



2021 NERFC SPRING FLOOD OUTLOOK



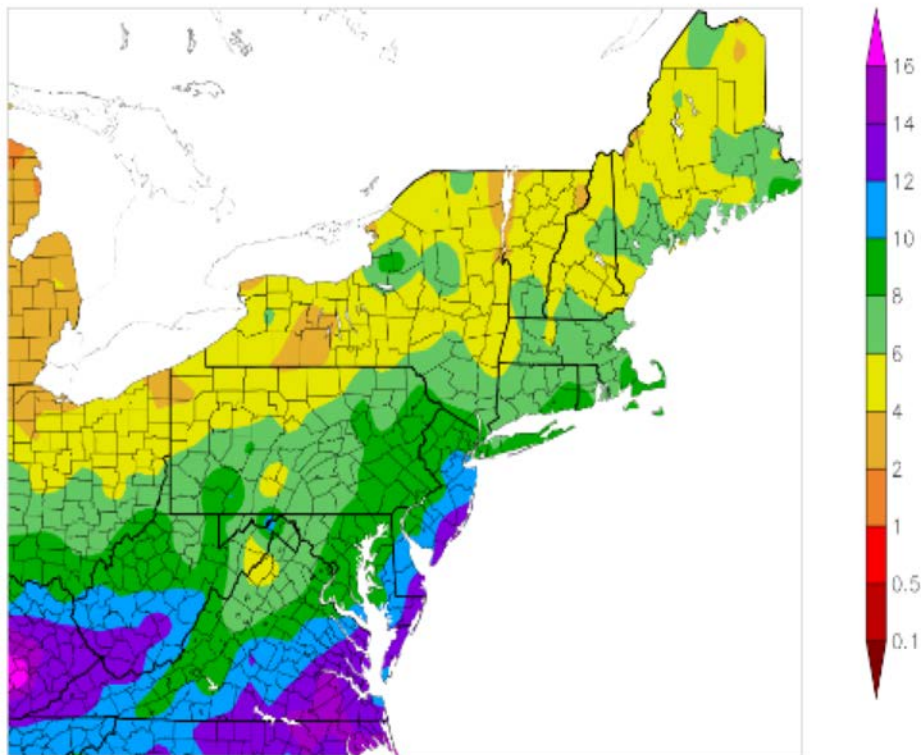
Ronald S.W. Horwood
Meteorologist – Sr HAS Forecaster
National Weather Service
Northeast River Forecast Center
Norton MA
Eastern Region Climate Webinar
30 March 2021

OVERVIEW

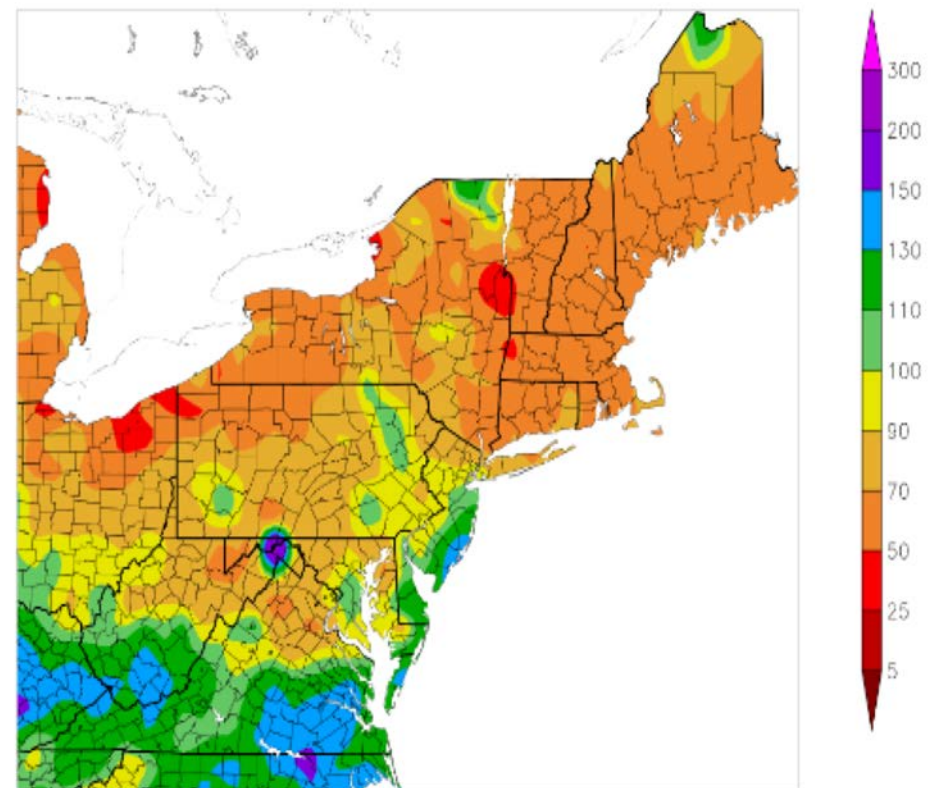
- Yearly Precipitation
- Snow Recap
- Current Flows
- Recent Flooding / Ice Breakup
- Groundwater and Water Supply
- Antecedent Moisture Conditions
- Flood / Drought Outlook

PRECIPITATION

Precipitation (in)
1/1/2021 - 3/27/2021



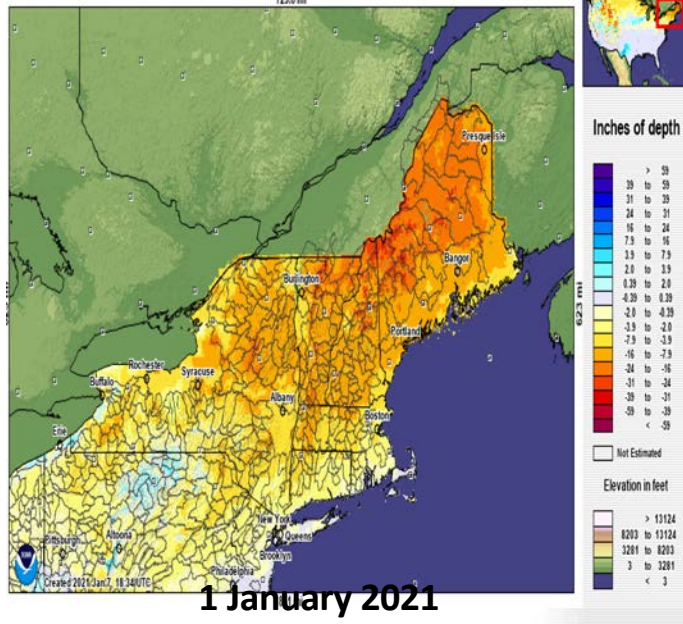
Percent of Normal Precipitation (%)
1/1/2021 - 3/27/2021



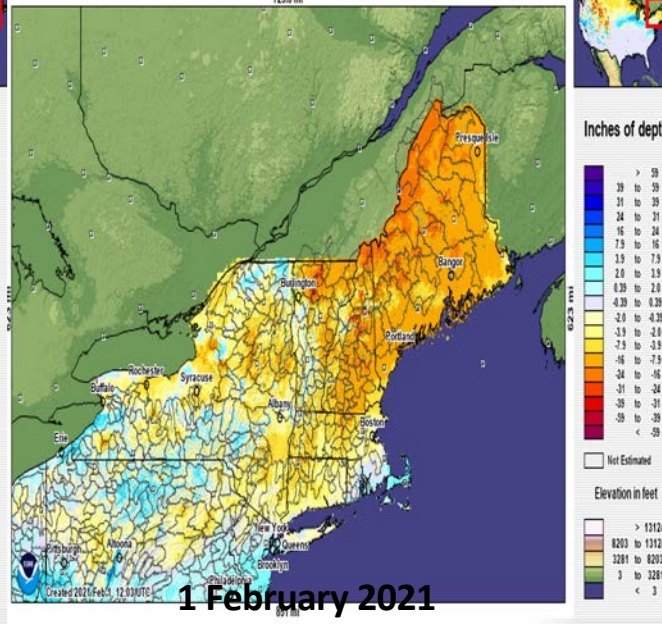
SNOW

- Snowfall was below normal across much of the NERFC service area for the winter of 2020-2021
- Snowpack did make a decent recovery in most places from February into early March

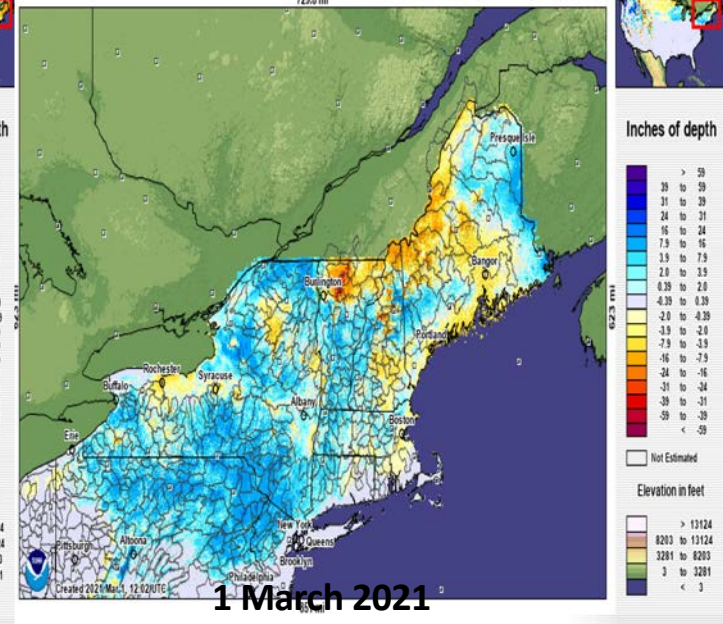
Modeled Snow Depth Departure from Normal (Daily) for 2021 January 1, 6:00 UTC
729.8 mi



Modeled Snow Depth Departure from Normal (Daily) for 2021 February 1, 6:00 UTC
729.8 mi

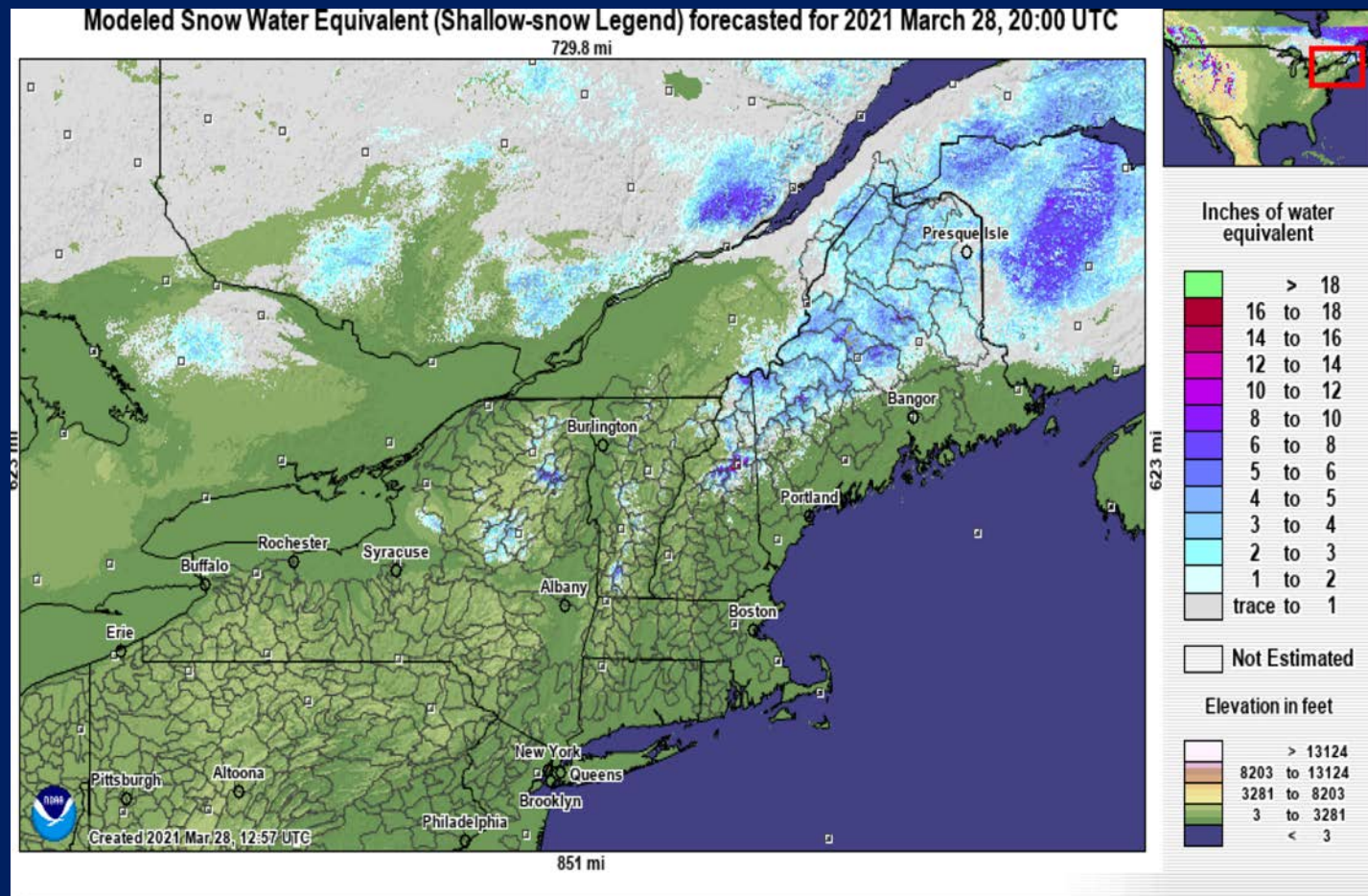


Modeled Snow Depth Departure from Normal (Daily) for 2021 March 1, 6:00 UTC
729.8 mi



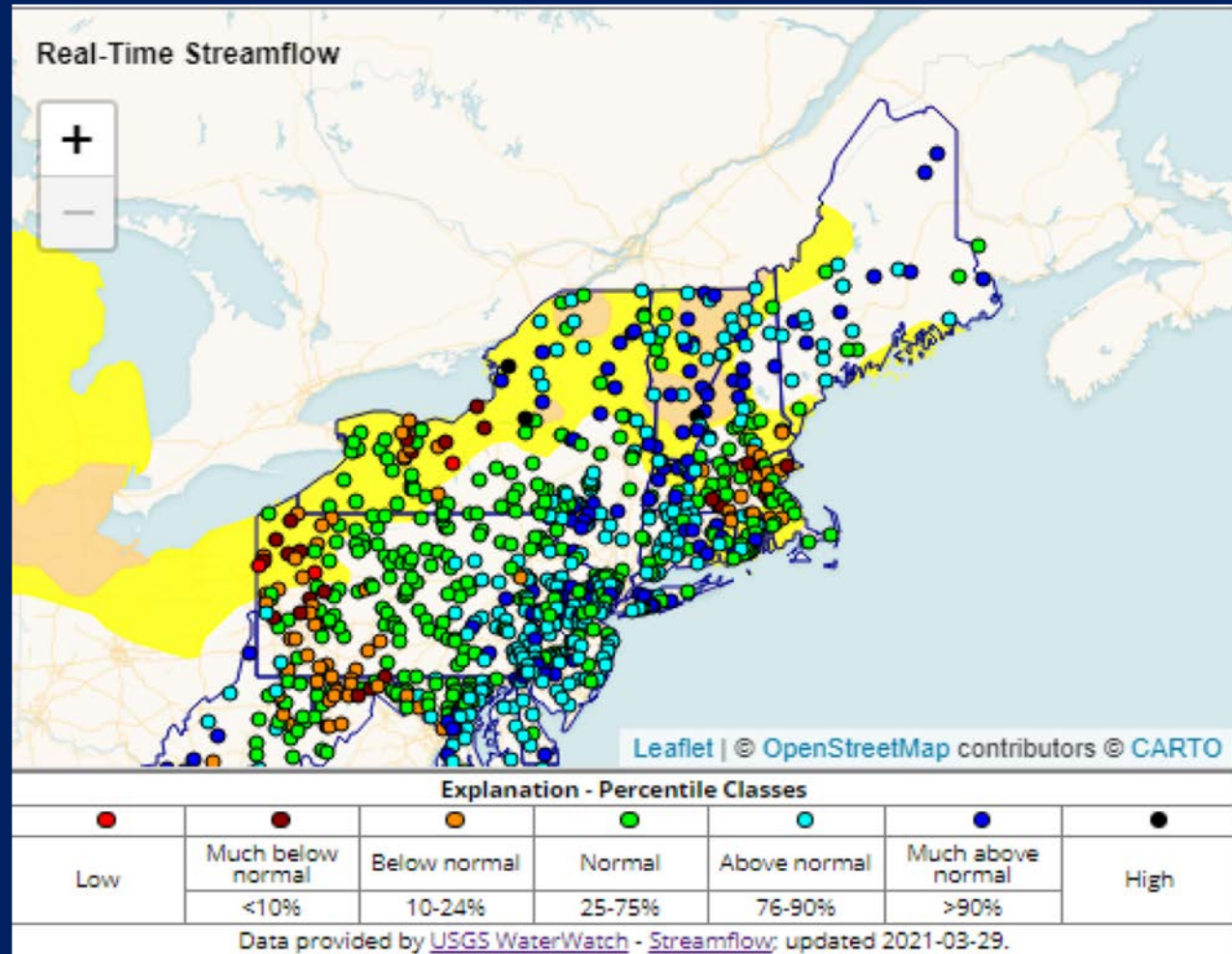
SNOW - cont

- Snowmelt up north is about 1-2 weeks ahead of schedule with limited snow remaining outside of Maine and northern New Hampshire



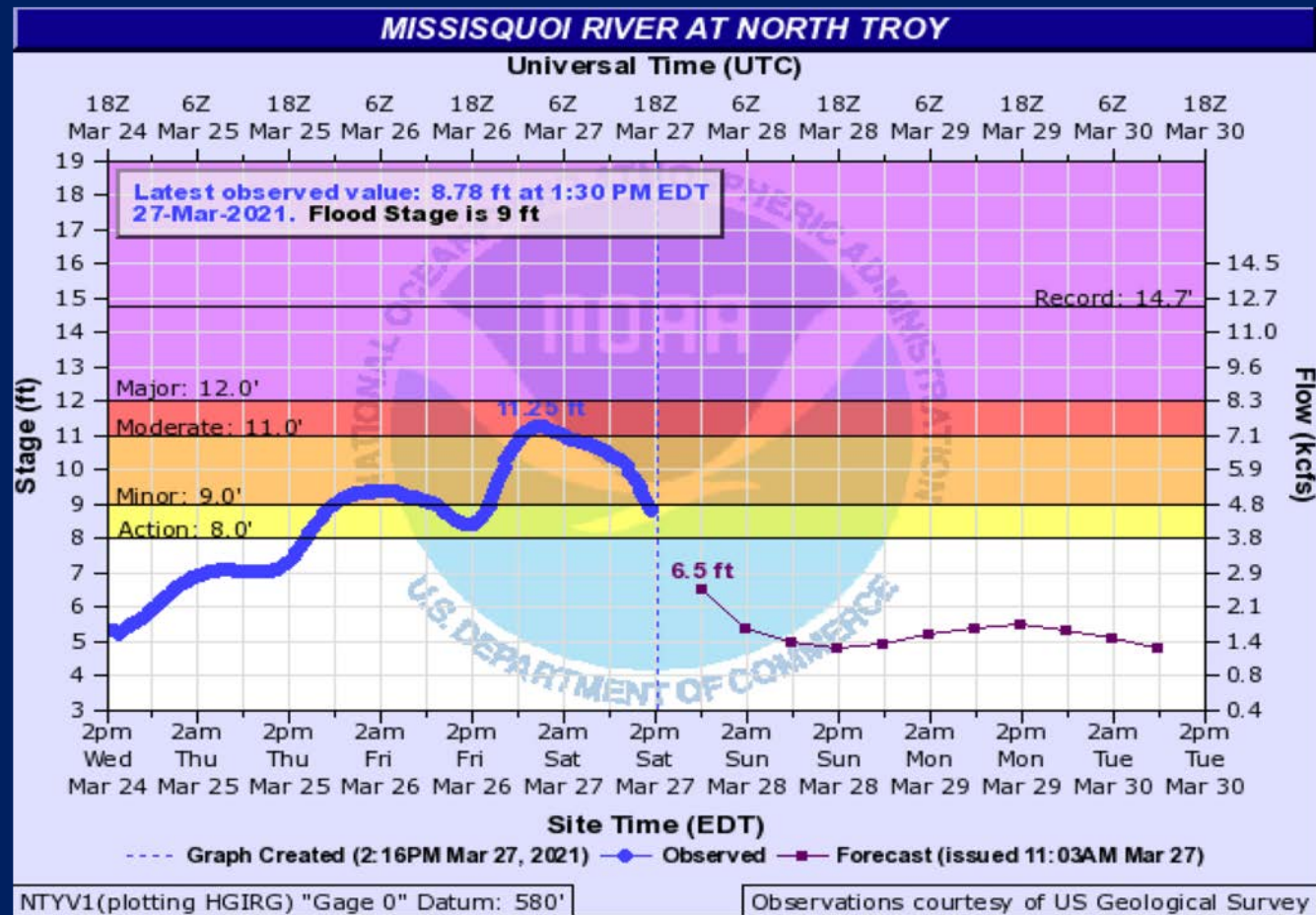
CURRENT RIVER/STREAM FLOWS

- Snowmelt and rainfall have increased streamflow dramatically across northern New York State and northern New England.
- Southern New England and western New York State continue to experience low flows.



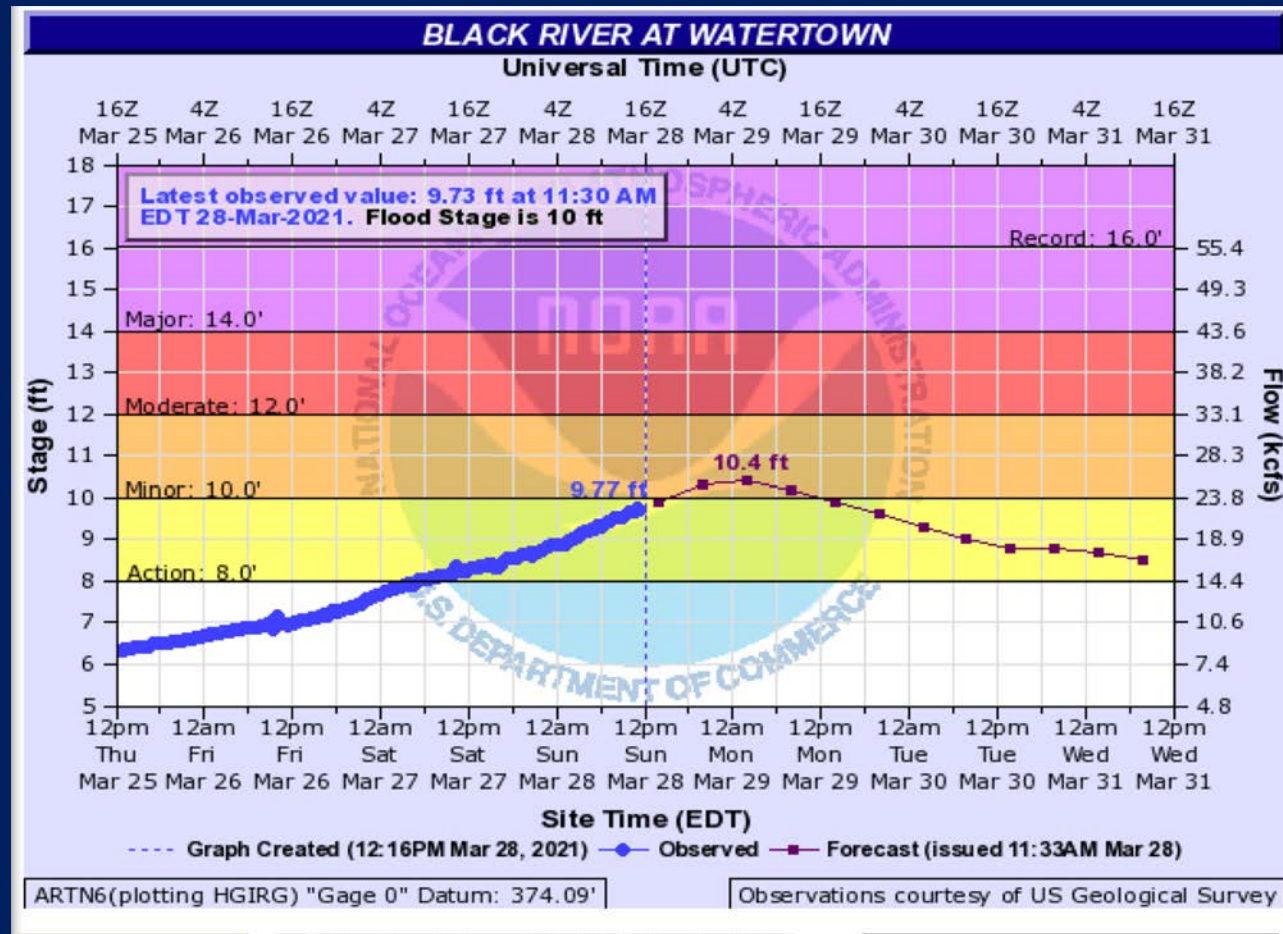
FLOODING

- Despite a below normal snowpack...some rain and melting snow resulted in minor flooding on the Missisquoi River on 25-26 March.
- The second moderate flood was triggered by mostly snowmelt as temperatures reached into the low 70s (rainfall was < 0.25 inches).



FLOODING – cont

- Rainfall and snowmelt from the Tug Hill Plateau and western Adirondack Mountains are pushing the Black River at Watertown New York into flood



ICE BREAKUP

- Ice is actively moving on most northern Maine Rivers (1-2 weeks early).
- This image shows the mainstem St. John River at Dickey near the border with Canada on 26 March 2021



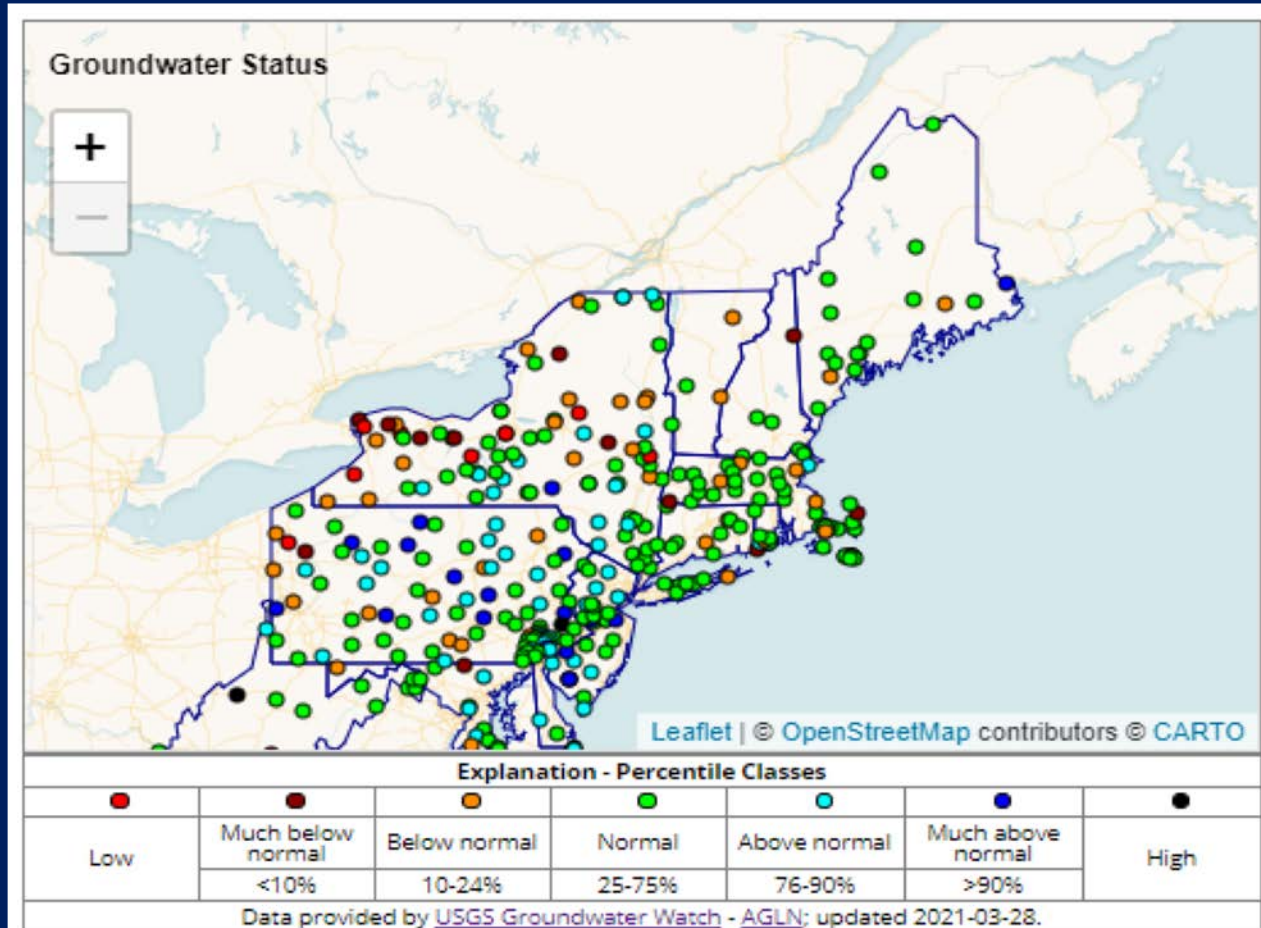
ICE BREAKUP - cont

- Ice jams currently on the Aroostook River outside of Caribou have resulted in some flooding including road closures.



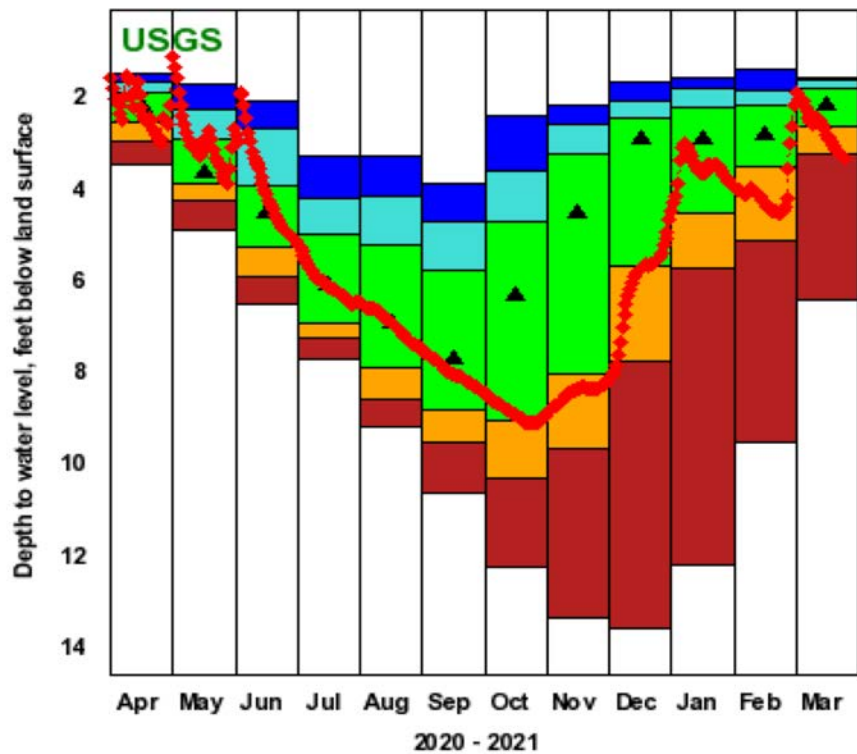
GROUNDWATER AND WATER SUPPLY

- Groundwater in northern New York State and northern New England is beginning to recharge from rain and snowmelt.
- Where snow is gone...some low groundwater levels persist in western New York State.



GROUNDWATER AND WATER SUPPLY - cont

431308078544501 - Local number, Ni-70, near Ransomville NY



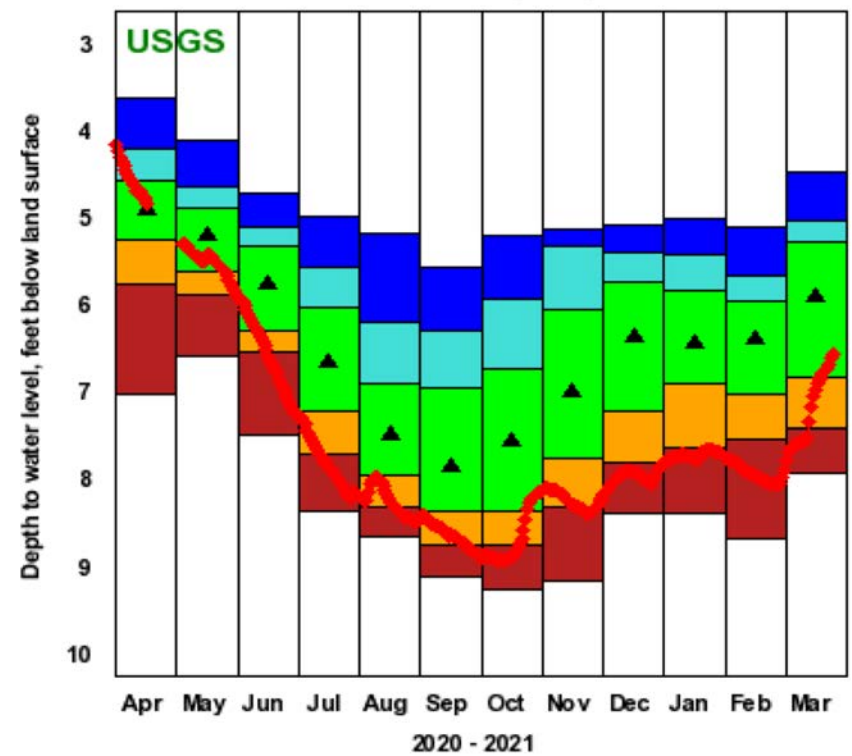
◆ Data Point

● Explanation - Percentile Classes

● <10 ● 10 - 24 ● 25 - 75 ● 76 - 90 ● >90

▲ Monthly Median

444904074455201 - Local number, St-40, near Brasher Falls



◆ Data Point

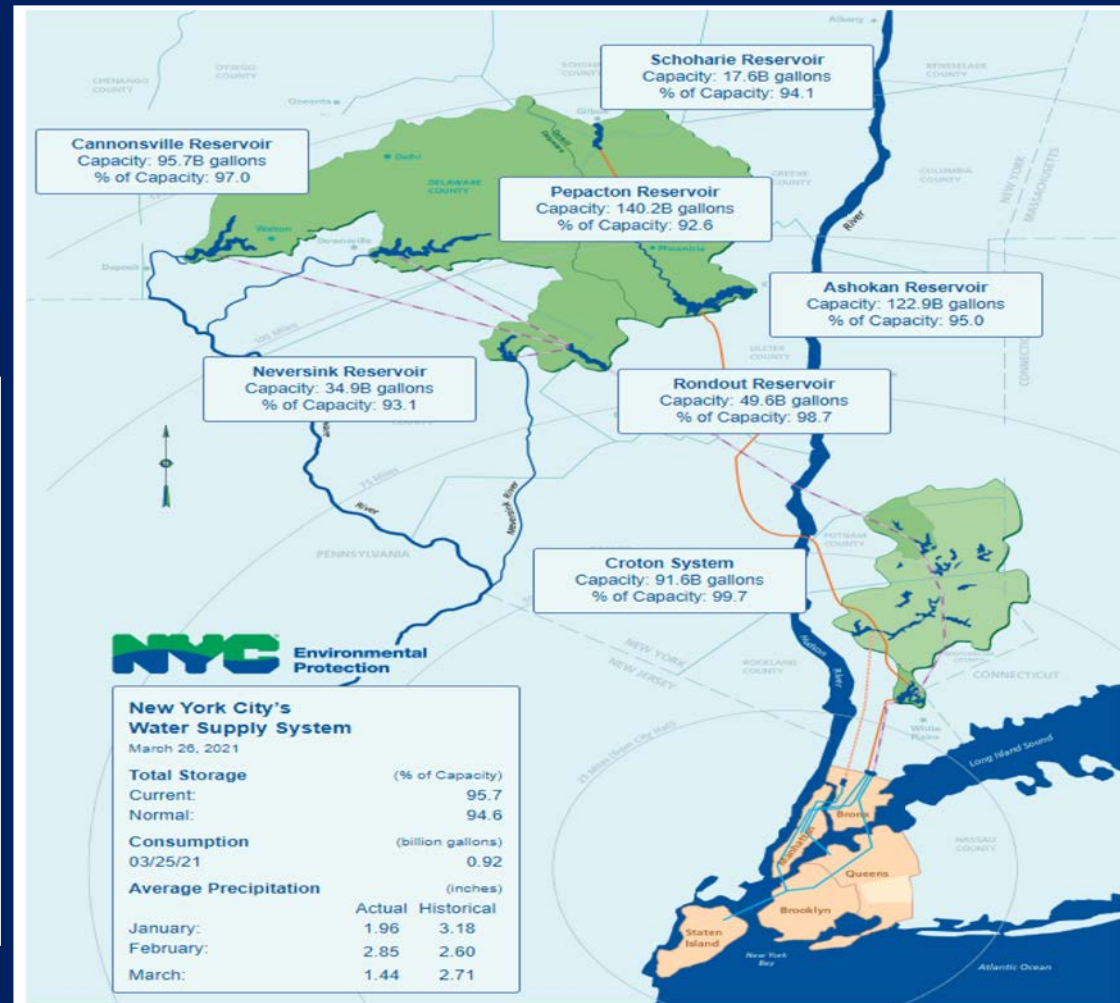
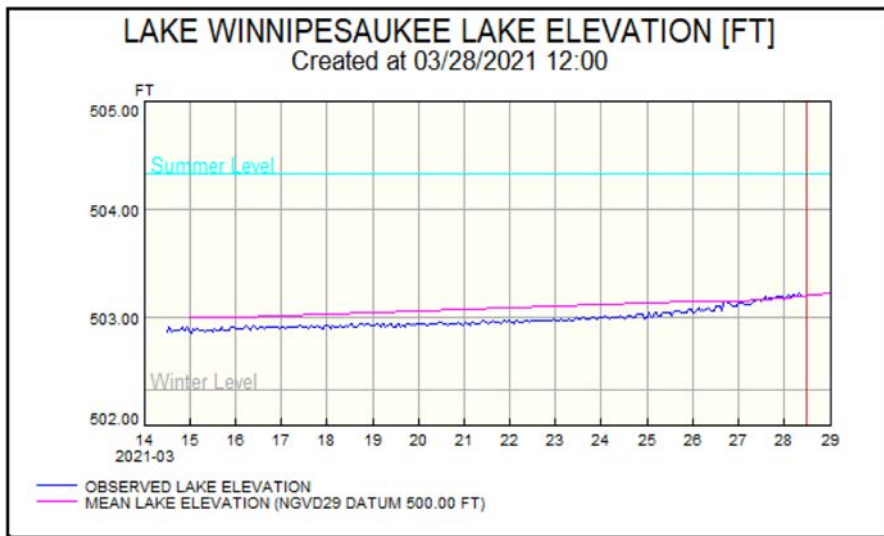
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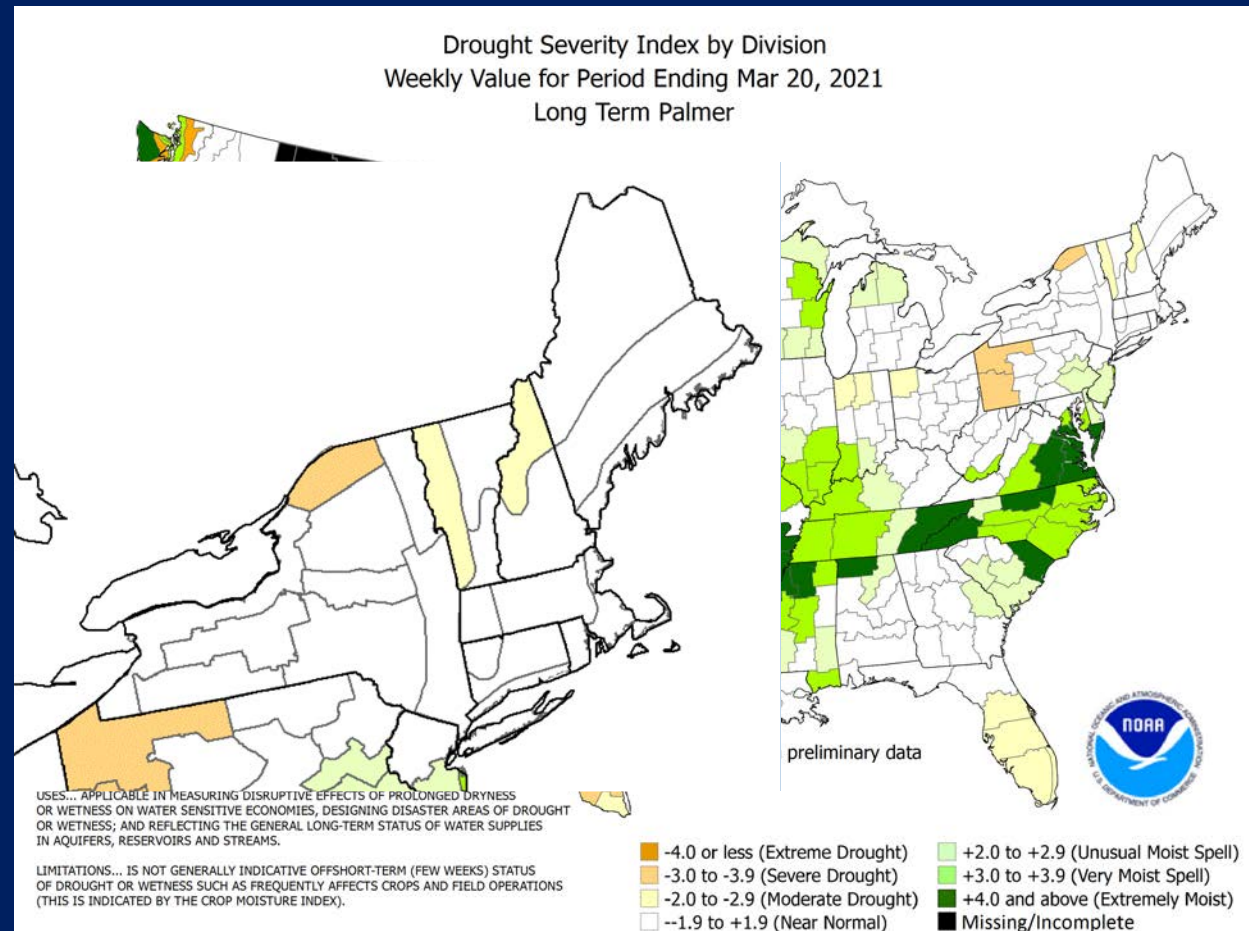
GROUNDWATER AND WATER SUPPLY - cont

- There are currently no large scale water supply issues across the NERFC service area.



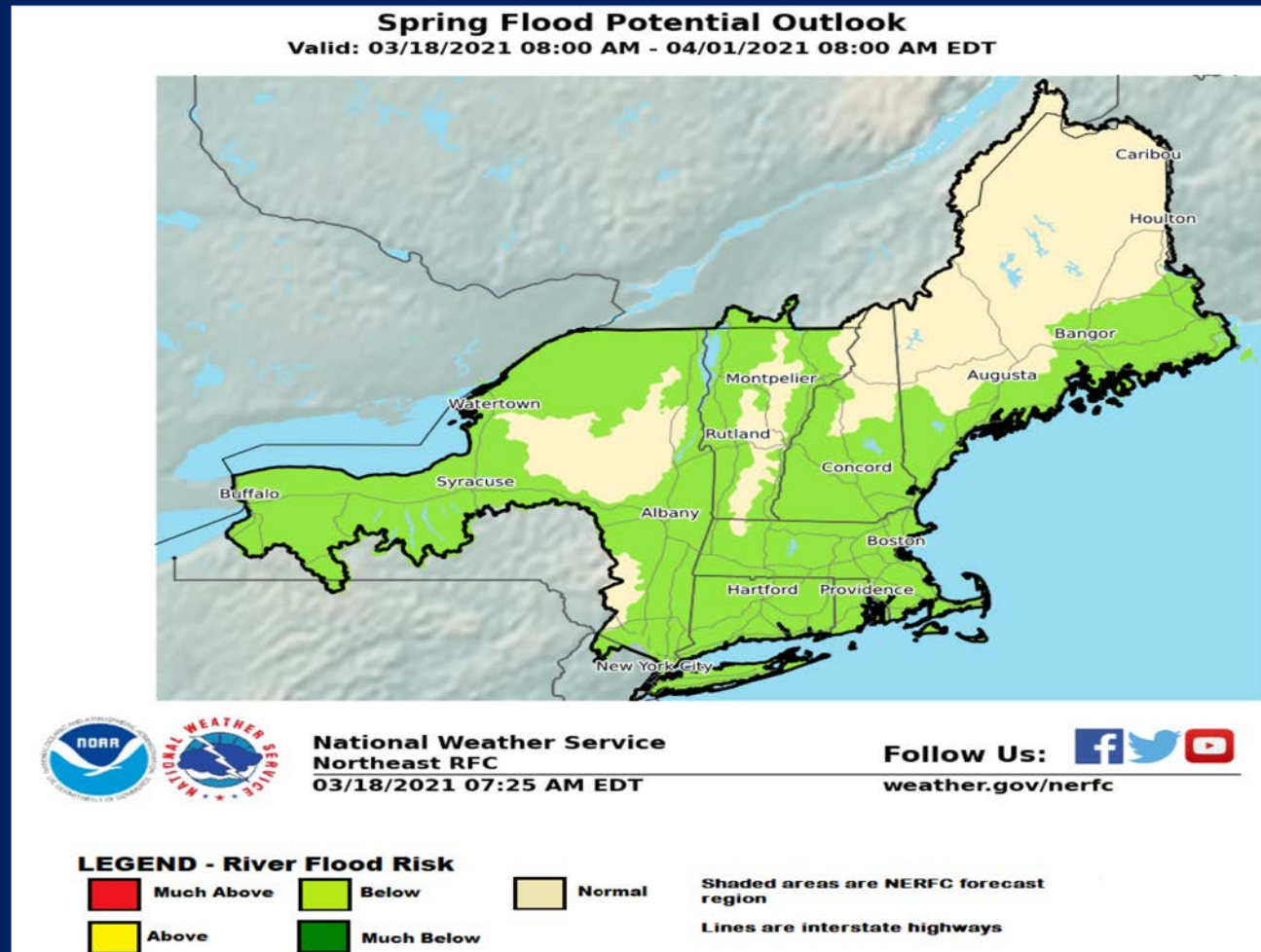
ANTECEDENT MOISTURE CONDITIONS

- Some moderate drought has crept in across portions of New Hampshire and Vermont with a longer severe drought indicated across the Saint Lawrence Valley in northern New York State.
- Both areas have benefited recently from rain and snowmelt.



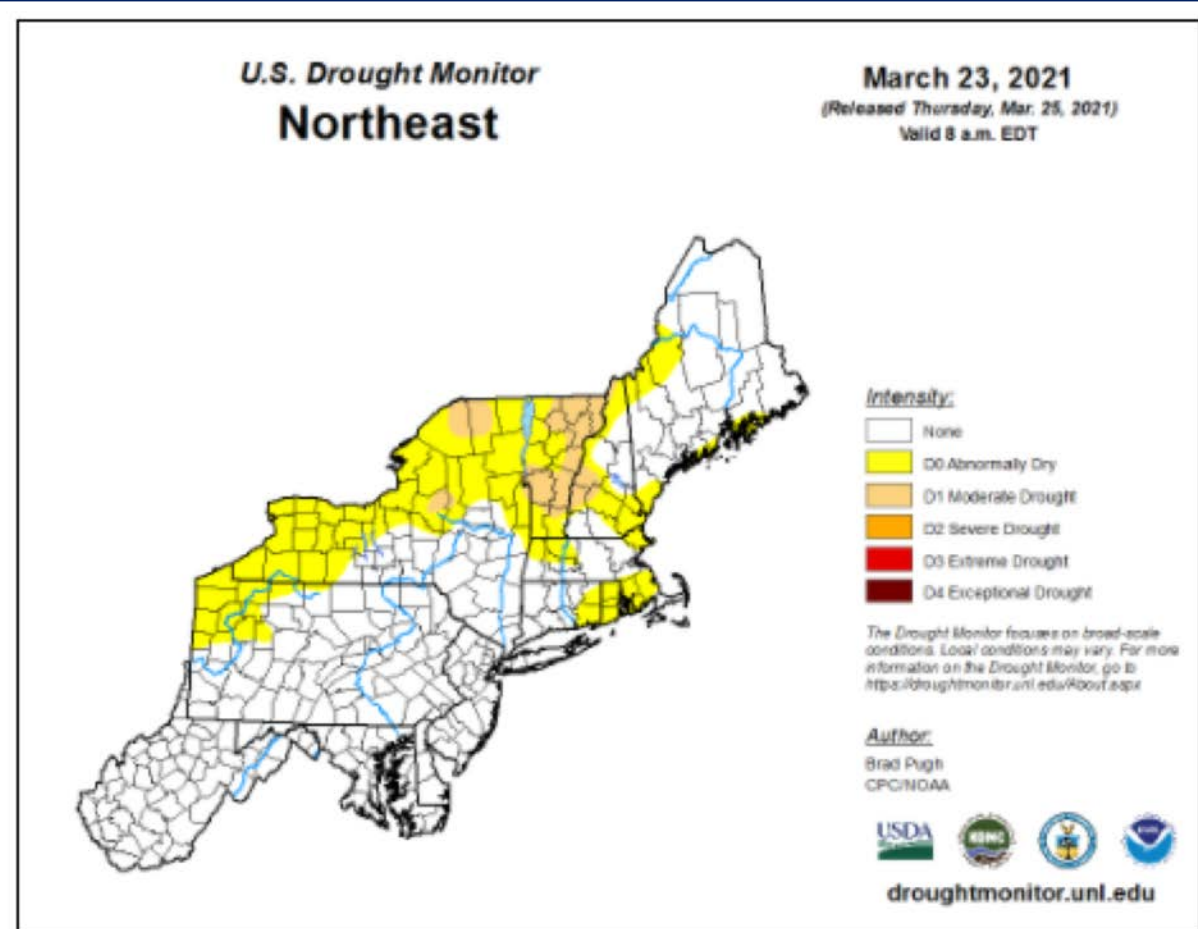
FLOOD POTENTIAL

- Flood potential remains near normal for northern New Hampshire and interior Maine.
- We may trim the New York State and maybe Vermont portions back to below normal with our next outlook release (1 April 2021)

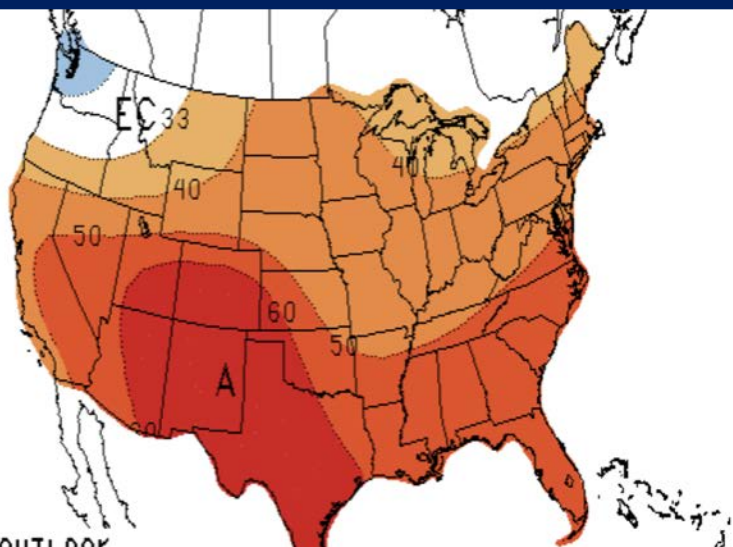


DROUGHT OUTLOOK

- Moderate drought lingers across portions of northern New York State and northern New England.

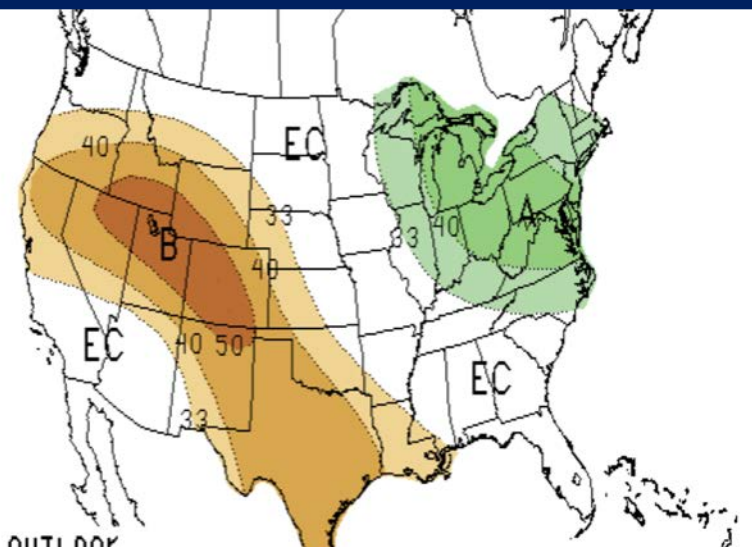


3 MONTH FORECASTS



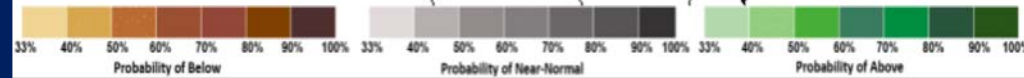
THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID AMJ 2021
MADE 18 MAR 2021

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID AMJ 2021
MADE 18 MAR 2021

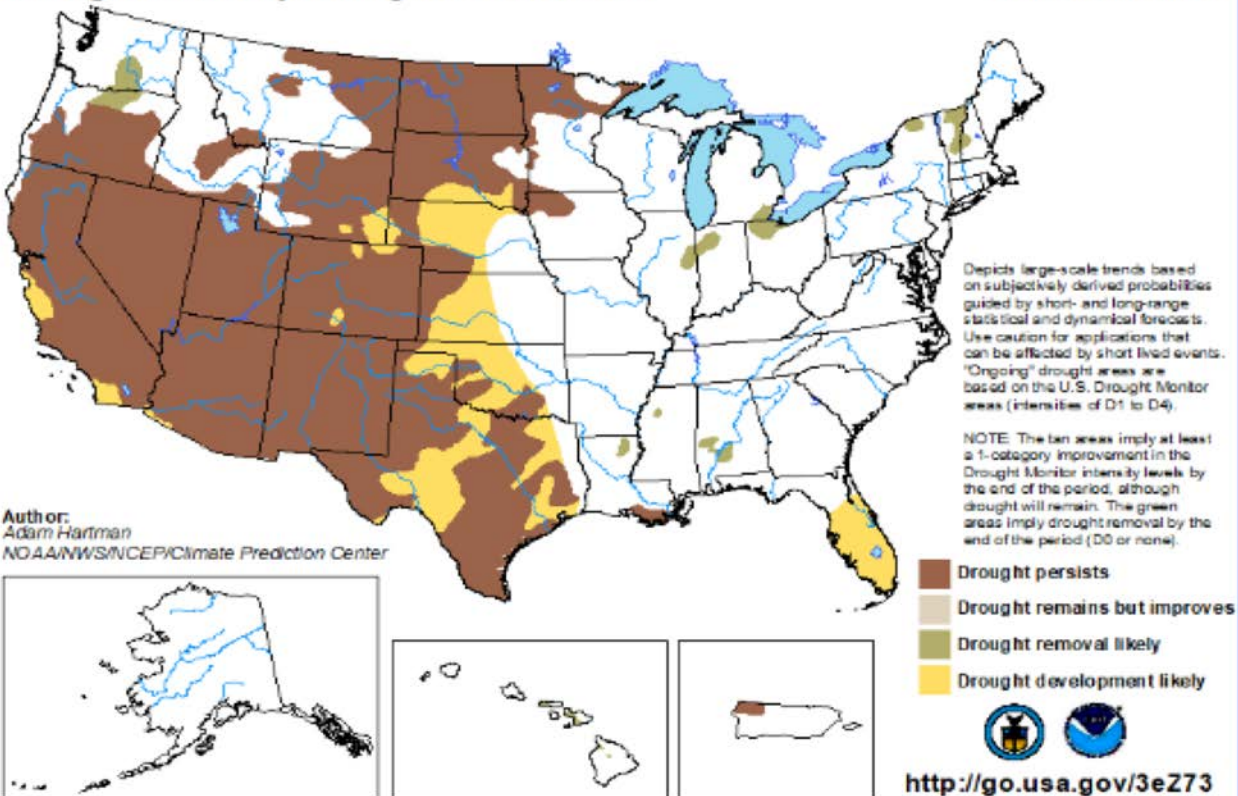
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DROUGHT OUTLOOK - cont

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

Valid for March 18 - June 30, 2021
Released March 18



- The official NOAA outlook calls for drought to improve across New England.
- However...I believe we need to be wary of areas like western New York State and southeast New England for emergence of drought unless precipitation returns to at least normal.

QUESTIONS??

