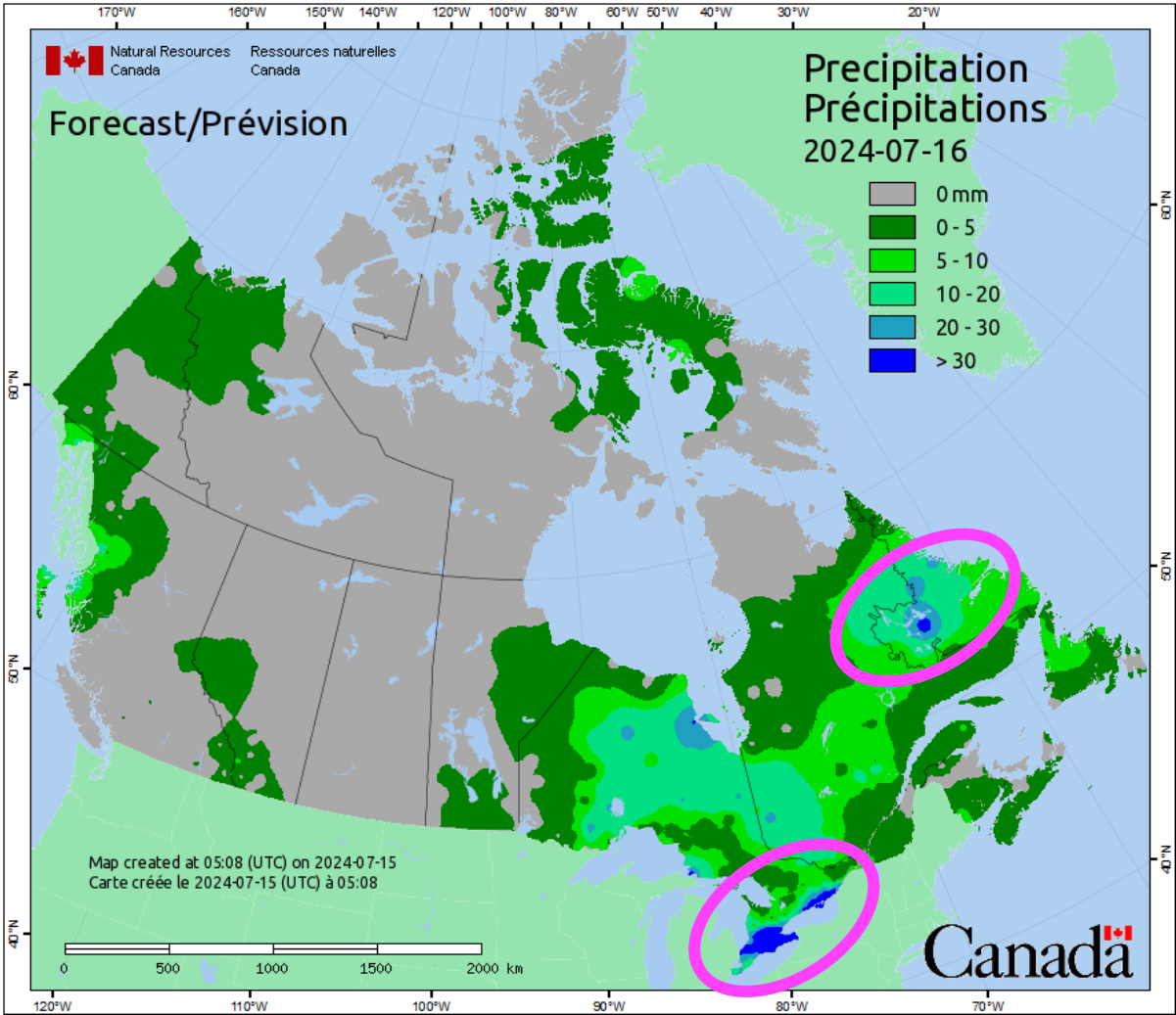
Outlook: Short Range (1-3 days)

Surface Forecast (Tuesday 7/16)

US NWS Forecast

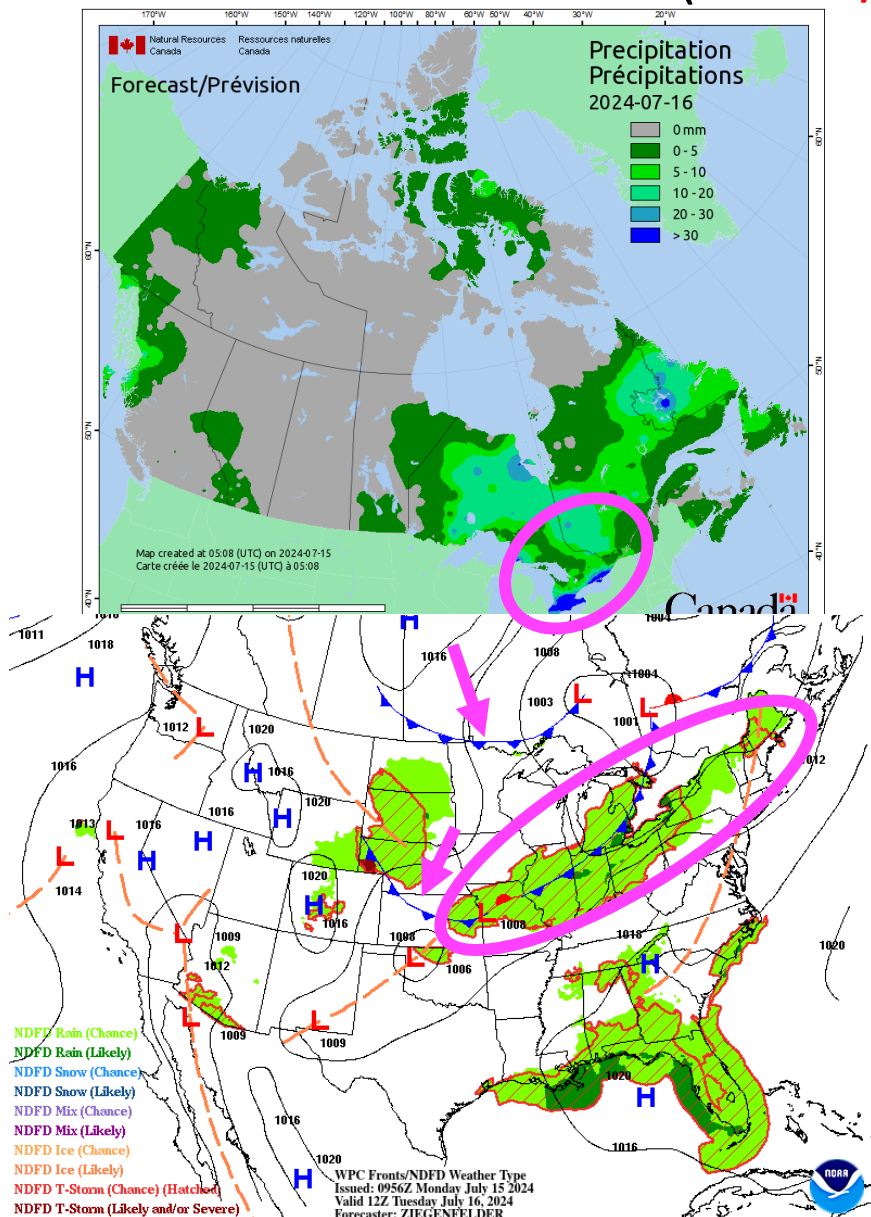


Environment Canada Forecast

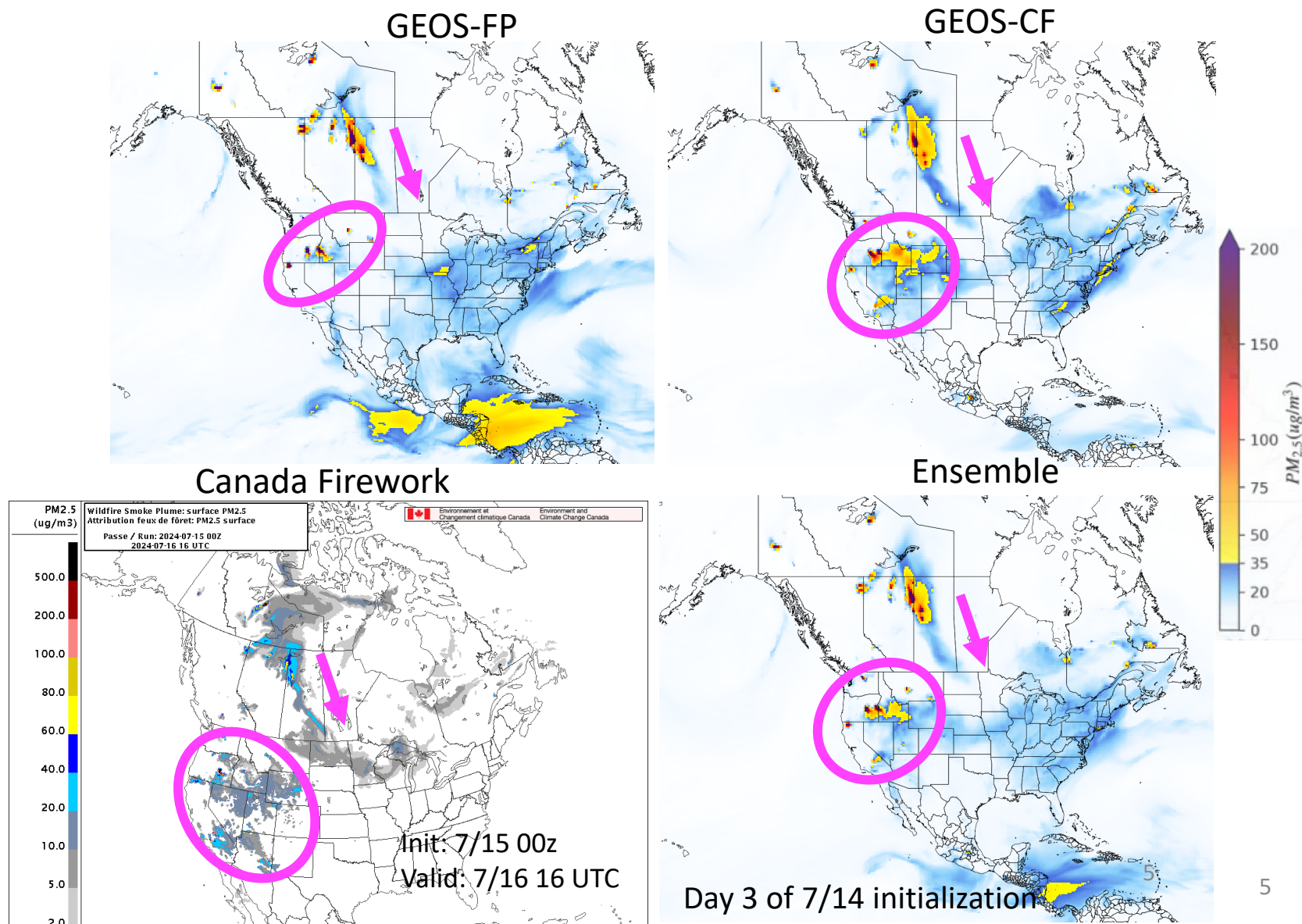


Outlook: Short Range (1–3 days)

Surface Forecast (Tues 7/16)



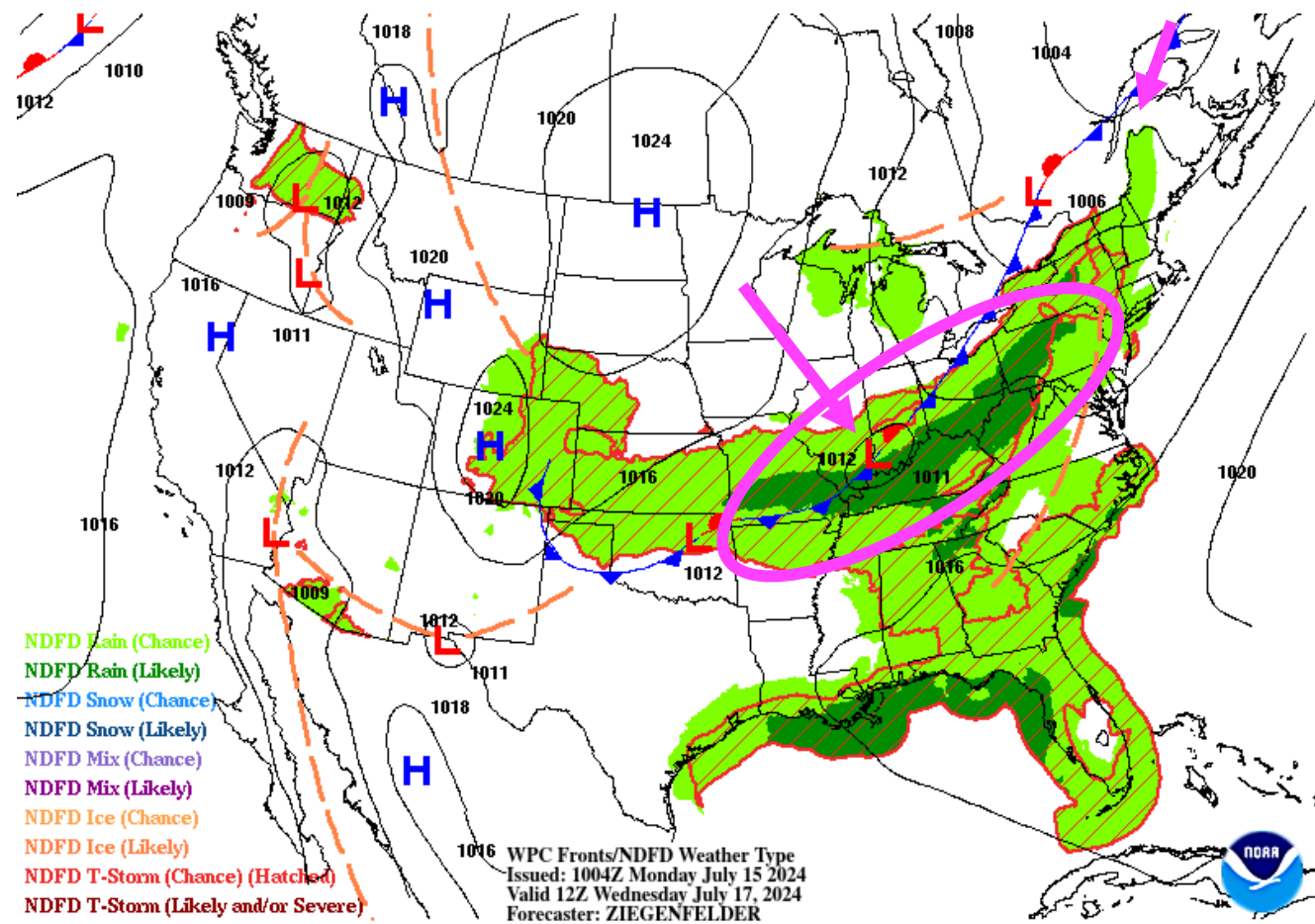
Model Means PM_{2.5} (Tues 7/16)



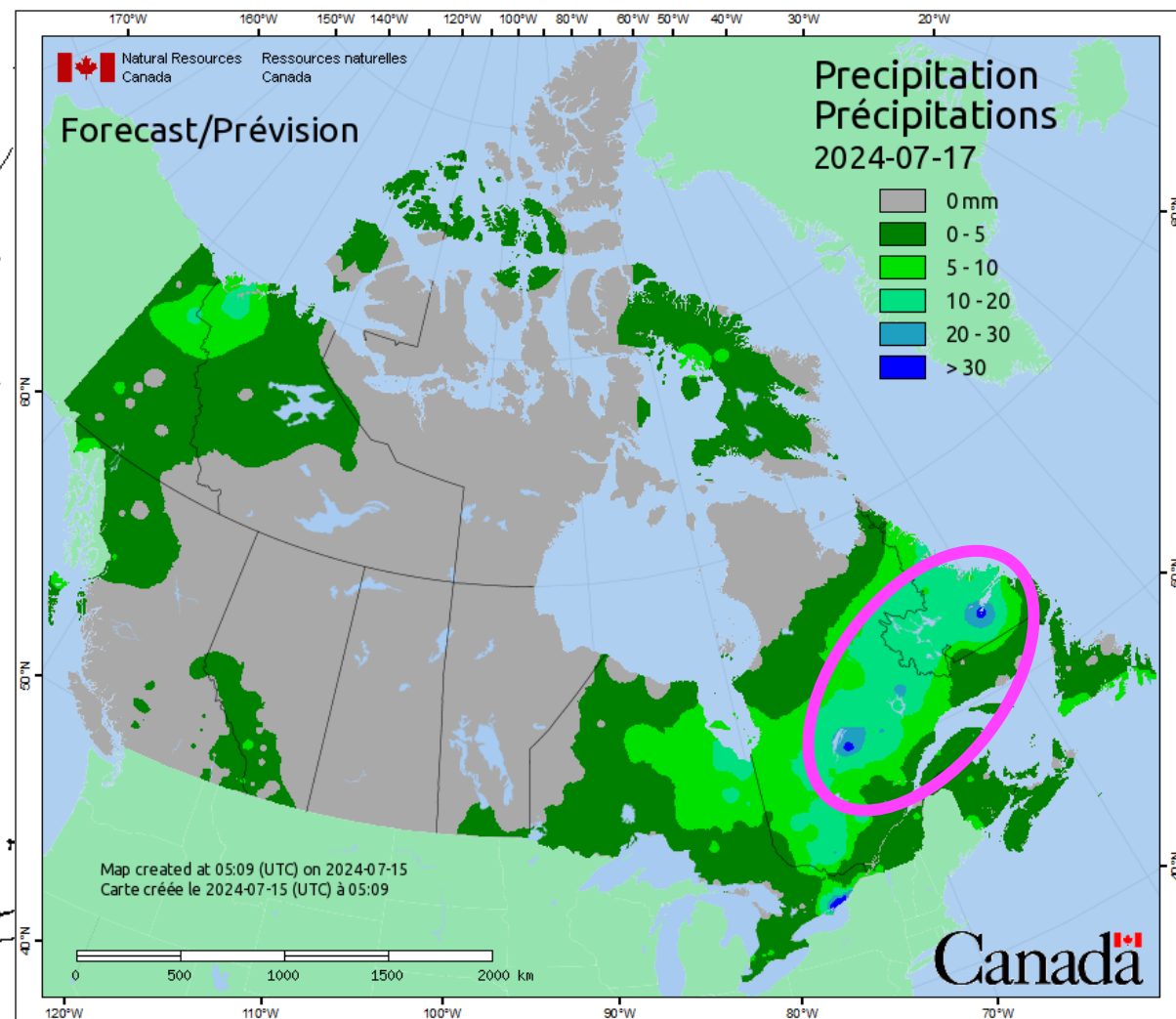
Outlook: Short Range (1-3 days)

Surface Forecast (**Wednesday 7/17**)

US NWS Forecast



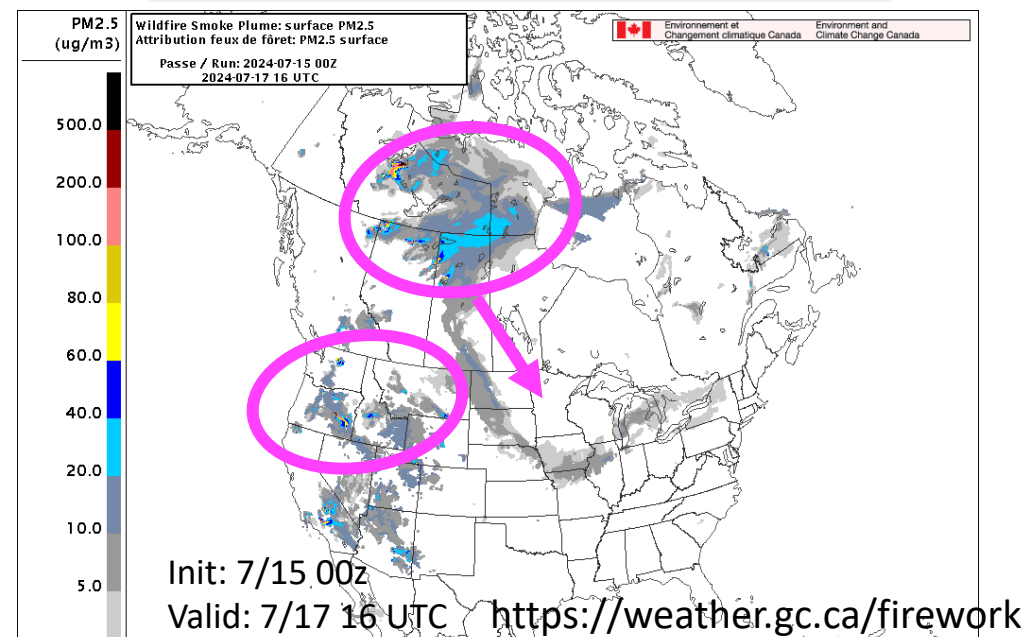
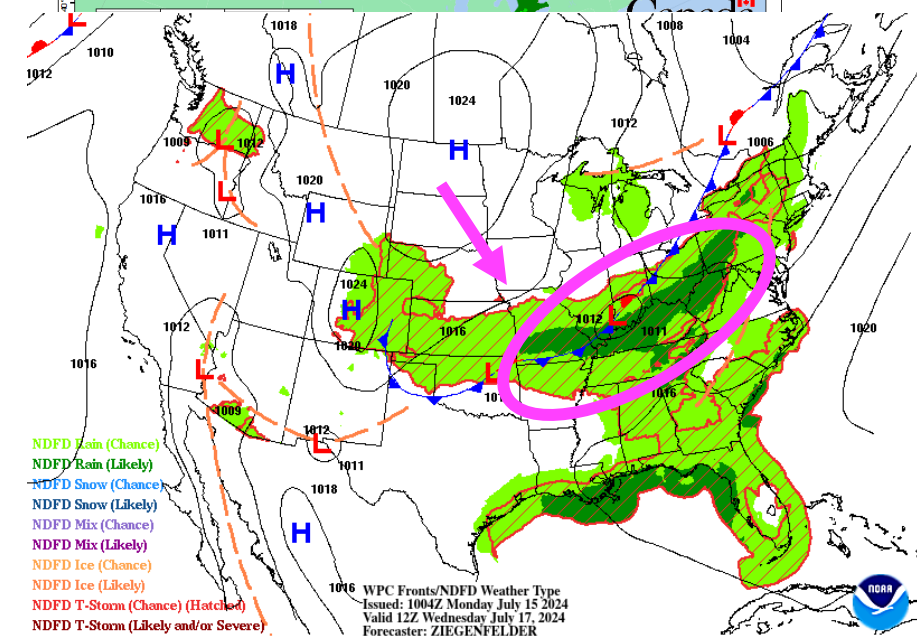
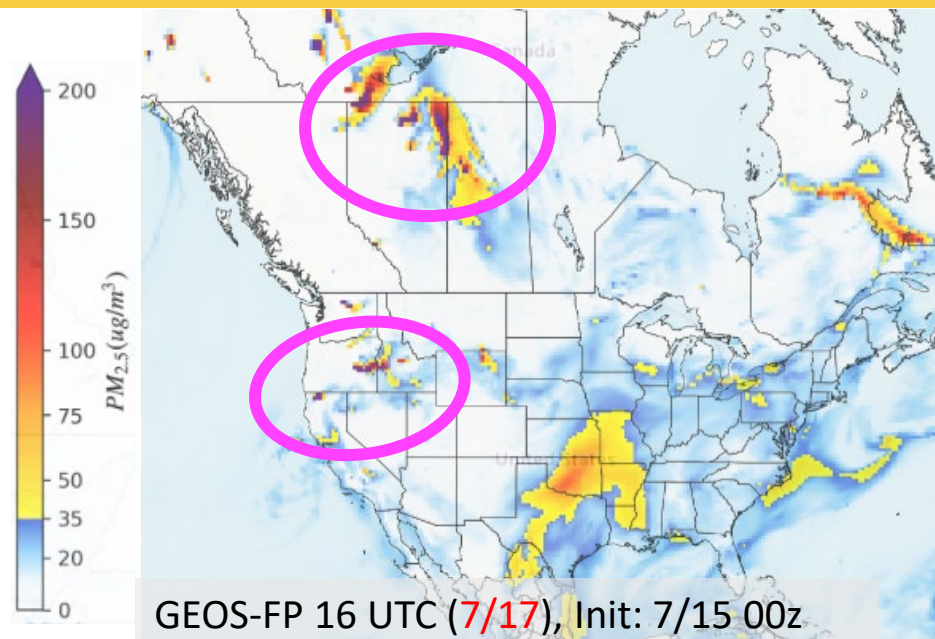
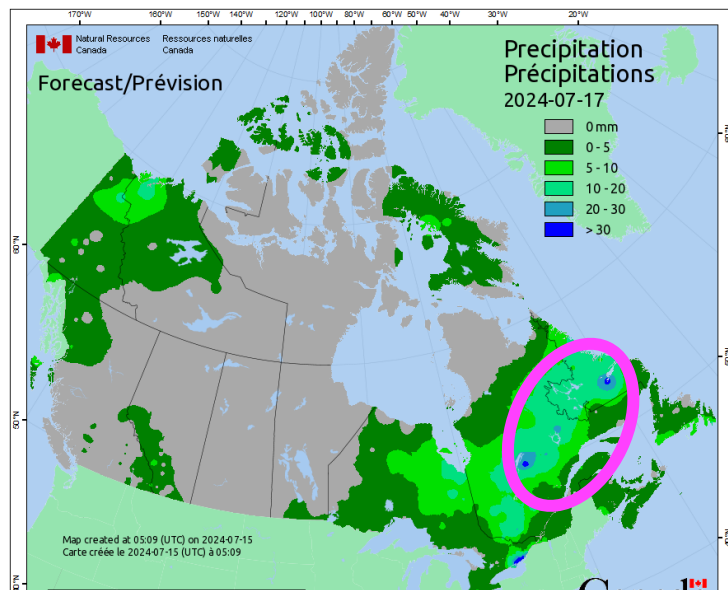
Environment Canada Forecast



Outlook: Short Range (1–3 days)

Surface Forecast

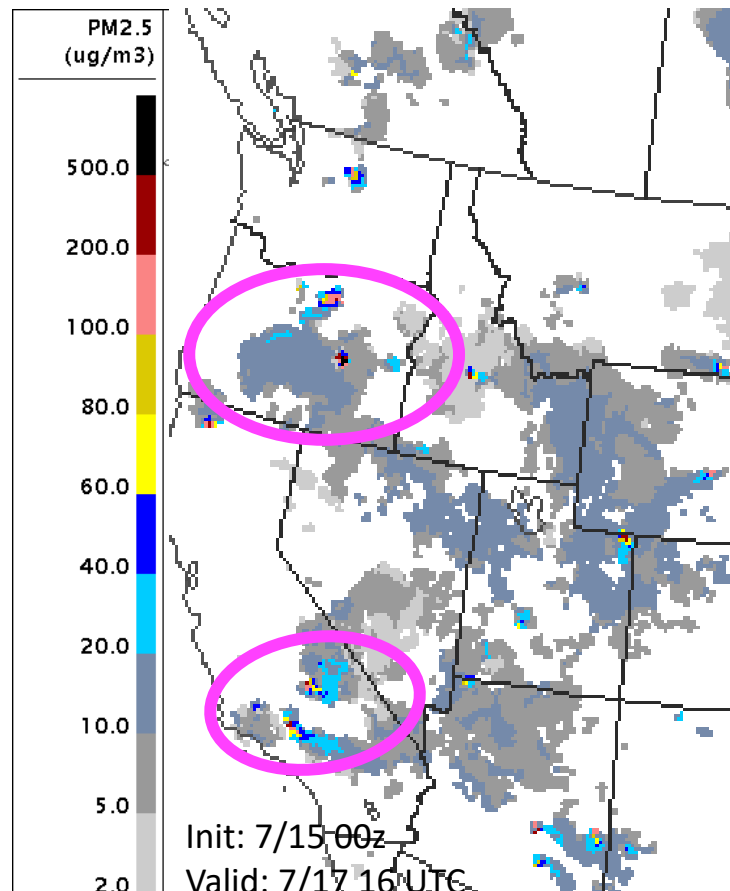
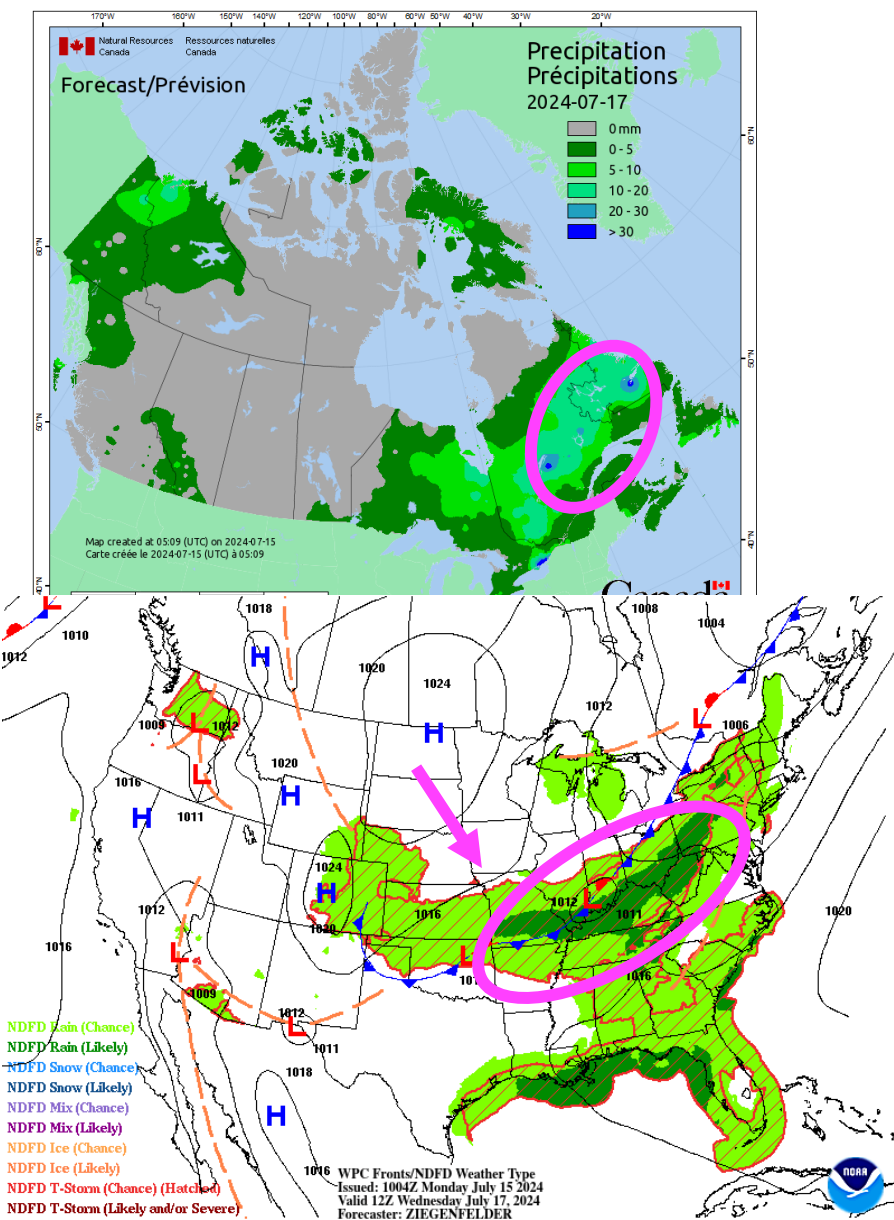
(Wednesday 7/17)



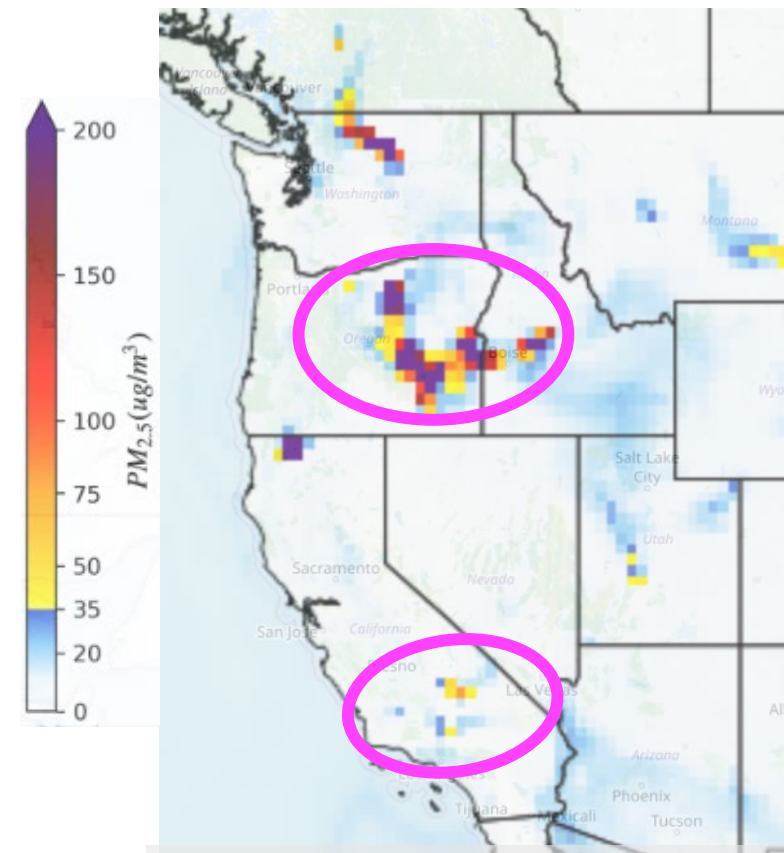
Outlook: Short Range (1–3 days)

Surface Forecast

(Wednesday 7/17)

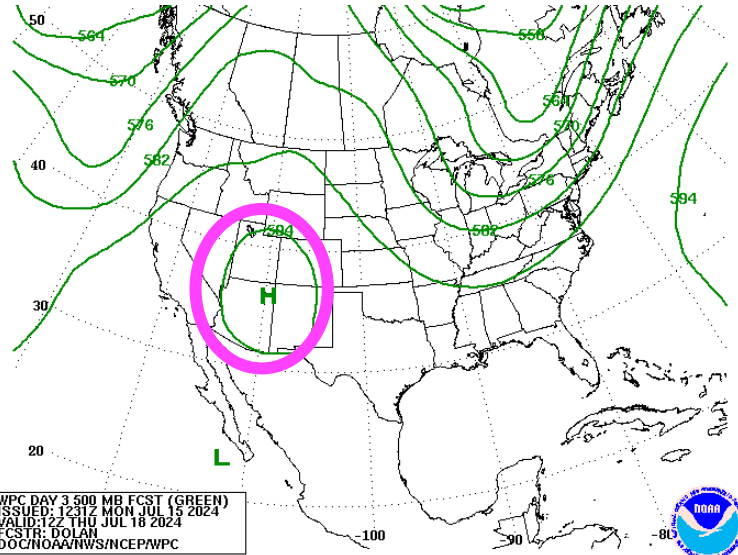


<https://weather.gc.ca/firework>

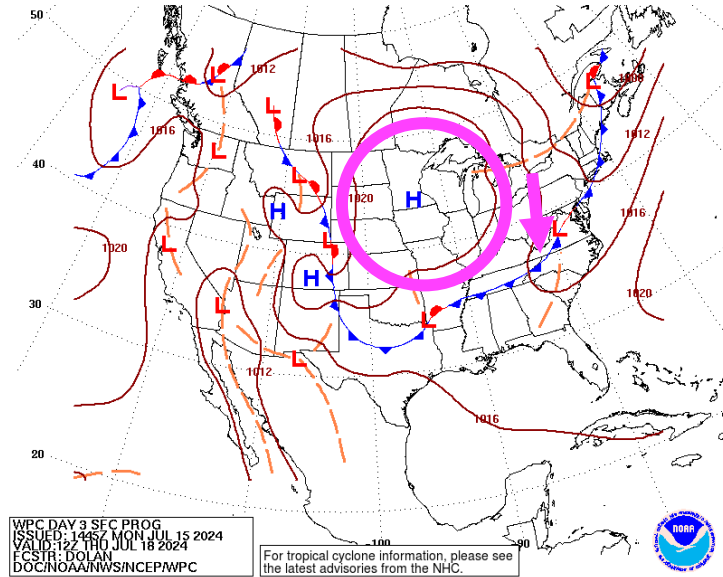


Outlook: Medium Range

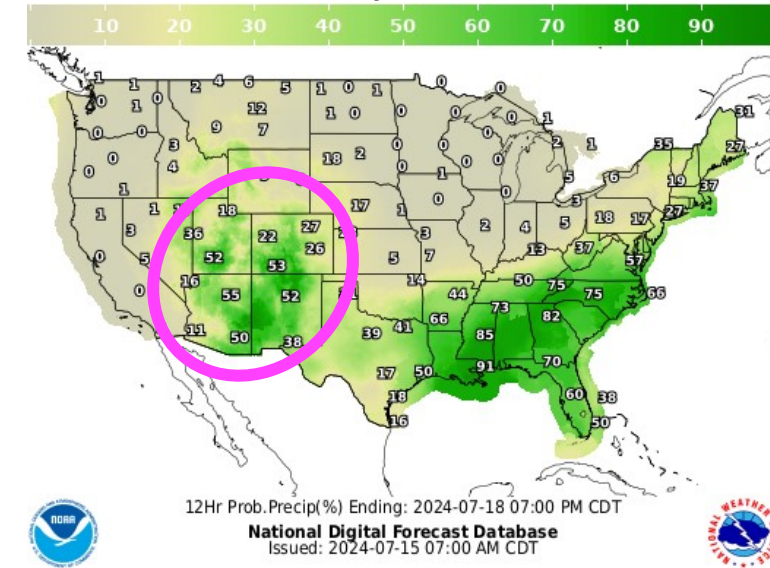
500 hPa Contours



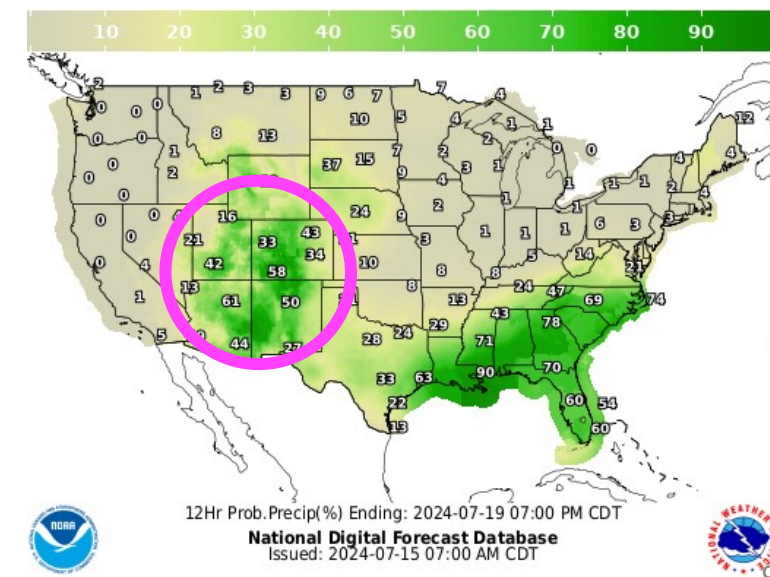
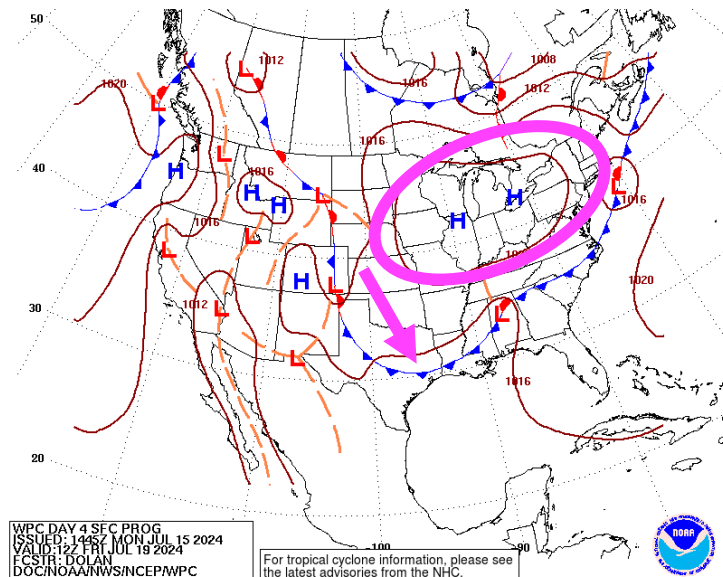
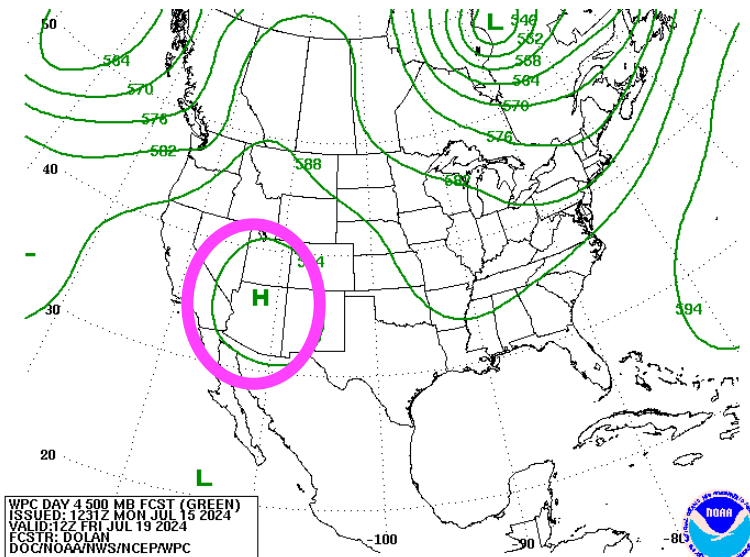
Sea Level



Precip Prob.



Friday
7/19



Summary

Monday : Oregon wildfires are impacting air quality in OR, ID, CA. Moderate PM2.5 AQI in much of southern/eastern US, but not related to wildfire smoke.

T → W : Likely chances of rain in the Central US. Smoke from Sask. Wildfires are forecasted to impact AQ in the Midwest US behind a cold front further south. OR and CA wildfire smoke continue to impact AQ in western US.

Th → F: Persistent high pressure system aloft over southern US will likely dampen longer range transport of smoke from CA fires. Transport of Sask. wildfire smoke is also likely to continue to the Midwest US, but potentially minimal impact to AQ.

