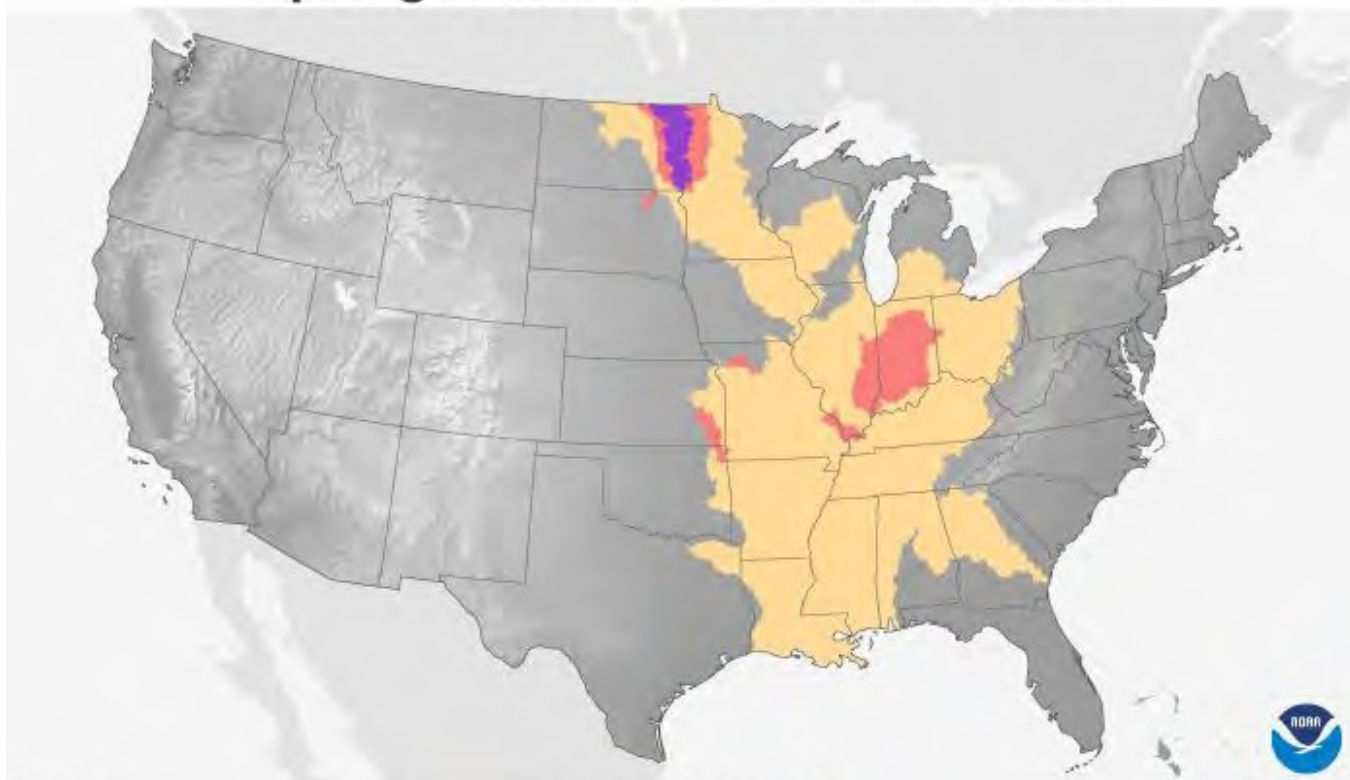


Eastern Spring Flood Outlook - Spring 2022

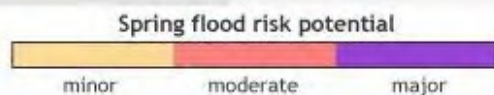


Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

Spring 2022: U.S. Flood Outlook



Flood Outlook
for March - May
Issued 2022 Mar 17



NOAA
Climate.gov
Data: QWP

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Bottom Line Up Front:

- No obvious signal for enhanced flood risk this spring in the eastern US
- Localized flood threat in northern Maine in April
- That doesn't mean no flood risk - any storm can cause a flood, any time of year

Recent Precipitation - 30 Days



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

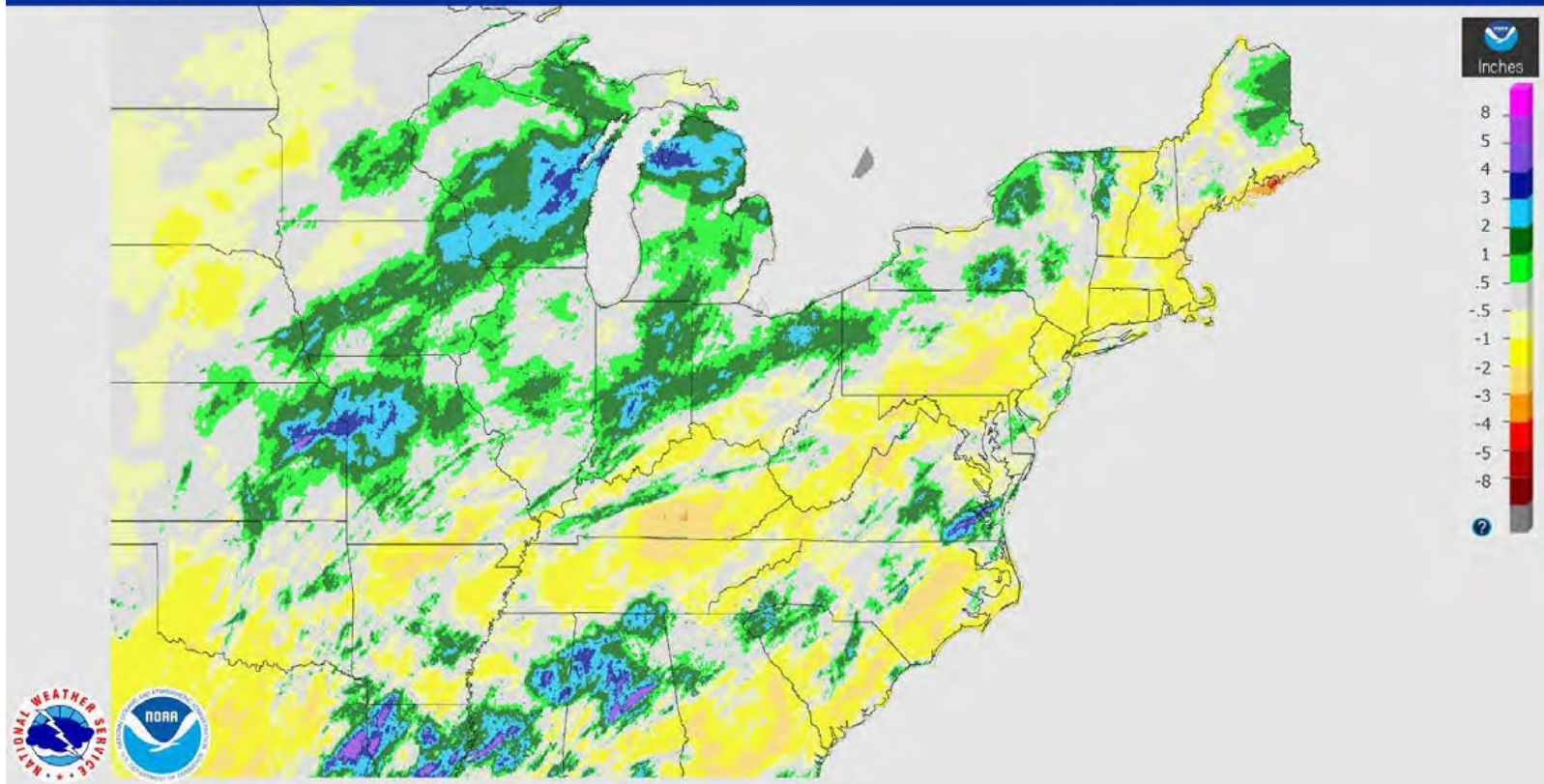
GENERALLY: WET INTERIOR, DRY CLOSER TO THE COAST (but quite wet southern Virginia)

→ Amounts generally 2-4 inches in the last 30 days for most

March 30, 2022 30-Day Departure Precipitation

Created on: March 30, 2022 - 14:00 UTC

Valid on: March 30, 2022 12:00 UTC



NWSNERFC NWSMARFC

<https://weather.gov/nerfc>

<https://weather.gov/marfc>

Recent Precipitation - Year-to-Date



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

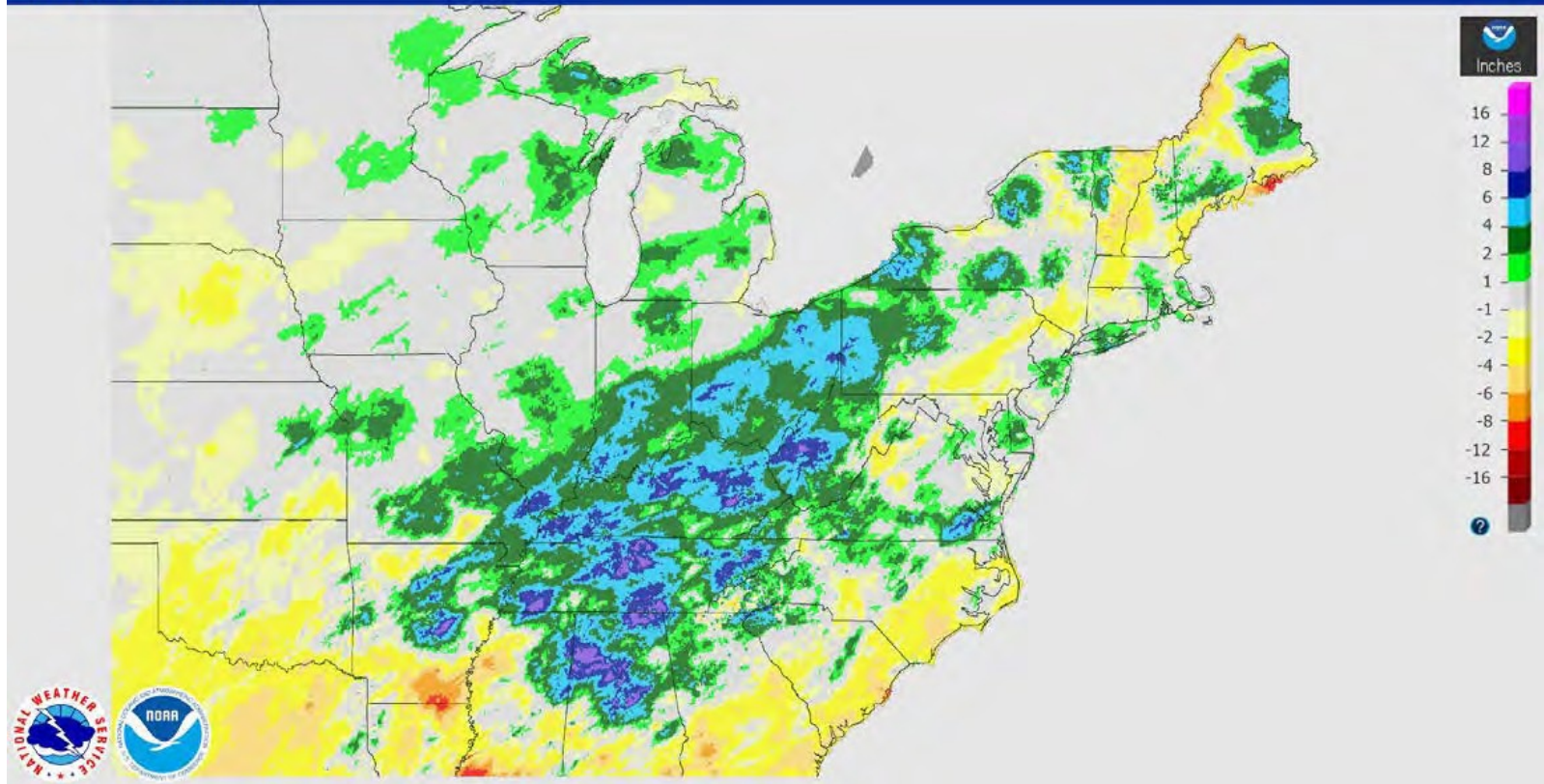
Slightly wetter signals compared to the 30 day graphic; driest VT/NH/NW Maine

→ Amounts generally 8-13 inches liquid equivalent in most areas

March 30, 2022 90-Day Departure Precipitation

Created on: March 30, 2022 - 14:08 UTC

Valid on: March 30, 2022 12:00 UTC



Water Year-to-Date (since 10/1/21) % of Normal



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

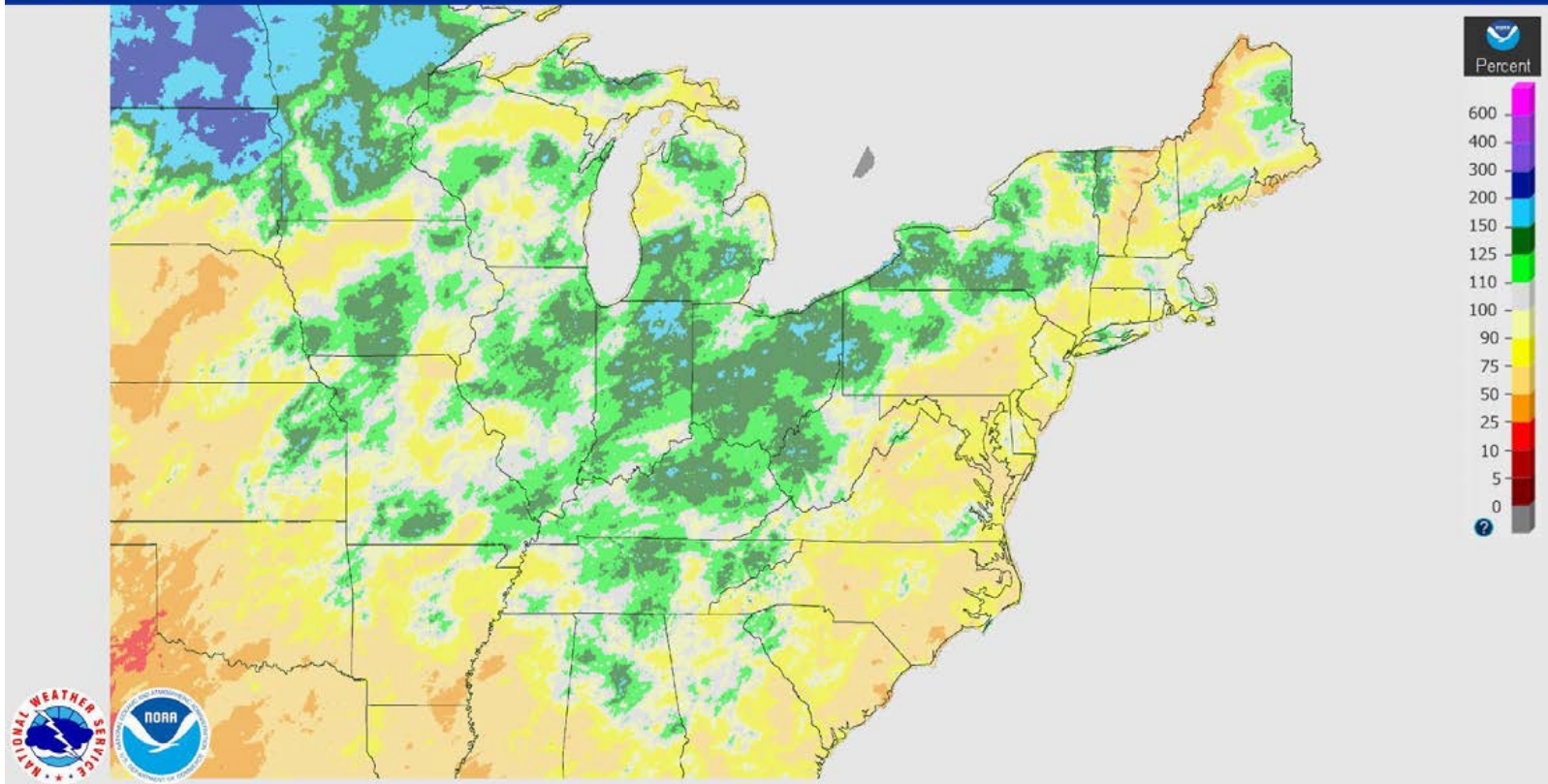
Below normal for much of the east (exceptions much of upstate NY; parts of Maine)

→ Amounts generally 15-25 inches, but less especially in southern PA and upper Potomac

March 30, 2022 Water Year to Date (Oct. 1) Percent Precipitation

Created on: March 30, 2022 - 14:12 UTC

Valid on: March 30, 2022 12:00 UTC



NWSNERFC NWSMARFC

<https://weather.gov/nerfc>

<https://weather.gov/marfc>

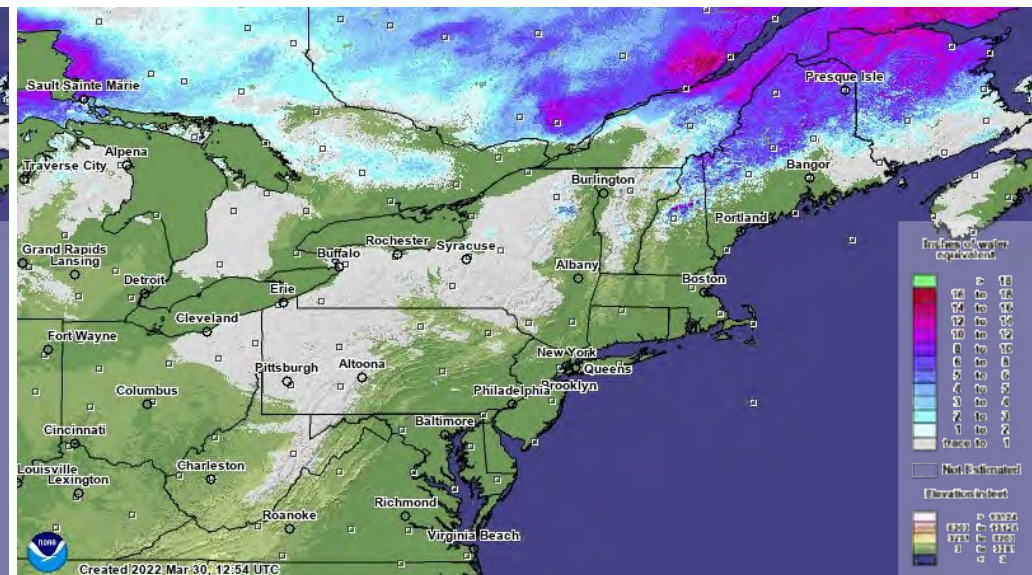
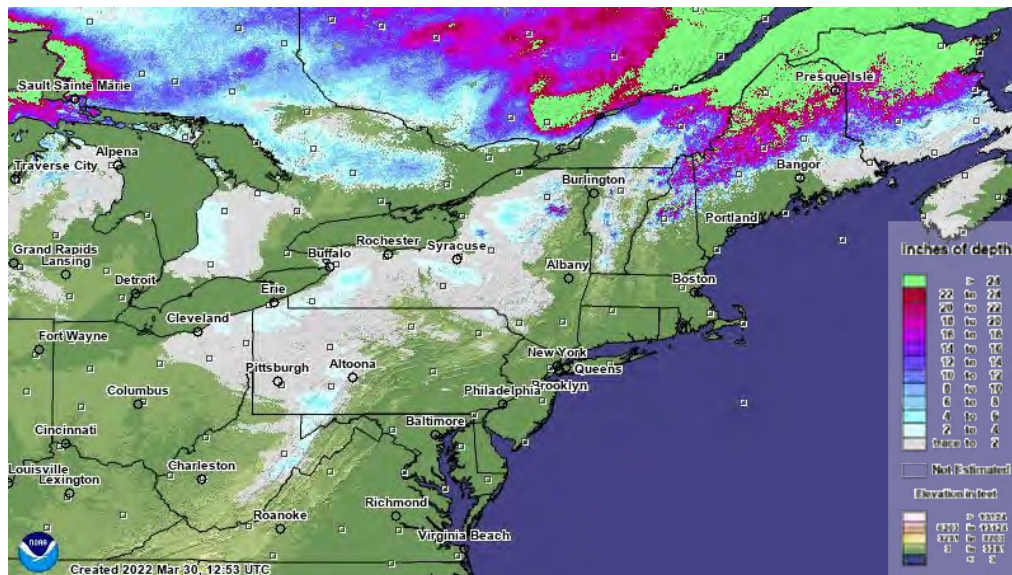
Current Snow Status



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

BELOW NORMAL EXCEPT IN NORTHERN MAINE

- Typically, even in late March, much of the interior Northeast should still have snow on the ground – and many areas do not. Even those that do have less than is typical. Only northernmost Maine has above normal snow at this point.
- Snow water content is also less than normal for most, but there is plenty of water in the snowpack in interior Maine (observed 8-11” of snow water!)



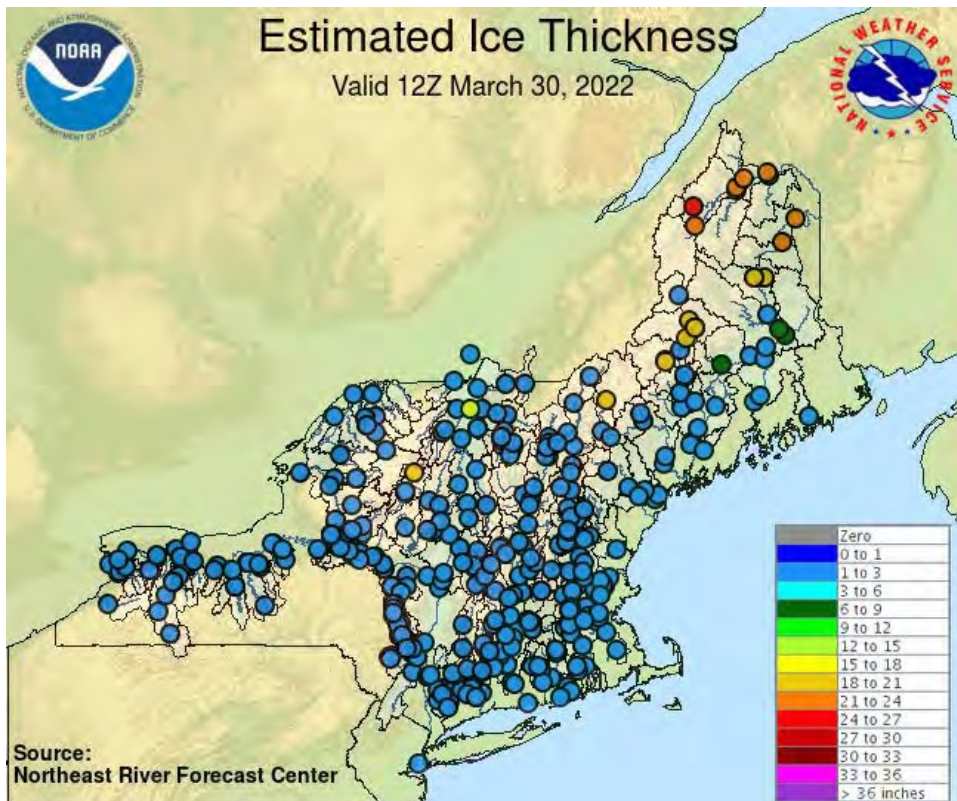
Current Ice Status



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

PLENTY OF ICE WITH JAMS FROM DECEMBER STILL IN PLACE IN NORTHERN MAINE

- Ice thickness still 12-24" but more ice openings are being observed
- Saint John River - reported ice jam of 16-17 miles in length



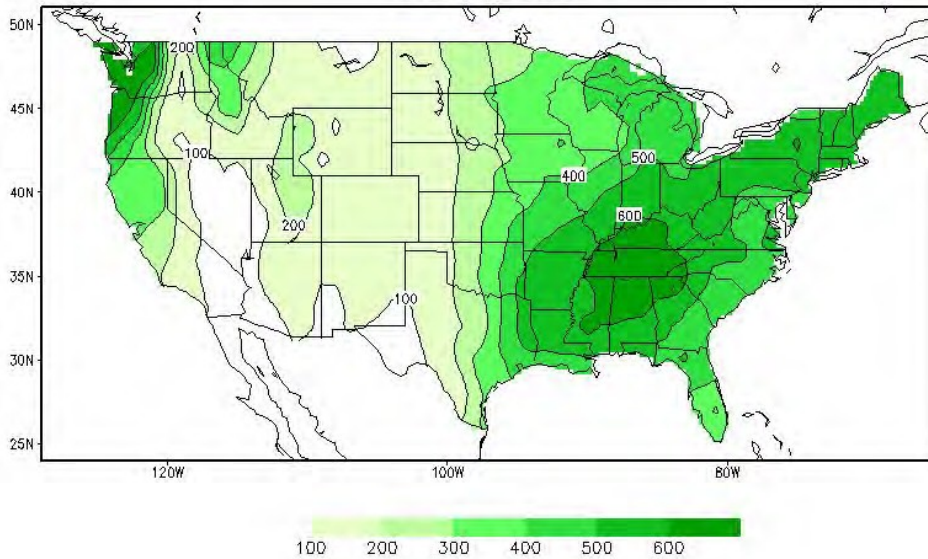
St. John River - March 23rd - courtesy NWS Caribou

Soil Moisture Conditions

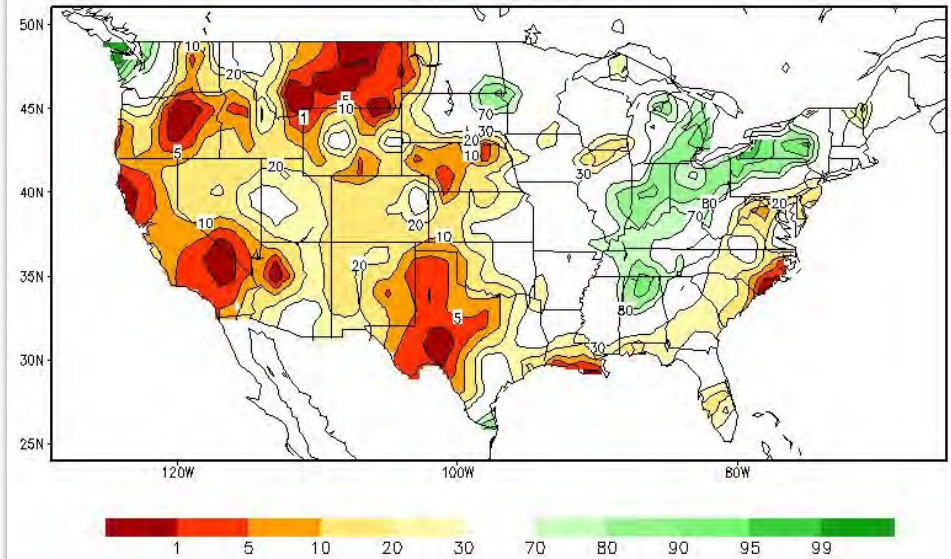


Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

Calculated Soil Moisture (mm)
MAR 29, 2022



Calculated Soil Moisture Ranking Percentile
MAR 29, 2022



Soils are wet in much of NW PA & upstate NY; near normal most of northeast; below much of mid-Atlantic
→ Extremely dry west of DC and coastal North Carolina



NWSNERFC NWSMARFC

<https://weather.gov/nerfc>

<https://weather.gov/marfc>

Streamflow (courtesy USGS)



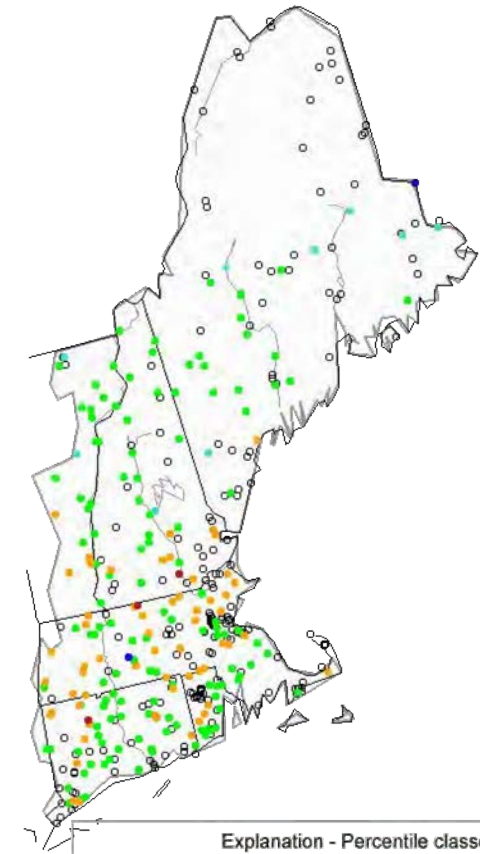
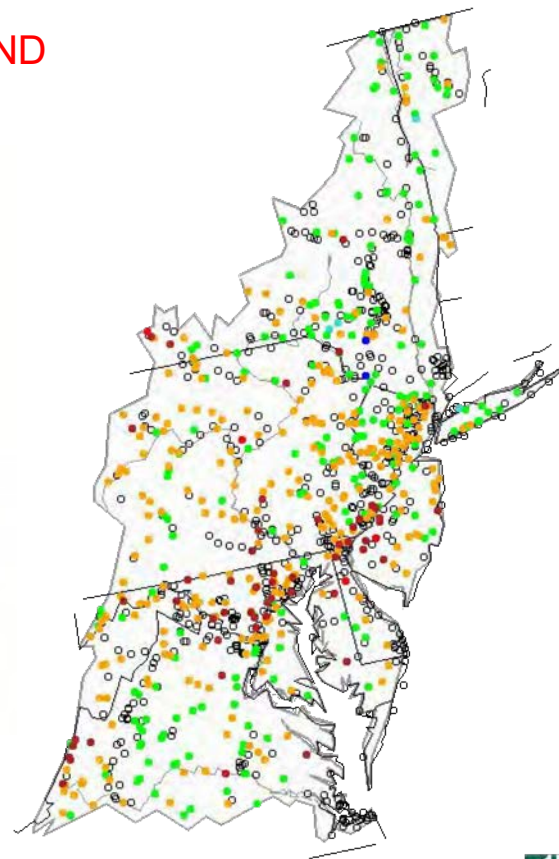
Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

**FITS THE PRECIPITATION PATTERN;
QUITE LOW CENTRAL MID-ATLANTIC AND
SOUTHERN NEW ENGLAND**

Hednesday, March 30, 2022 10:30ET

Hednesday, March 30, 2022 10:30ET

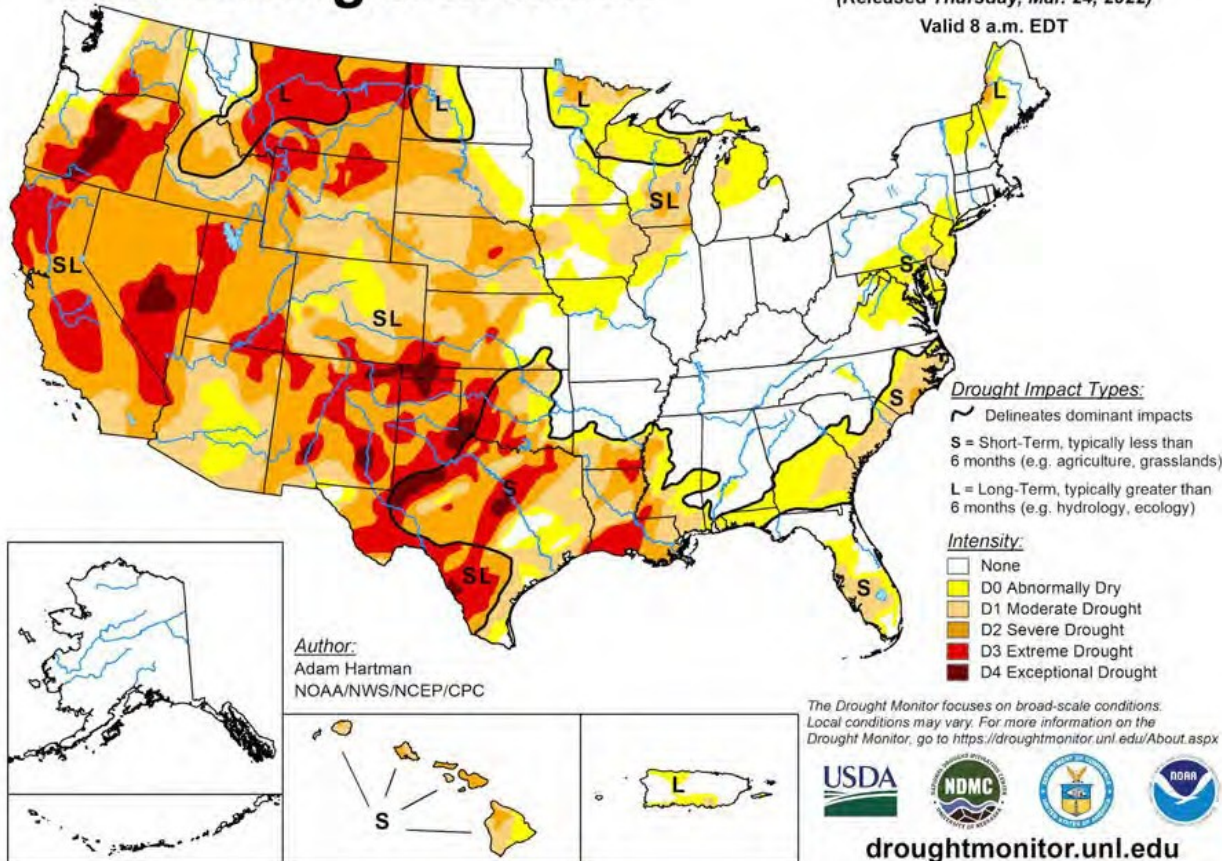
Hednesday, March 30, 2022 10:30ET



Explanation - Percentile classes							
●	●	●	●	●	●	●	○
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

U.S. Drought Monitor

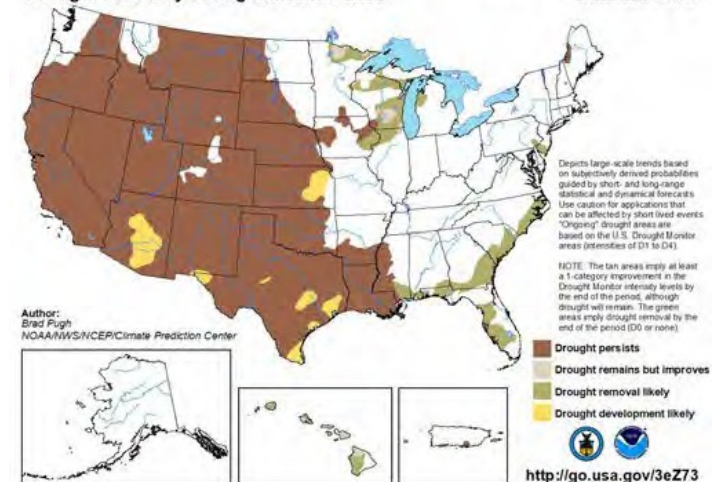
March 22, 2022
(Released Thursday, Mar. 24, 2022)
Valid 8 a.m. EDT



- Moderate Drought areas:
 - ◆ Western Maine
 - ◆ Philadelphia / Southern NJ
 - ◆ Coastal Carolinas
- Abnormally Dry areas:
 - ◆ Northern New England
 - ◆ Southern Mid-Atlantic
 - ◆ Central Carolinas

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for March 17 - June 30, 2022
Released March 17

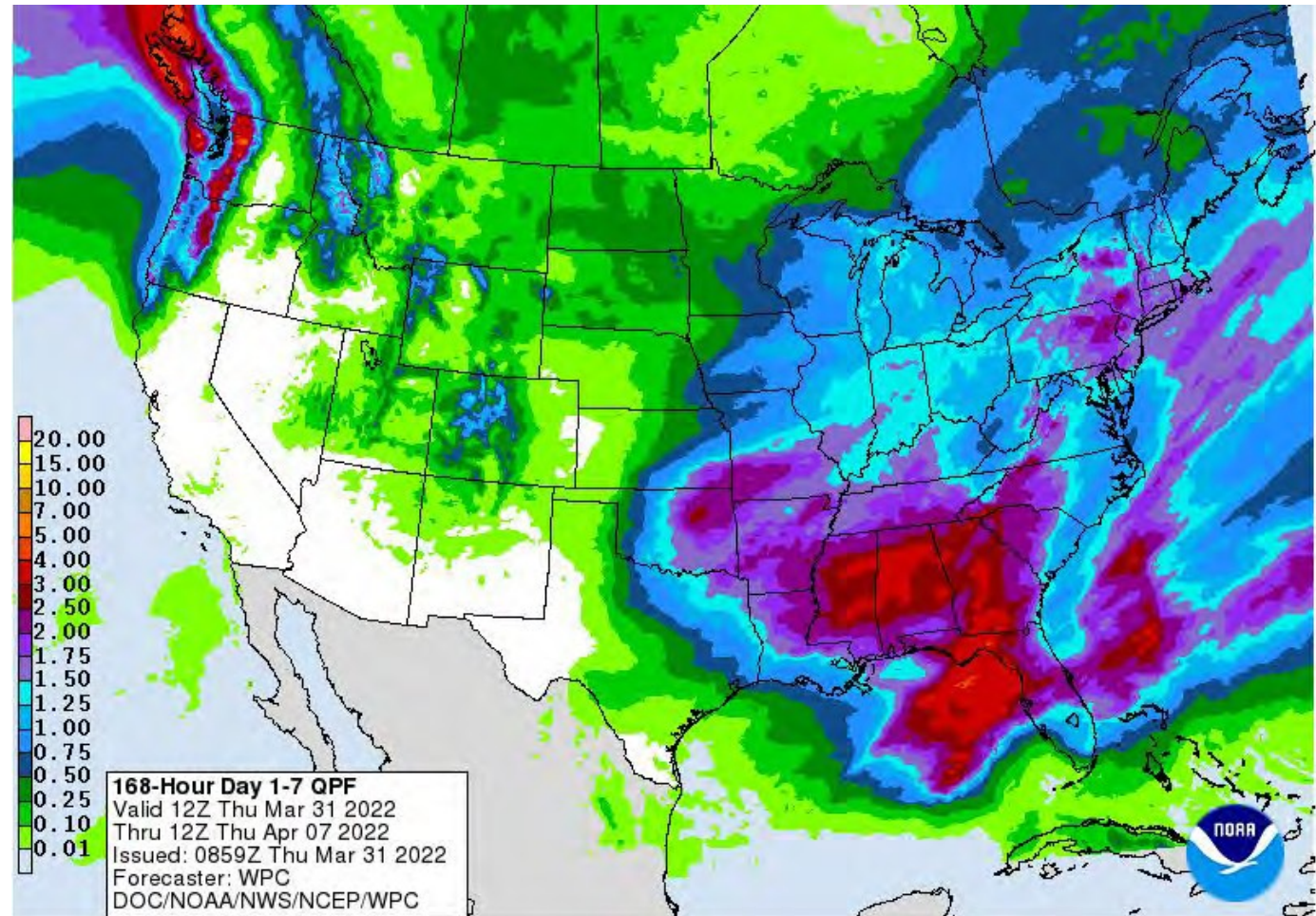


NWS 7 Day Precipitation Forecast



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

- Liquid equivalent precipitation over the next week generally 1-2 inches (locally higher near higher elevations), with heavy rain confined to the south



NWSNERFC NWSMARFC

<https://weather.gov/nerfc>

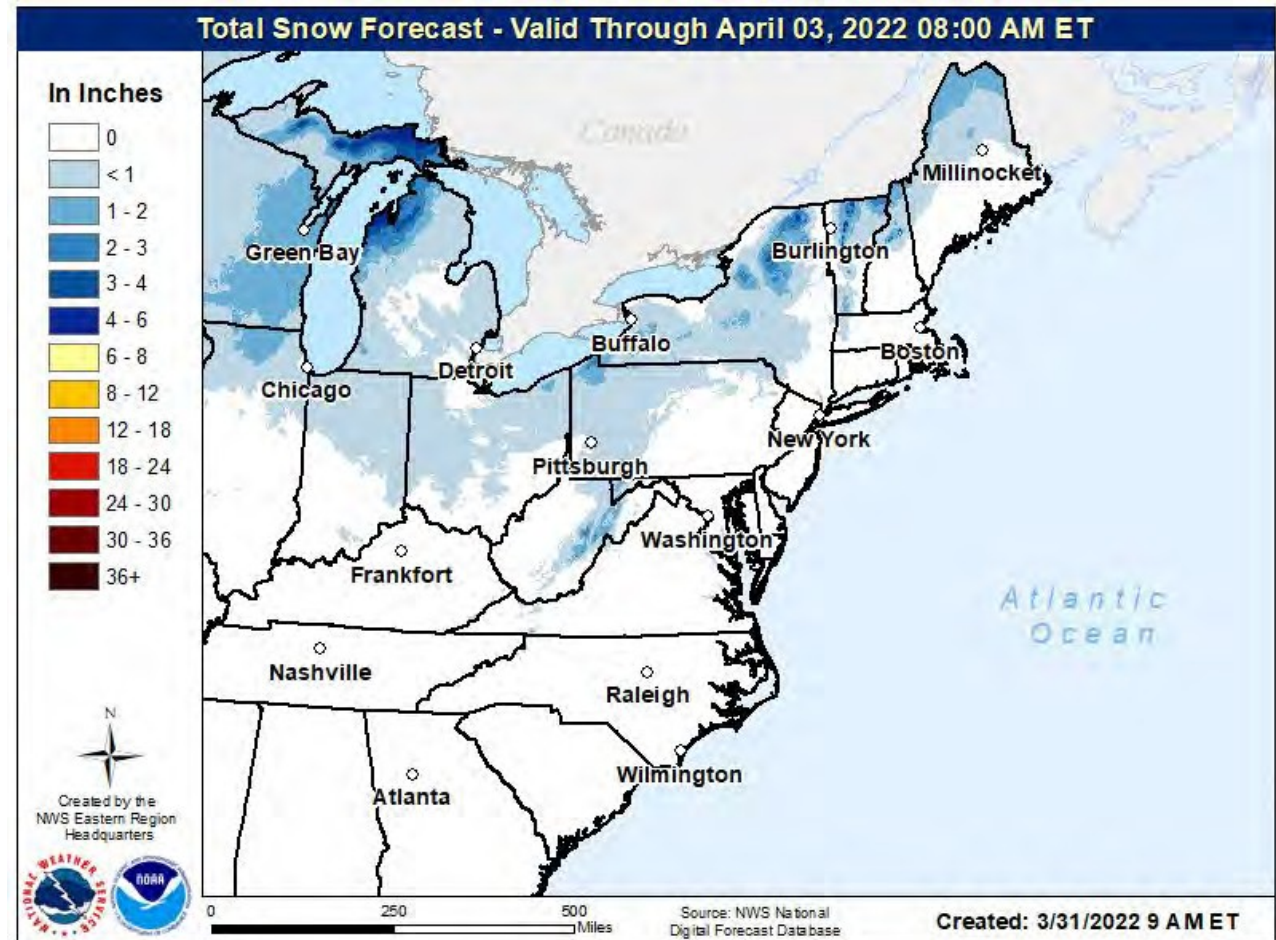
<https://weather.gov/marfc>

NWS Snowfall Forecast



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

- Additional snow largely minimal this week (but there will be some!)



NWSNERFC NWSMARFC

<https://weather.gov/nerfc>

<https://weather.gov/marfc>

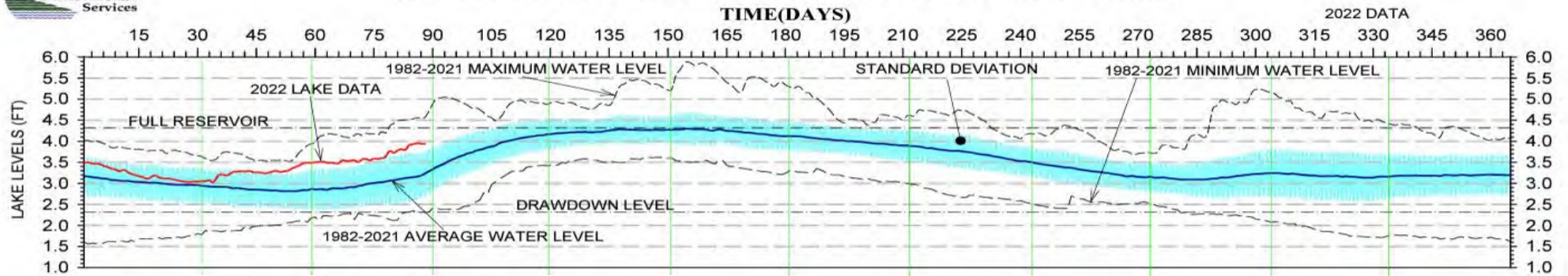
New England Lake Levels



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS



LAKE WINNIPESAUKEE LAKE LEVEL DATA



Lake Champlain Extremes and 2022 Level

Click and drag in plot area to zoom in



- Lake Winnepesaukee still about half a foot above normal
- Lake Champlain seems to be an early-season fill but settling close to normal

Some other reservoirs of note:

- Scituate - 284.71 feet / 103.3%
- NYC system - 97.4% capacity / above normal

Almost all reservoirs are above normal for this time of year at present



NWSNERFC

<https://weather.gov/nerfc>

<https://weather.gov/marfc>

River Observations and Forecasts



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

No flooding expected in the short term, and only a few locations over – or expected to be over – the ‘Action’ Stage level (mostly tidal)



ENSO Conditions

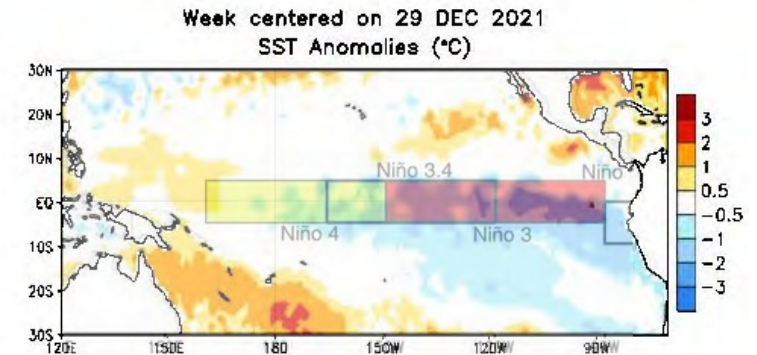
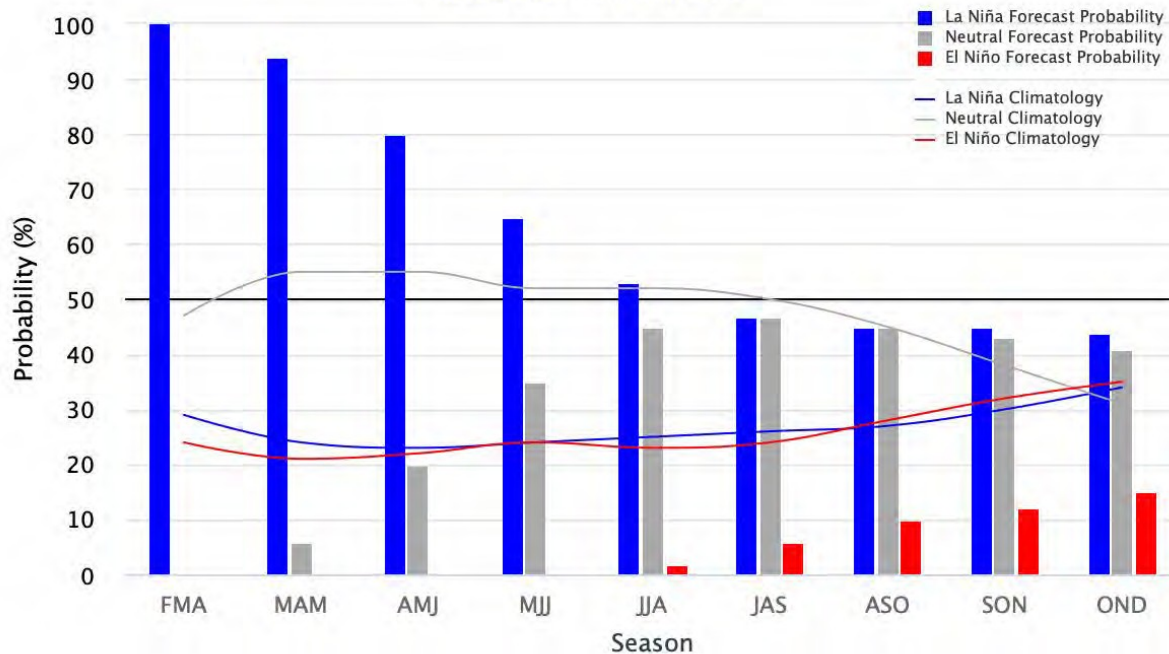


Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

Could there be a third year of La Niña?

Early-March 2022 CPC/IRI Official Probabilistic ENSO Forecasts

ENSO state based on NINO3.4 SST Anomaly
Neutral ENSO: $-0.5\text{ }^{\circ}\text{C}$ to $0.5\text{ }^{\circ}\text{C}$



La Niña three-peats (triple dips?) are very rare—only two exist in our more reliable historical record going back to 1950 and both occurred after major El Niño events, which our current event did not.

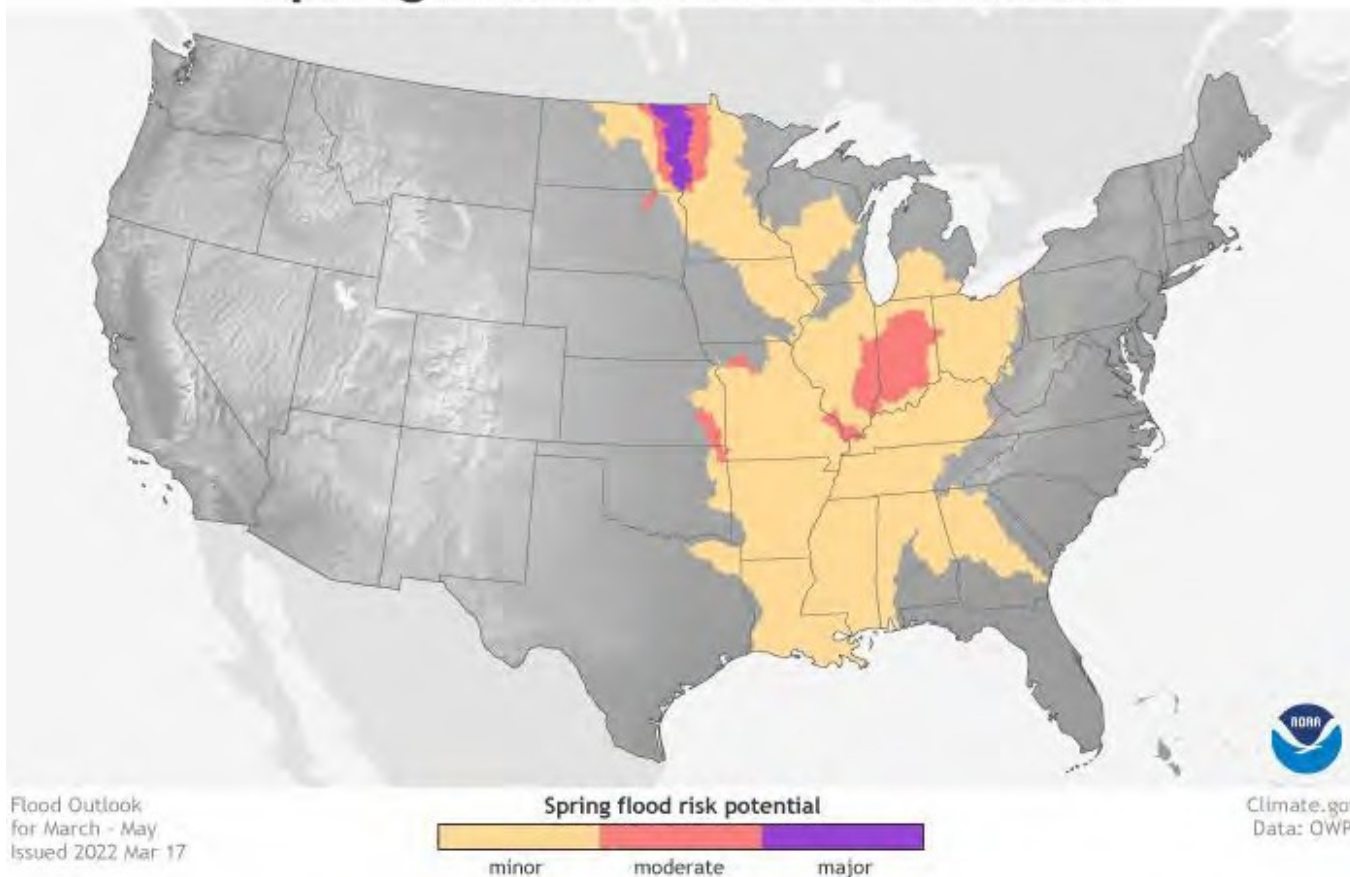
Bottom line: the long term signal is very uncertain - don't expect much definitive information

Eastern Spring Flood Outlook - Spring 2022



Northeast & Mid-Atlantic
RIVER FORECAST CENTERS

Spring 2022: U.S. Flood Outlook



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Recap:

- No obvious signal for enhanced flood risk this spring in the eastern US
- That doesn't mean no flood risk - any storm can cause a flood, any time of year