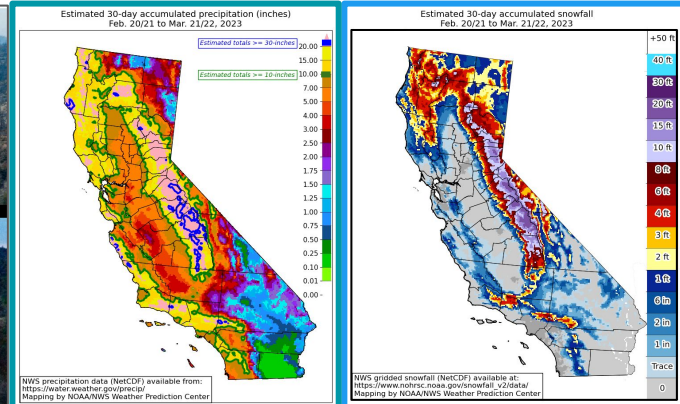
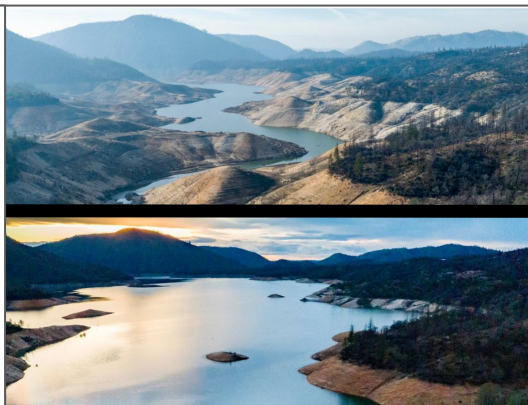
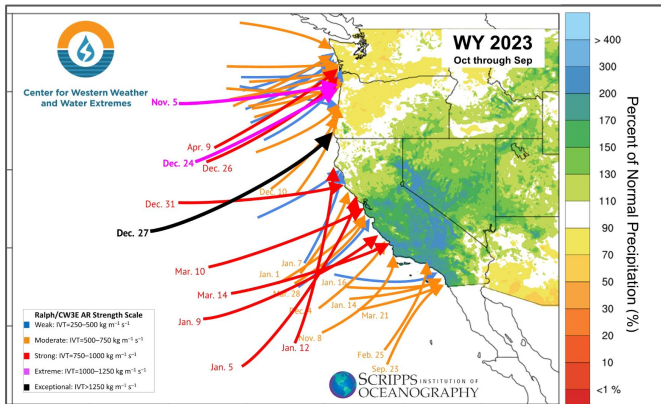


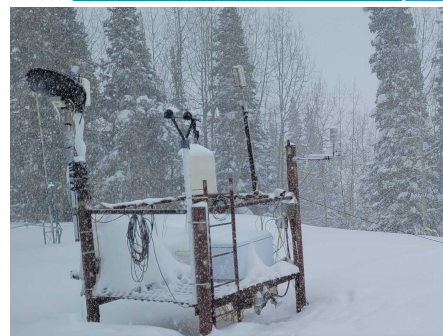
# 2023 Meteorological Memories



Northern Sierra = **282%** percent of average  
Central Sierra = **320%** percent of average  
Southern Sierra = **442%** percent of average



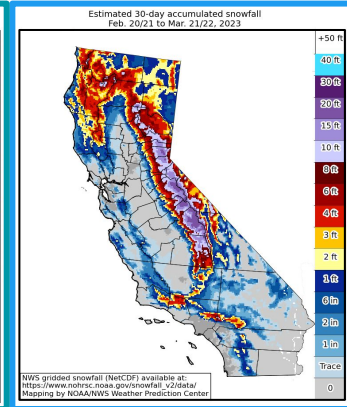
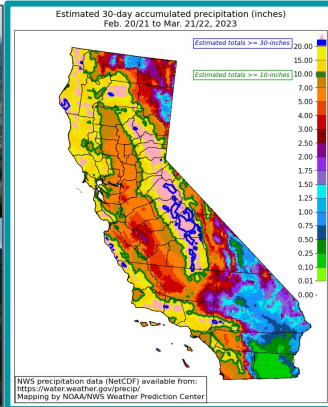
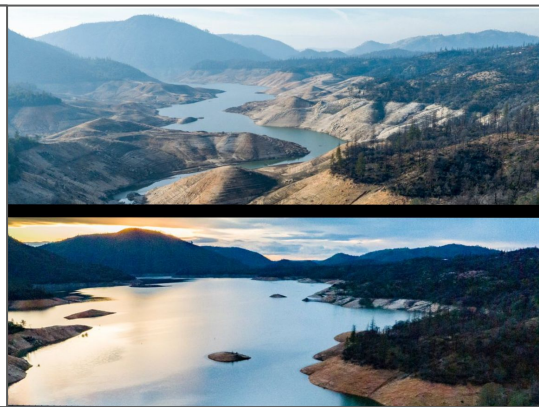
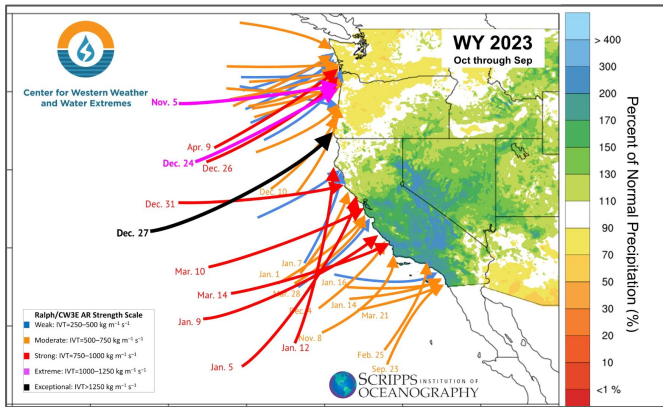
By Greg Carbin



**Alta Ski Area** recorded its first snow on October 22nd and averaged 4.7 inches of snow per day through April 30th. The 903 inches of snow was the most snow recorded at the Collins Study Plot—topping the previous record of 748 inches from the 1981–82 season by 155 inches.

- **Snowiest season on record: 903 inches**
- **Deepest settled snow depth: 248 inches**
- **Single-snowiest month (March 2023): 229 inches**

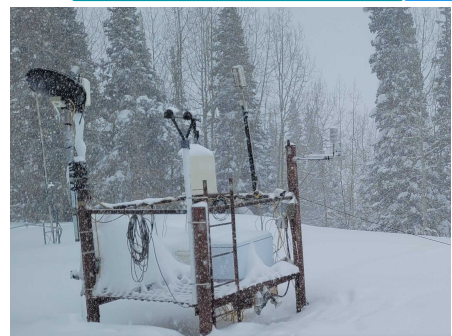
# 1&2) Early 2023 West Coast to Intermountain Wet and White



Northern Sierra = **282%** percent of average  
Central Sierra = **320%** percent of average  
Southern Sierra = **442%** percent of average



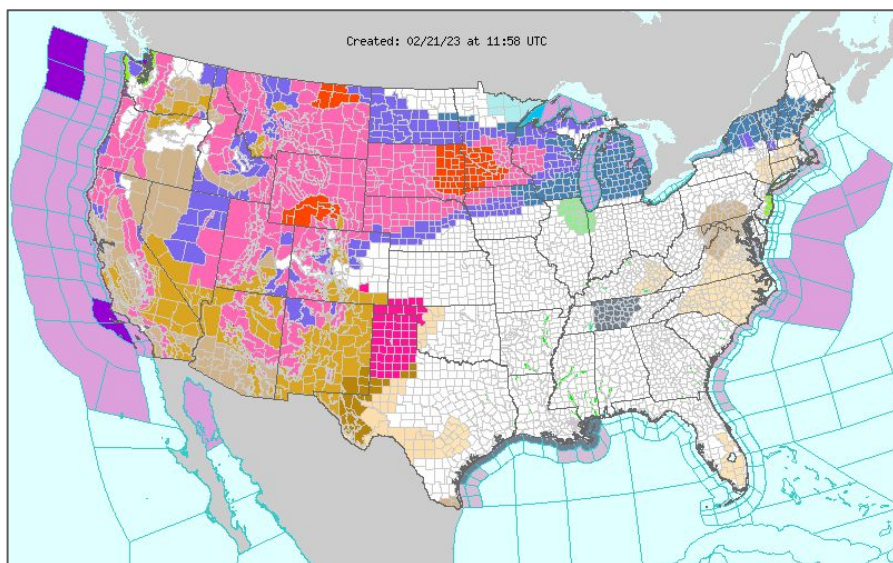
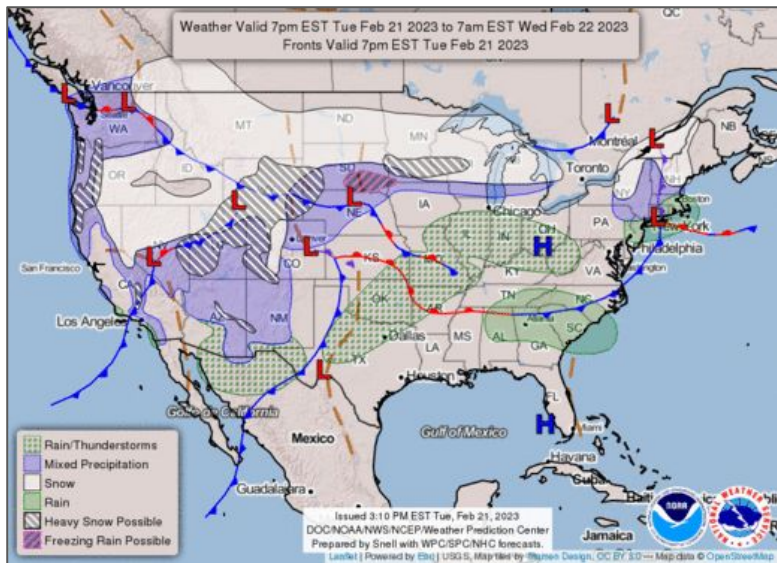
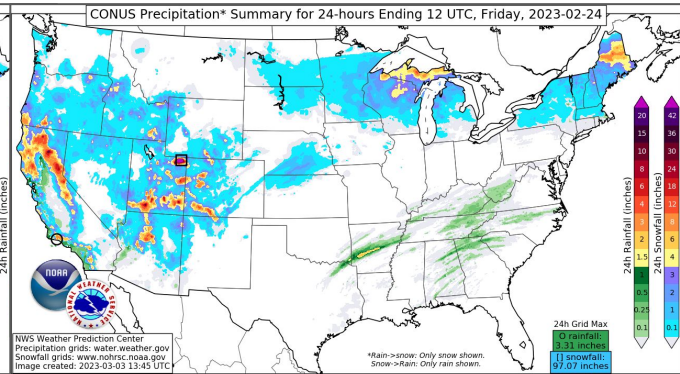
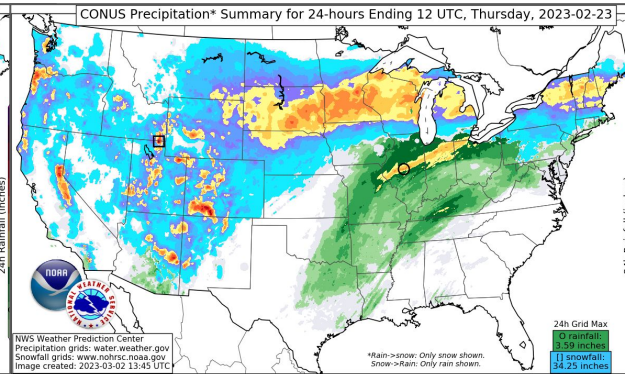
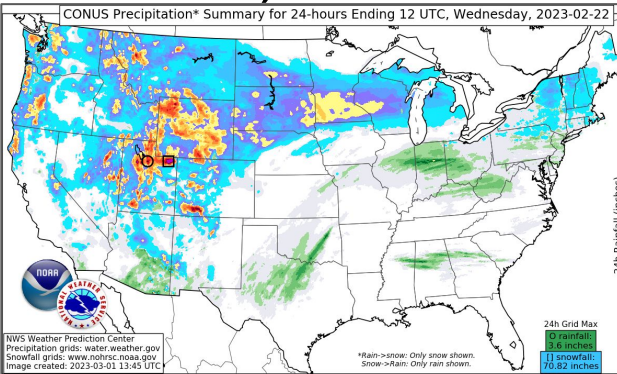
By Greg Carbin



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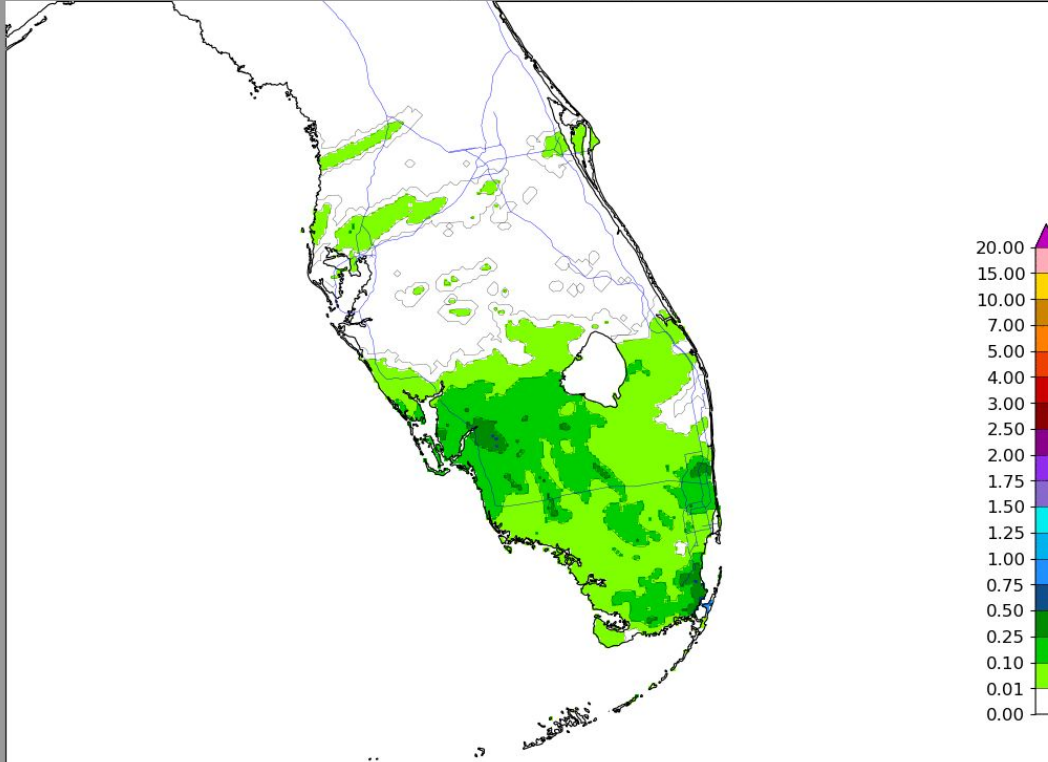
# 3) Coast-to-coast Winter Storm, Feb. 21-23, 2023





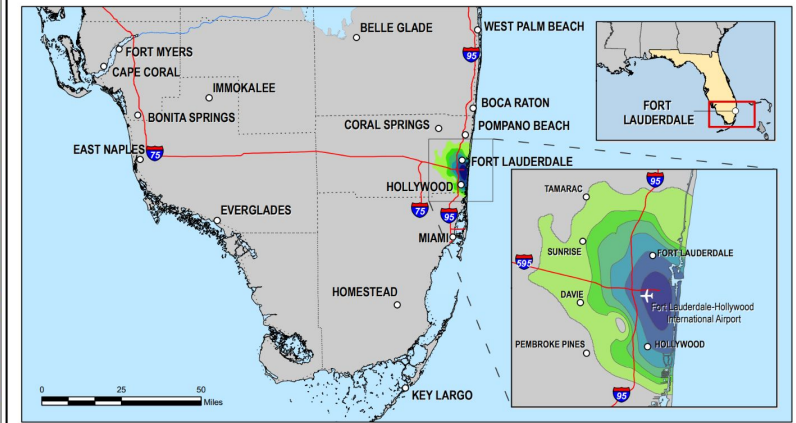
# 4) Fort Lauderdale Flood, April 12, 2023

1 hour ending 15 UTC, Apr. 12, 2023



NWS CONUS RTMA  
Summed Hourly Precipitation (inches)  
Max values may be outside area shown.  
@GCarbin

Max total precip: 0.97"  
Max hourly precip: 3.56"



Fort Lauderdale, Florida, 12 April 2023  
Annual Exceedance Probabilities (AEPs) for the Highest 12-hour Rainfall Period



National Water Center  
Office of Water Prediction, National Weather Service  
National Oceanic and Atmospheric Administration

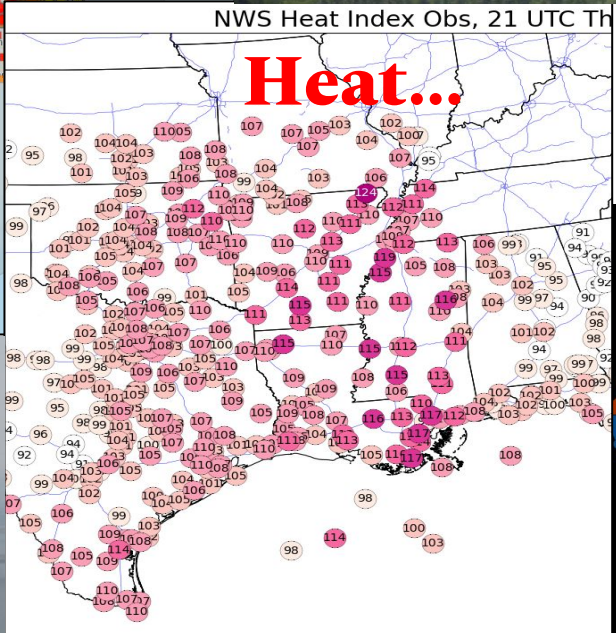
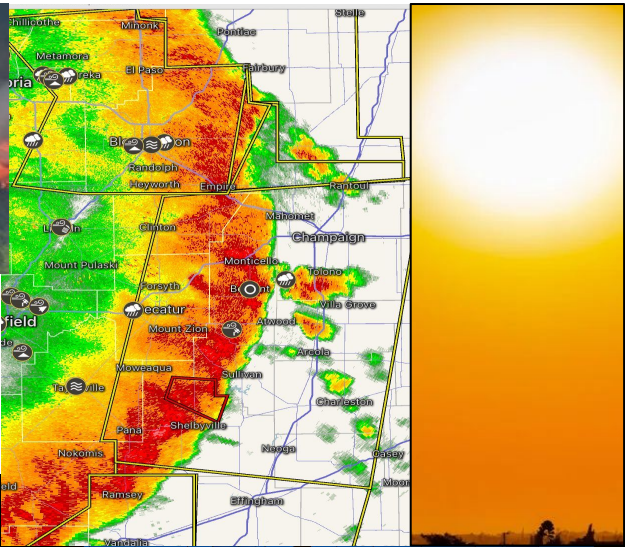
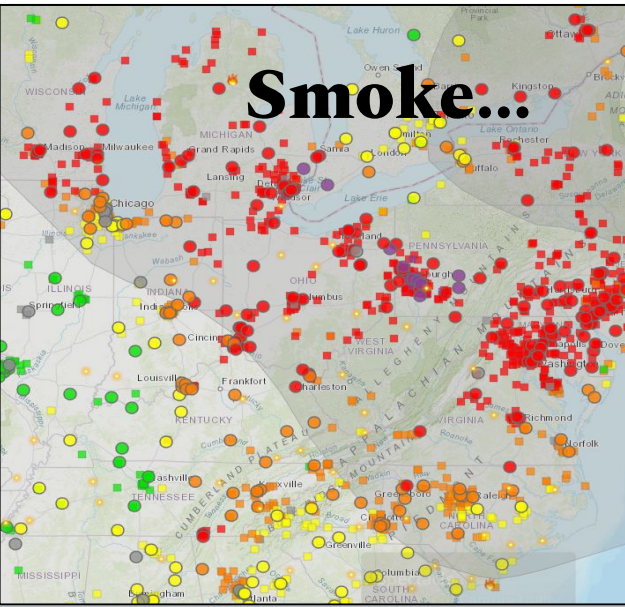
<https://www.weather.gov/owp/hdsc>

Created 13 April 2023  
Precipitation frequency estimates are from NOAA Atlas 14.  
Rainfall values come from 1-hour Stage IV multi-sensor data.

- > 1/10
- 1/50 - 1/10
- 1/100 - 1/50
- 1/200 - 1/100
- 1/500 - 1/200
- 1/1000 - 1/500
- < 1/1000

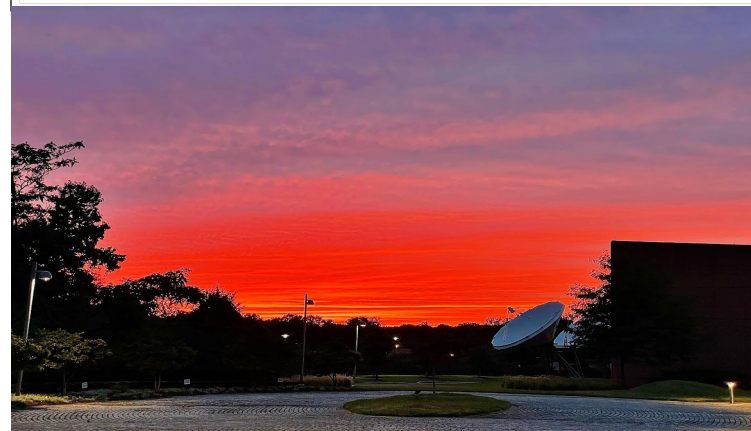
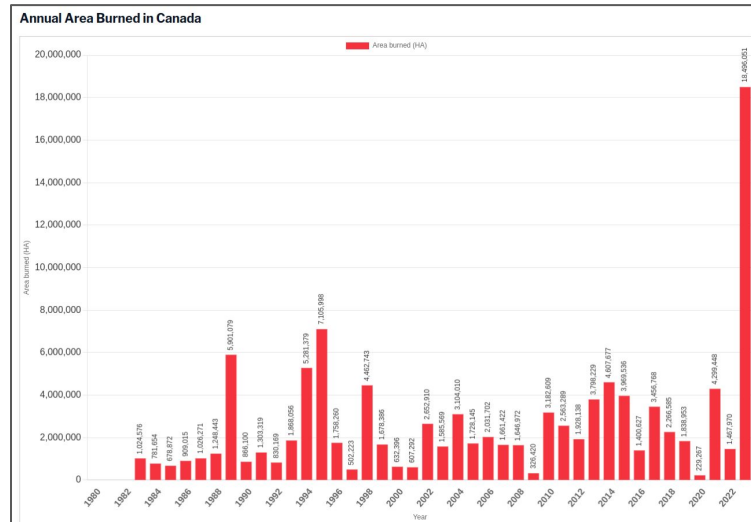
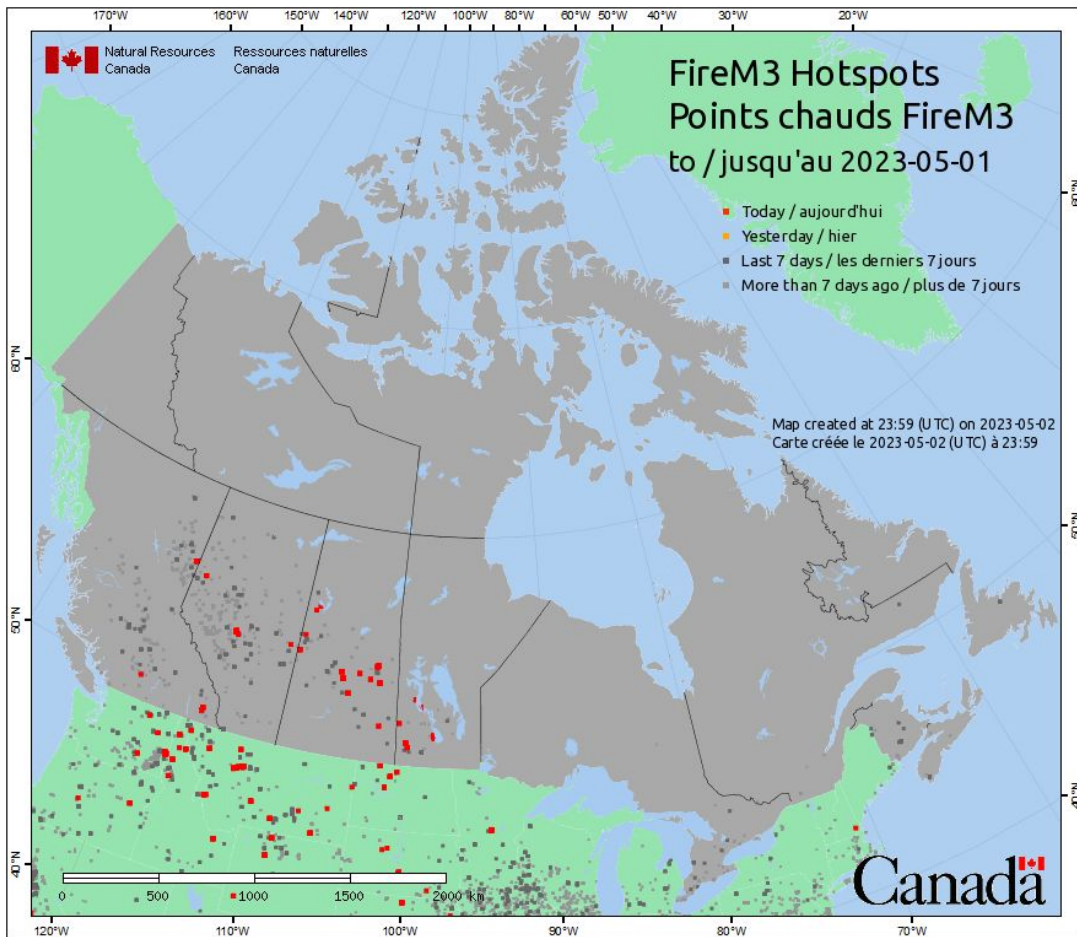


# 5, 6, 7, 8) Smoke, Heat, Wind, Flooding - Spring/Summer 2023



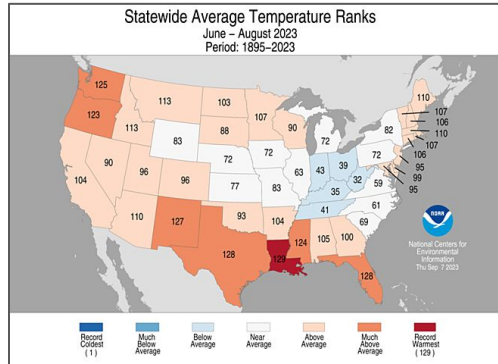
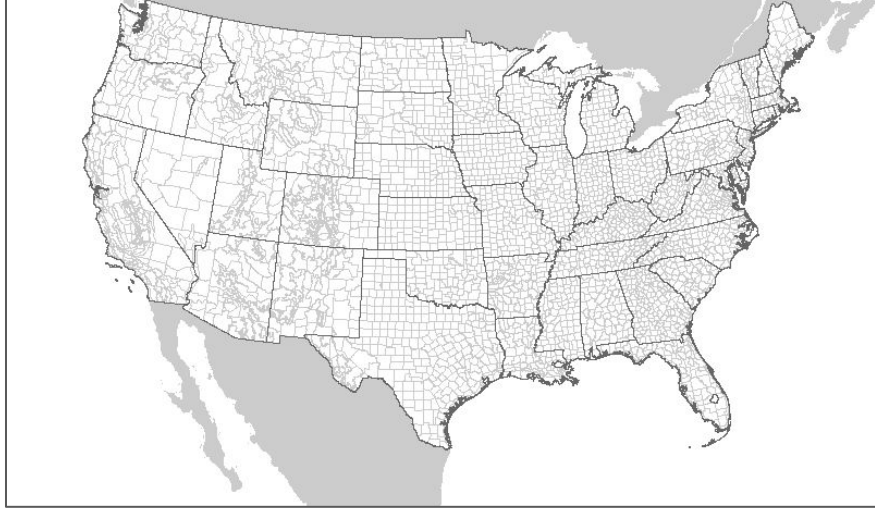
ysis/Mapping@GCarbin  
 Heat Index Calcs:  
[://www.wpc.ncep.noaa.gov/html/heatindex\\_equation.shtml](http://www.wpc.ncep.noaa.gov/html/heatindex_equation.shtml)

# 5) Smoke

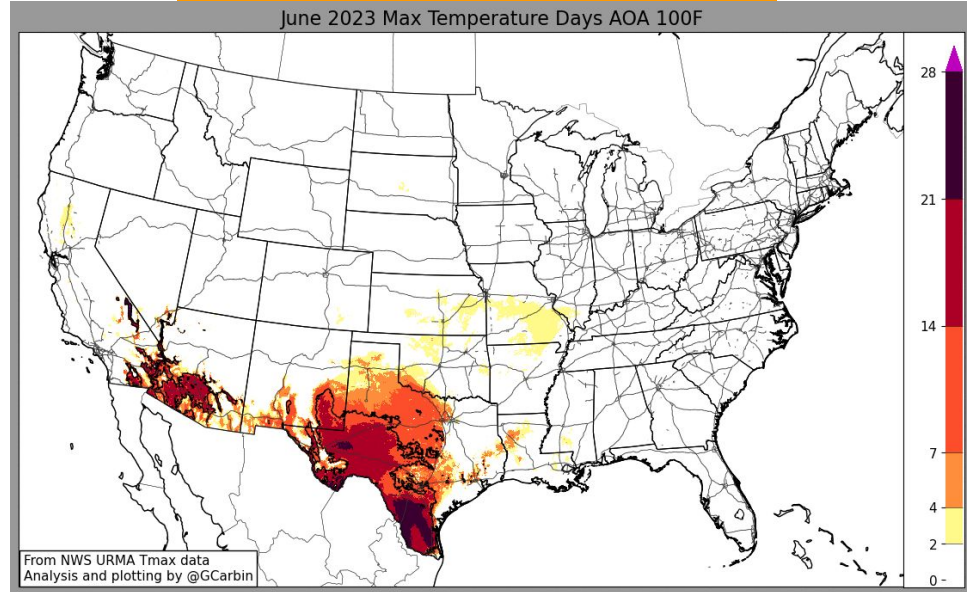


# 6) Heat

## -Daily NWS Heat Headlines June through August-



## Each month, # of days AOA 100F

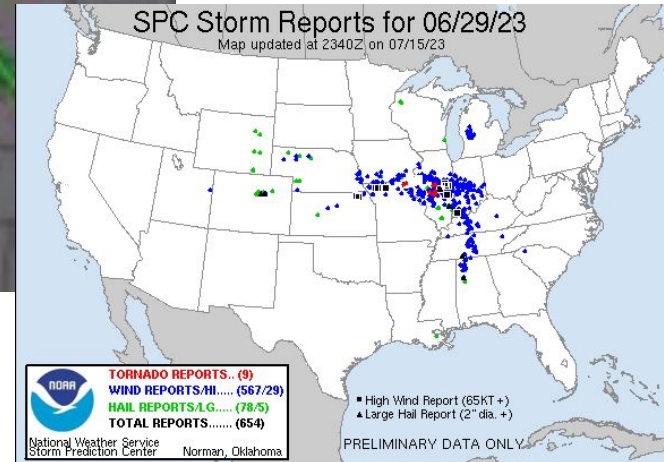




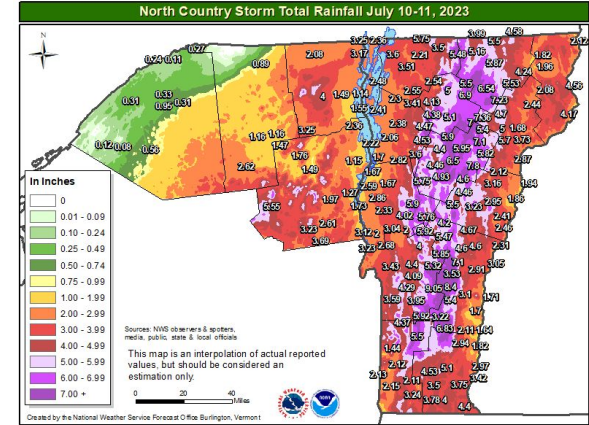
## 8) Midwest Derecho (Wind!)



[https://youtu.be/t1A\\_D6kzjsg](https://youtu.be/t1A_D6kzjsg)



# 7) Vermont Flooding - July 2023

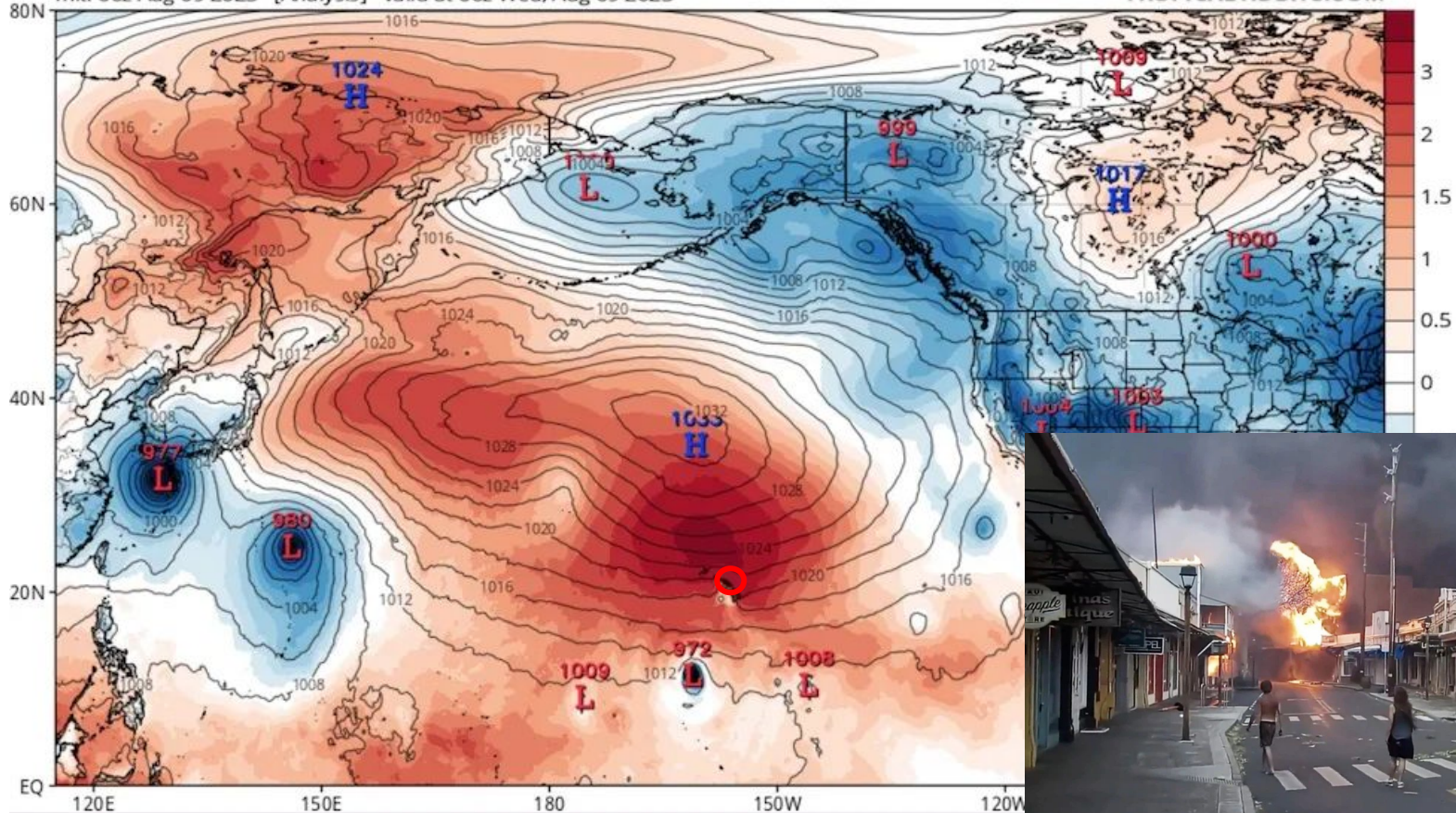


# Lahaina Fire, Hawai'i, August 8-9, 2023

GFS MSLP (mb) & Normalized Anomaly (based on CFSR 1981-2010 Climatology)

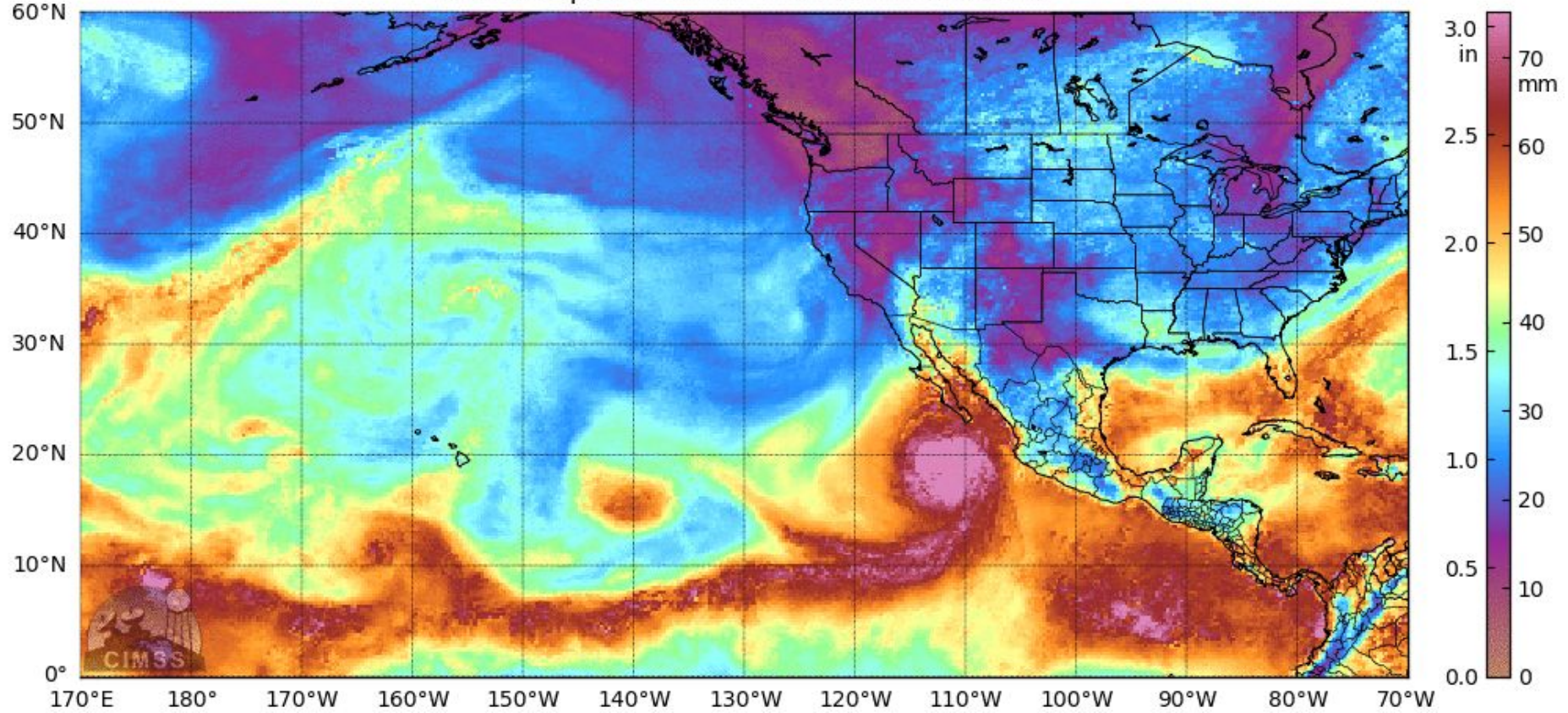
Init: 06z Aug 09 2023 [Analysis] valid at 06z Wed, Aug 09 2023

TROPICALTIDBITS.COM



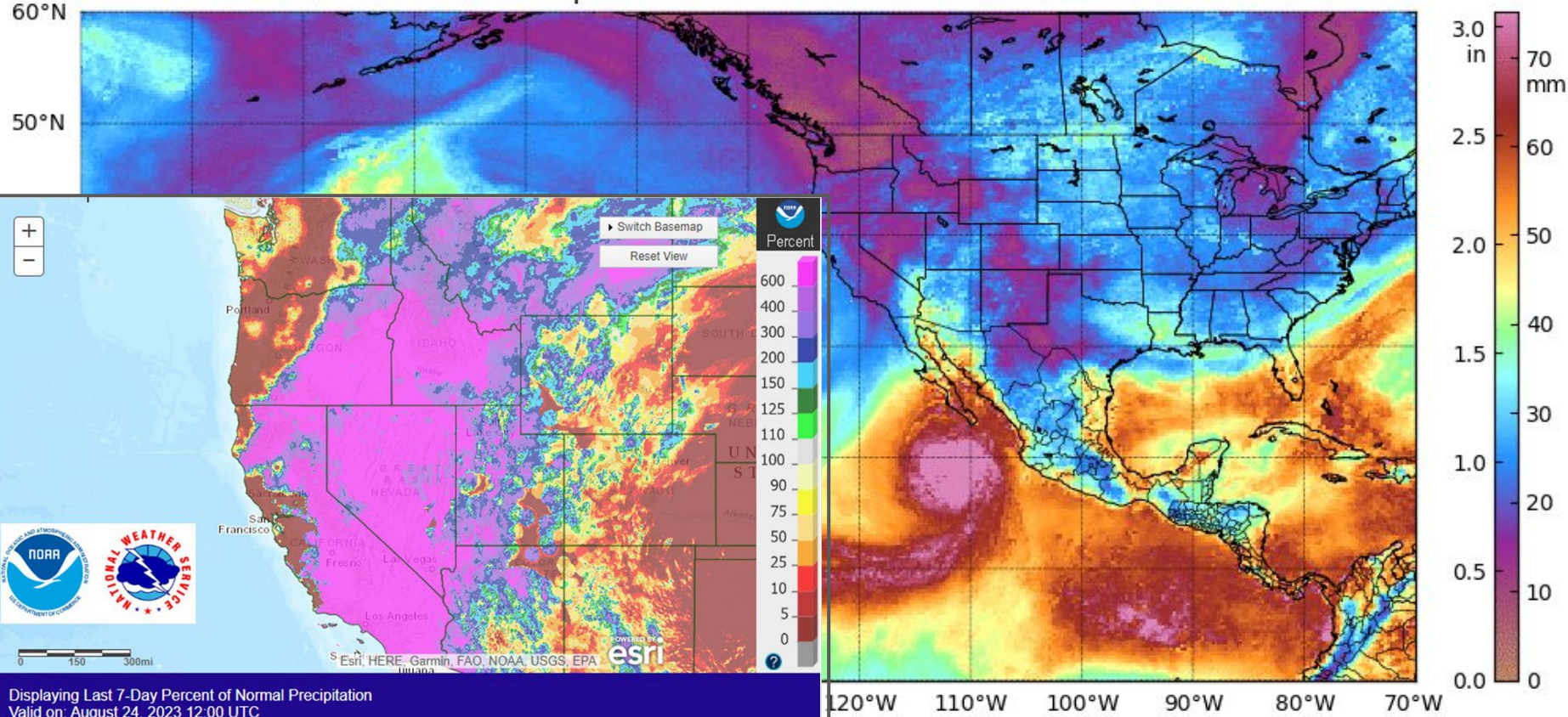
# Hillary, August 21, 2023

Total Precipitable Water 2023-08-19 0000 UTC



# Hillary, August 21, 2023

Total Precipitable Water 2023-08-19 0000 UTC



Displaying Last 7-Day Percent of Normal Precipitation  
Valid on: August 24, 2023 12:00 UTC

# 2023 - A Year of Floods, Smoke, and Heat

