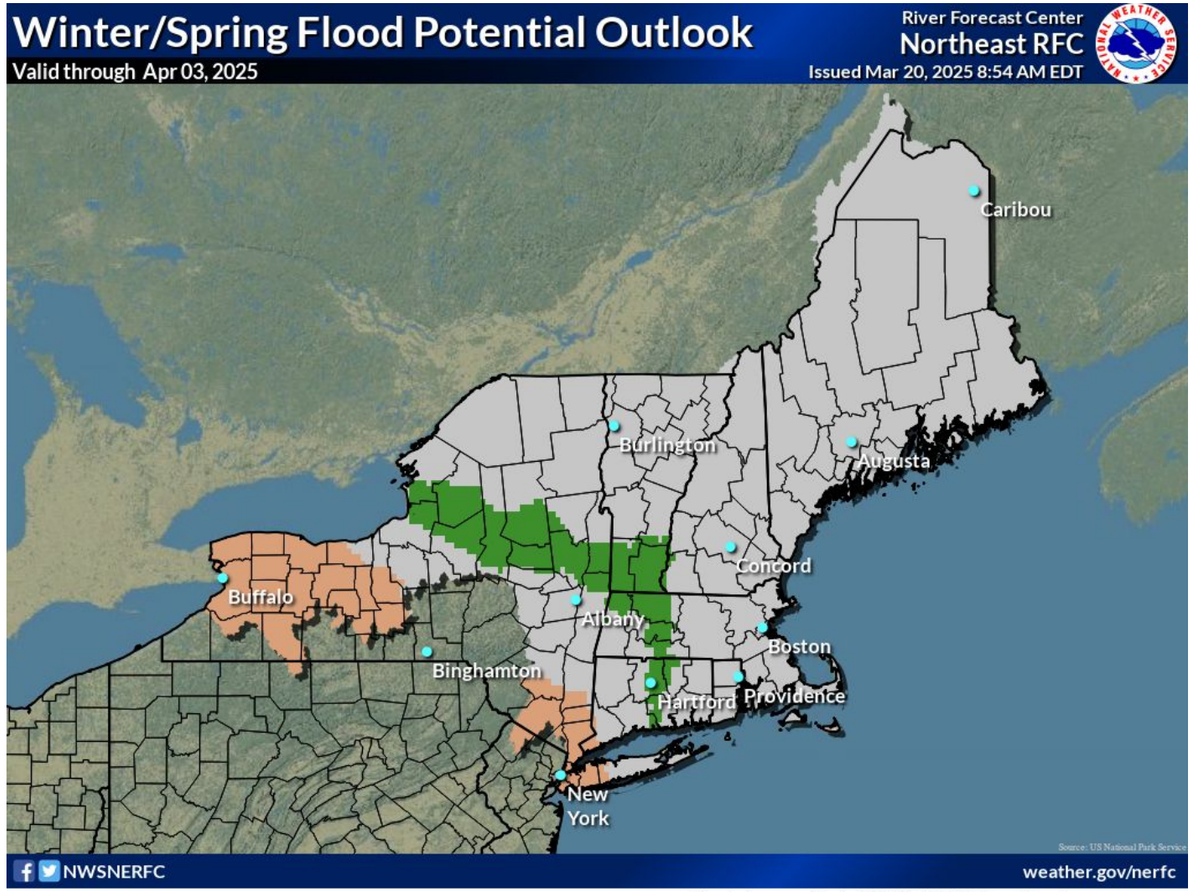
Winter Flood Outlook 2025

March 20, 2025
9:07 AM

Representing the Flood Risk from March 20 through March 27

Key Messages:

- ➔ Short Term: There is a Normal Risk for flooding through late March due to elevated streamflows, frozen ground, and residual snow and river ice in the north
- ➔ Long Term: By April a lack of significant liquid water contained in existing snow cover combined with diminishing river ice levels all point towards a Below Normal river flood risk through the spring months



LEGEND - Flood Risk

Above | Normal | Below

Shaded areas are NERFC forecast region

Disclaimer: This **TWO WEEK** outlook compares the current flood potential to the normal flood potential during the valid period. It takes into account snowpack conditions, antecendent soil moisture, water supply, ice and future weather conditions.

Factors For Assessing Spring Flood Risk

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Lowers Flood Risk

- Little additional snow or a well below normal snowpack
- Cold snowpack with low density
- Dry, warm, and windy weather promoting evaporation
- Gradual warm up in the spring - warm days with cool nights leads to a slow melt
- Thin river ice <6”
- Spring thaw and green-up
- High runoff storage capacity

Increases Flood Risk

- Deeper snowpack with lots of stored water
- Ripened or high density snowpack nearing isothermal melt-out phase
- Frozen ground
- Rapid snowmelt
- Rain on snow events
- Thick river ice >6” capable of ice jams
- Limited storage capacity in streams and lakes

Spring Flood Outlook

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Normal Risk for Flooding in Western Maine and New Hampshire Through March 27

	Short Term Risk- Thru March 27	Long Term Risk- Spring Season
Open River Threat	Normal Elevated streamflows and continued snowmelt conditions	Below Normal Lingering drought, below normal snowpack
Ice Jam Threat	Normal Localized ice break-up and movement possible, mainly in the headwaters	Below Normal Diminished River Ice Conditions

Risk Factor	Condition State
Snow Depth	Below Normal
Snow Water Equivalent	Below Normal
Snow Condition	Above Normal: >35% Density indicative of the warming phase of a ripening snowpack
Potential for River Rises	Above Normal: Current high streamflows with continued melt and runoff events likely
River Ice	Normal to Below Normal: Ice remaining in headwaters only with continued thermal rot

Watershed Flood Risk Levels

March 20, 2025
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Watershed	Short Term Risk Factor (7 Day)	Long Term Risk Factor April and May
Connecticut River	Above Normal	Below Normal
Merrimack River	Normal	Below Normal
Androscoggin River	Normal	Below Normal
Saco River	Normal	Below Normal
Kennebec River	Normal	Below Normal

Key Messages

- Upper Connecticut remains elevated with ongoing snowmelt, with additional rises following rainfall events
- Modest stream rises possible the next 7 days FRI & MON/TUE, though no flooding expected at this time
- River ice remains in the headwaters posing risks for localized ice jam flooding until flushed
- Loss of snow, frost, and river ice combined with reservoir storage and low groundwater levels reduce the risk for flooding in April and May

Snow Depth

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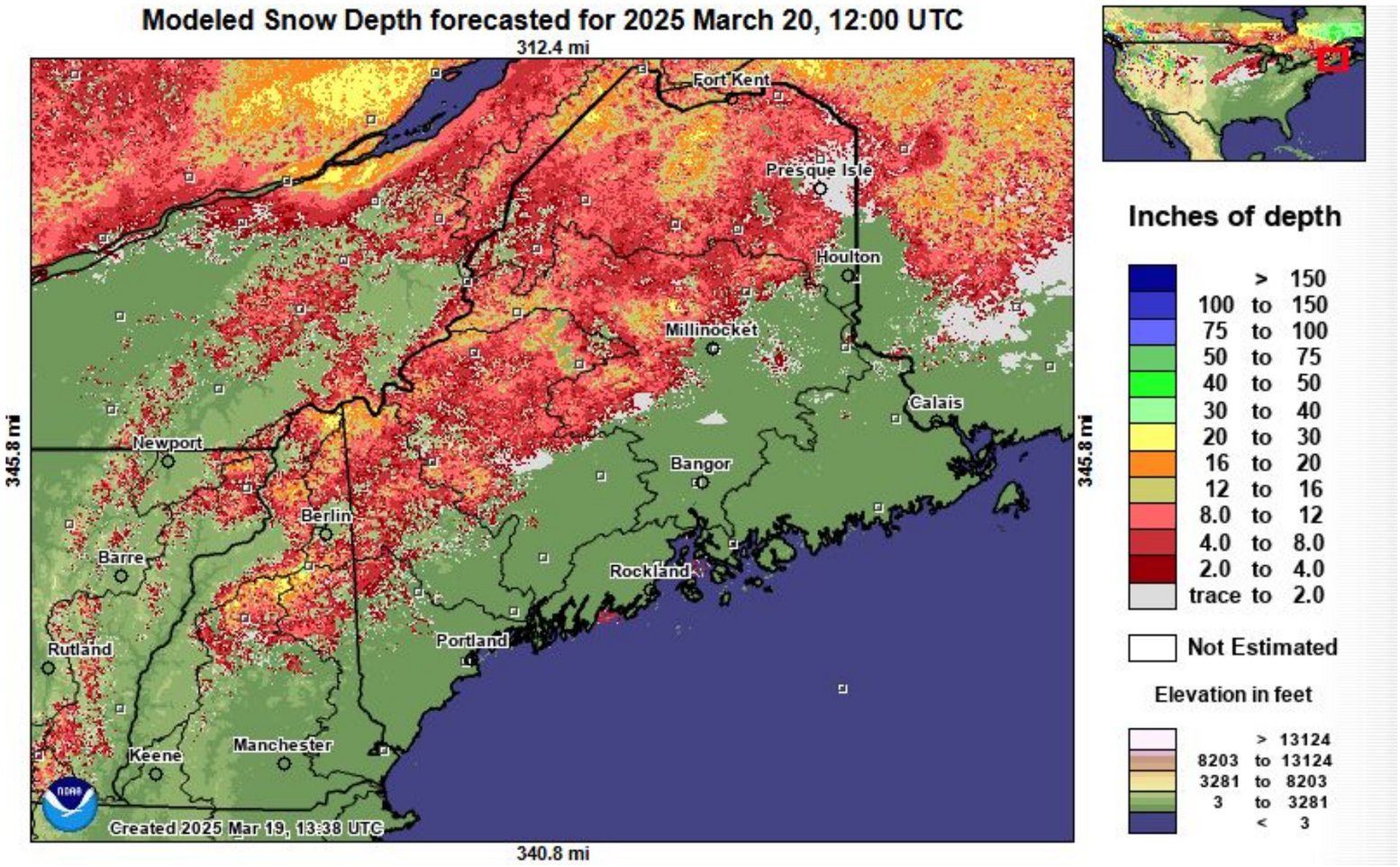

Key Message-

Significant snowmelt in the second week of March with expanding areas of bare ground

Coast to the foothills

Mostly bare ground, some lingering snow in the foothills but less than 30% coverage area

Mountains from 1,000 to 4,000 ft

8 to 18 inches

Mountains above 4,000 ft

18 to 36 inches

Snow Depth Departure from Normal

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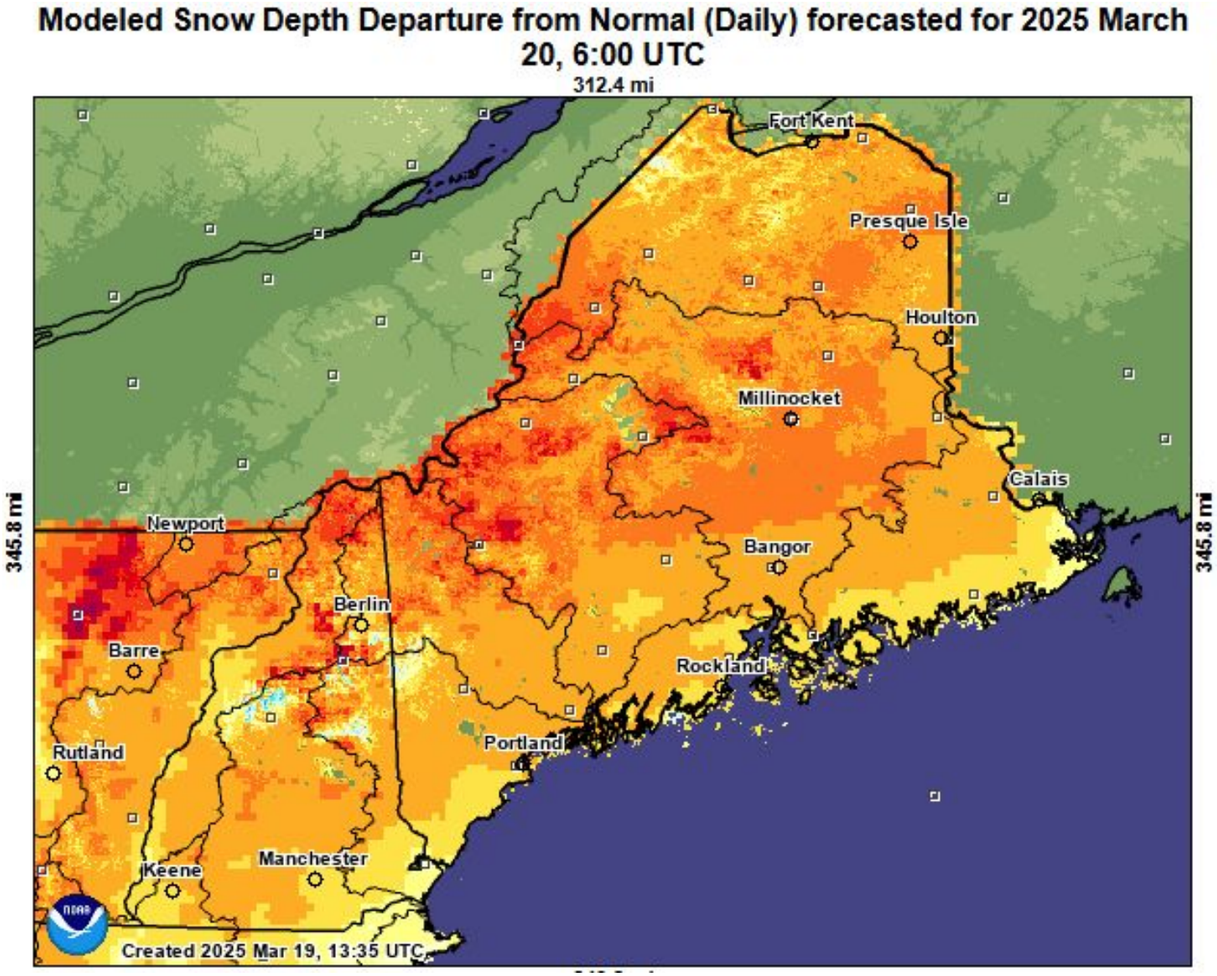

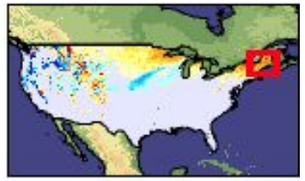

Inches of depth

	>	59
39	to	59
31	to	39
24	to	31
16	to	24
7.9	to	16
3.9	to	7.9
2.0	to	3.9
0.39	to	2.0
-0.39	to	0.39
-2.0	to	-0.39
-3.9	to	-2.0
-7.9	to	-3.9
-16	to	-7.9
-24	to	-16
-31	to	-24
-39	to	-31
-59	to	-39
	<	-59

Not Estimated

Elevation in feet

	>	13124
8203	to	13124
3281	to	8203
3	to	3281
	<	3

Coast to the foothills

Below normal by 6-12 inches

Mountains from 1,000 to 4,000 ft

Below normal up to 2 feet

Mountains above 4,000 ft

Below normal by 2 to 3 feet

Snow Water Equivalent

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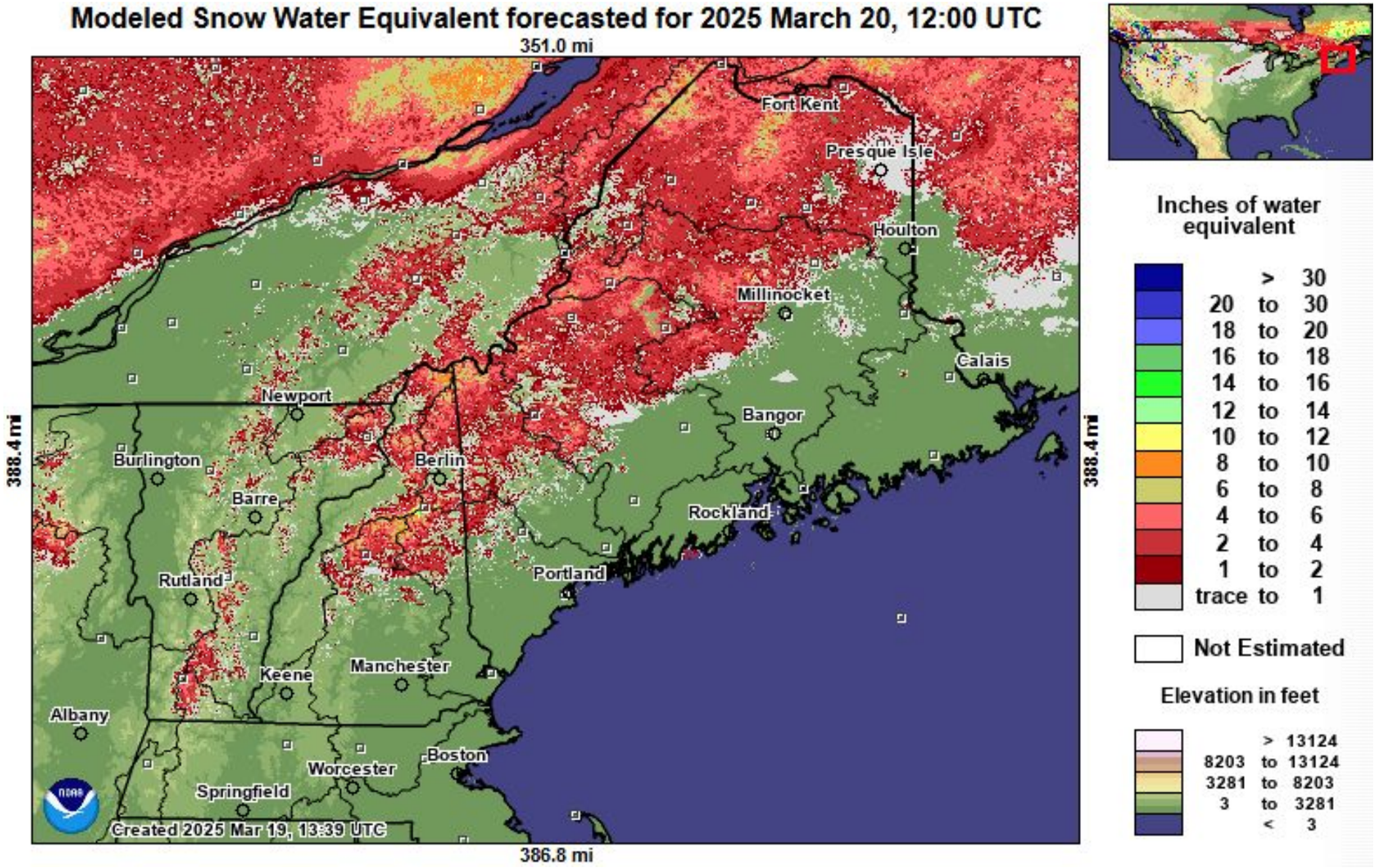

Coast to the foothills

Midcoast Maine and southeastern New Hampshire have mainly bare ground with SWE inconsequential to future flooding

Mountains from 1,000 to 4,000 ft

SWE Averaging 1 to 3 inches

Mountains above 4,000 ft

SWE averaging 3 to 6 inches

Snow Water Equivalent % Normal

March 20, 2025
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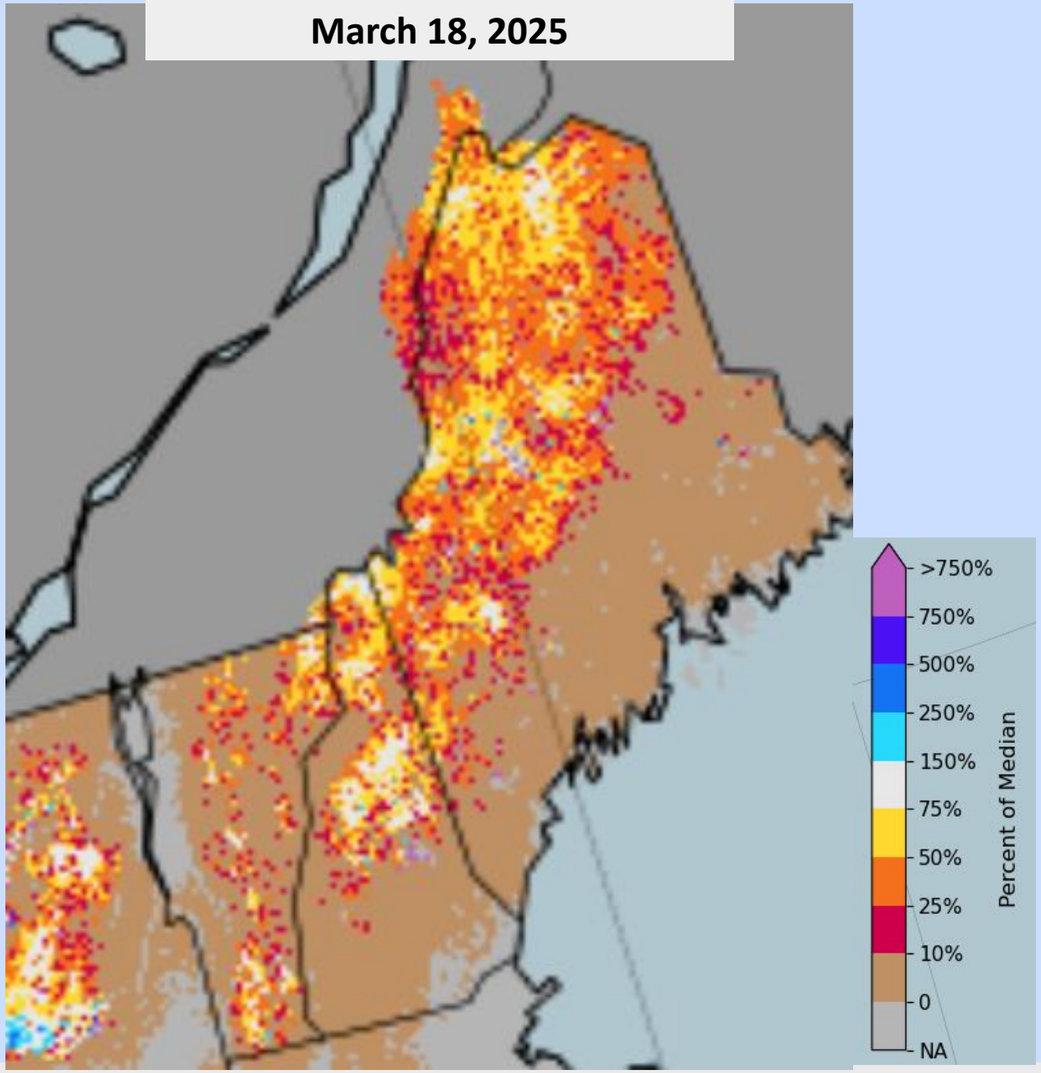
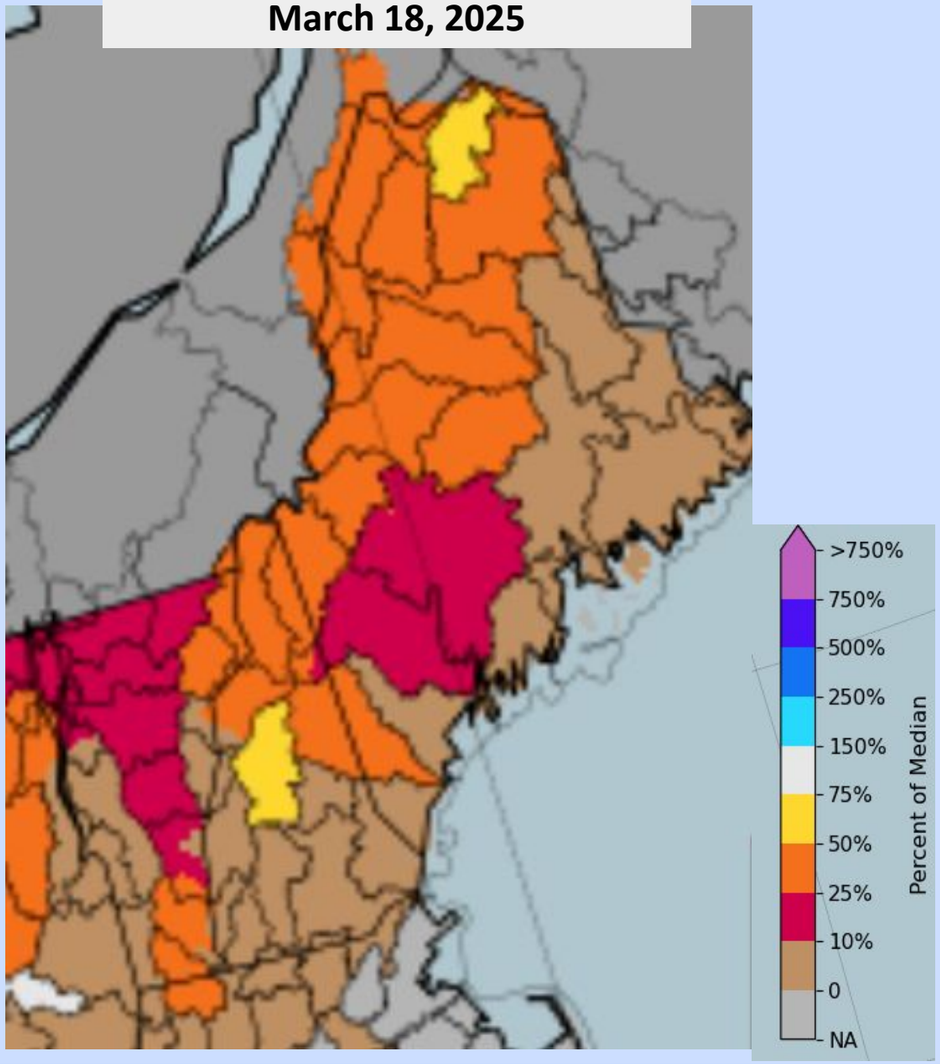
Normals are based on 20 Year Medians 2005-2024

Source NOAA NOHRSC National Snow Analysis

SWE % Normal
March 18, 2025



SWE % Normal by HUC Basin
March 18, 2025



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Snowpack Conditions

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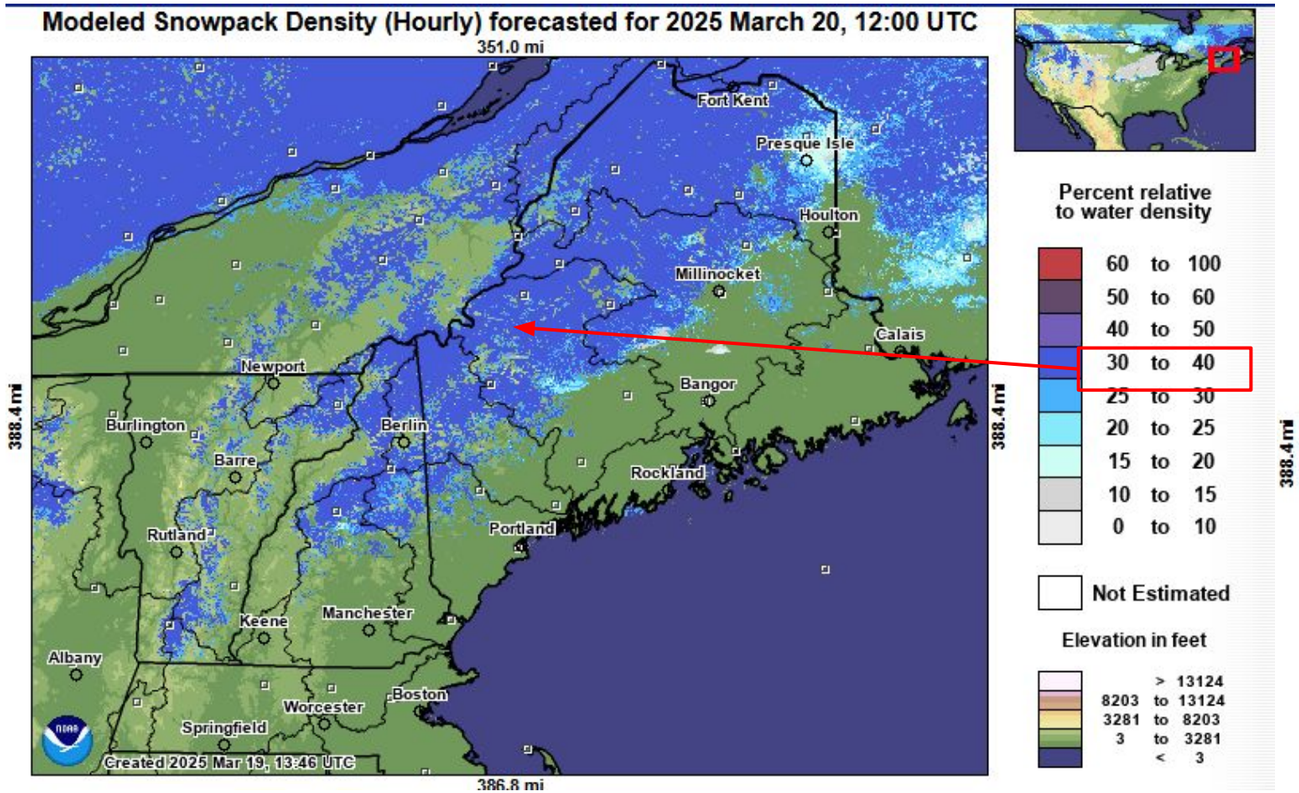

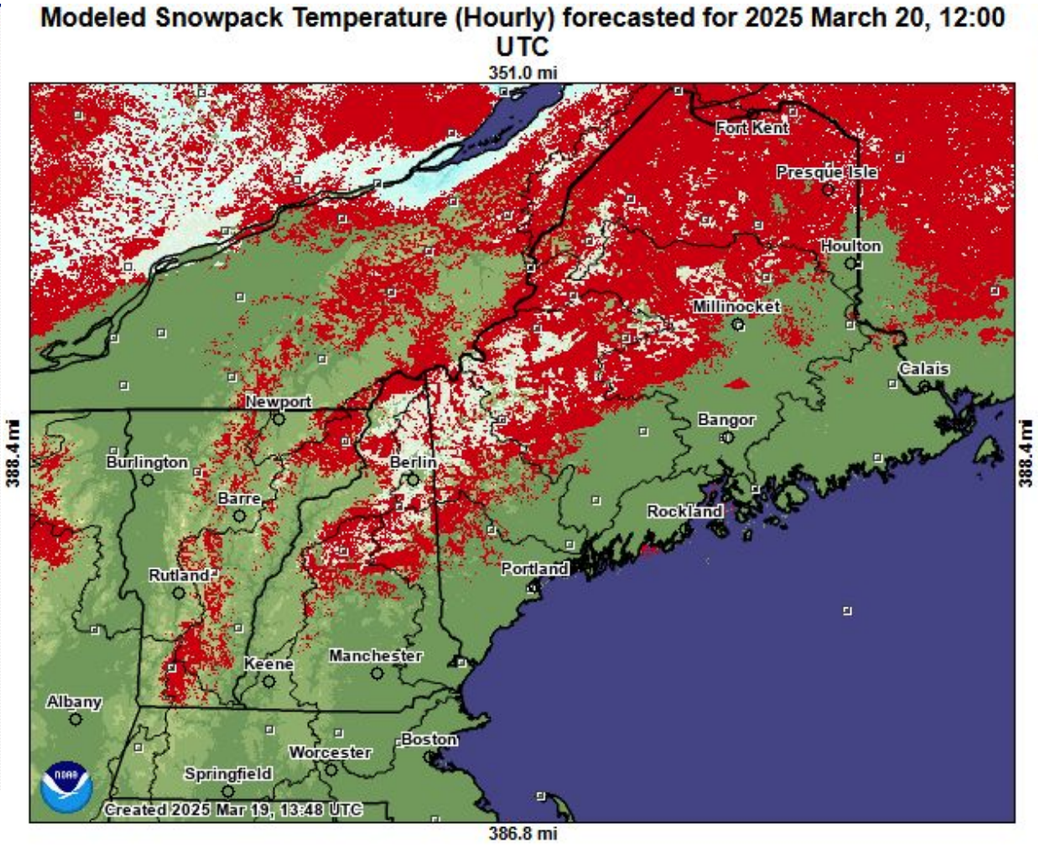

Key Messages

- Snowpack is in the warming phase and nearing isothermal conditions
- Once ripened with a density between 35-40%, the snowpack is able to melt more efficiently

River Ice

March 20, 2025
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Androscoggin River above Rumford on March 18, 2025
Source Mike Arsenault Rumford Fire Department

Key Messages

- Many rivers and streams from the foothills southward have flushed their ice and no longer have a risk of ice jams
- The headwaters of most mainstem rivers still have ice that can flush downstream over the coming week, continuing the risk for localized ice jams
- The remaining ice is expected to undergo thermal rot over the next 7 days, much of which will melt in place
- Only modest stream rises expected the next 7 days, which will need to be monitored for ice movement and the risk for localized ice jam flooding

Precipitation Accum - Next 7 Days

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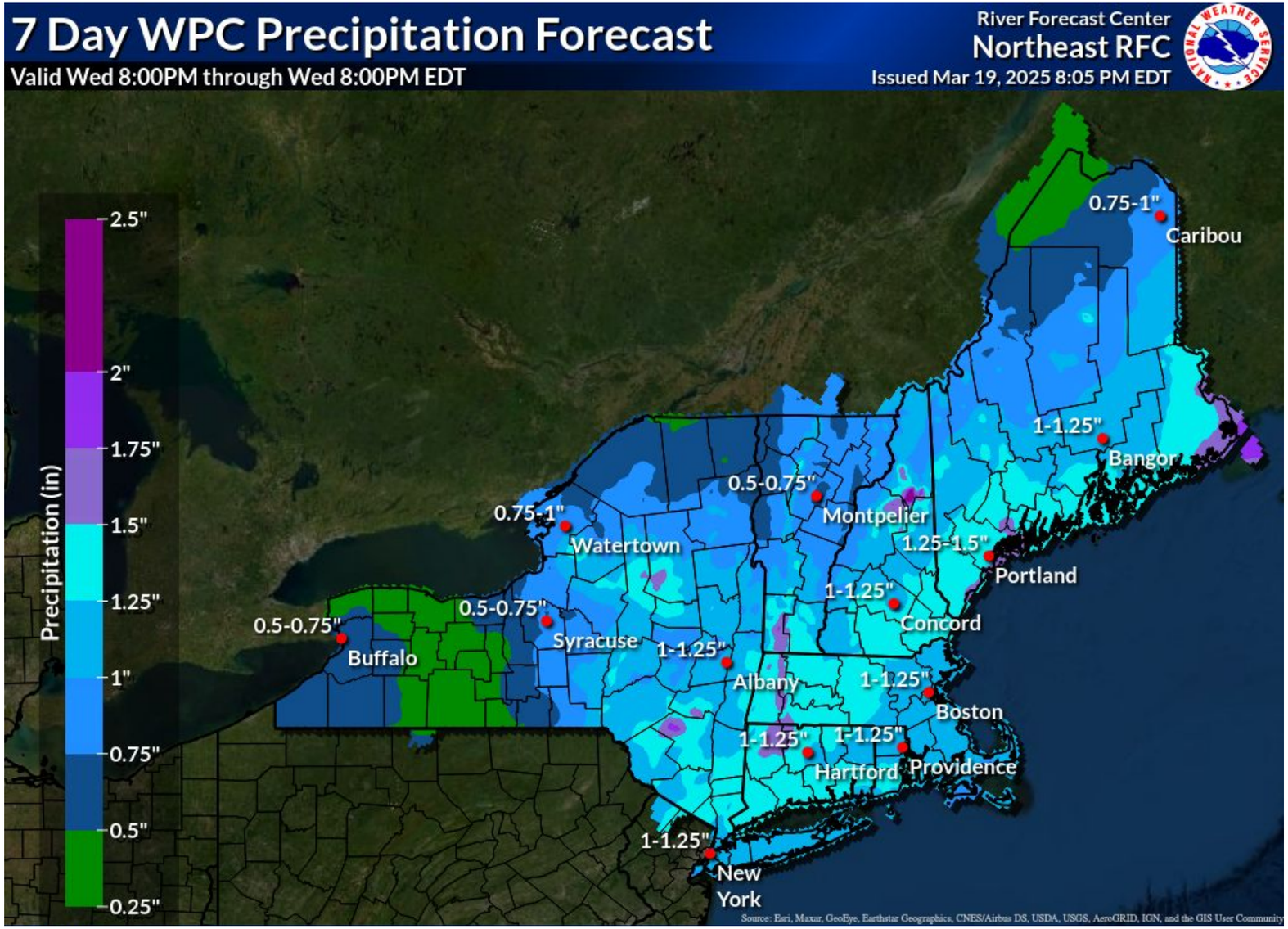
March 20 through March 27 2025



Key Messages

- Active, progressive pattern the next 7 Days with two precipitation events for Friday and Monday-Tuesday
- Precipitation will likely be a rain/snow mix, with higher snow chances in the north and rain in the south

6-10 Day Temperature and Precipitation Outlooks

March 20, 2025
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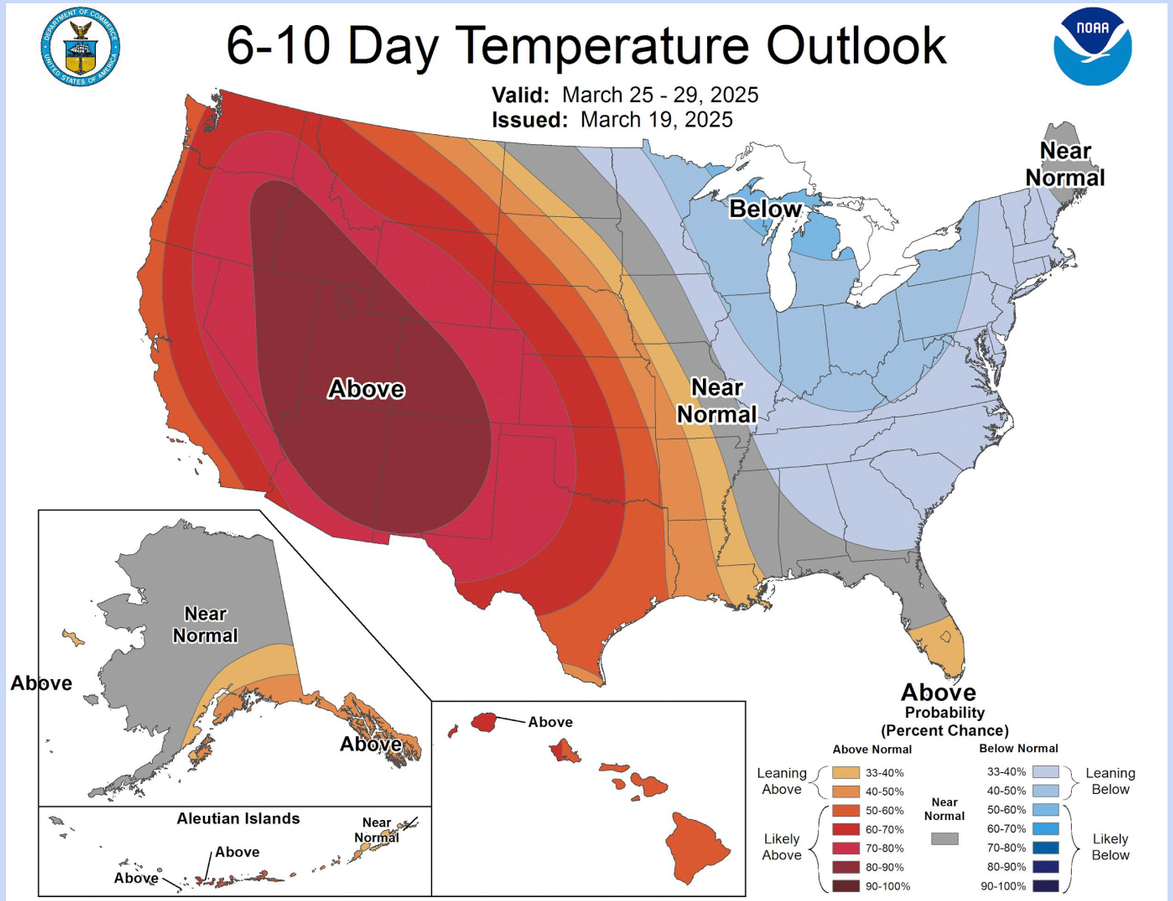

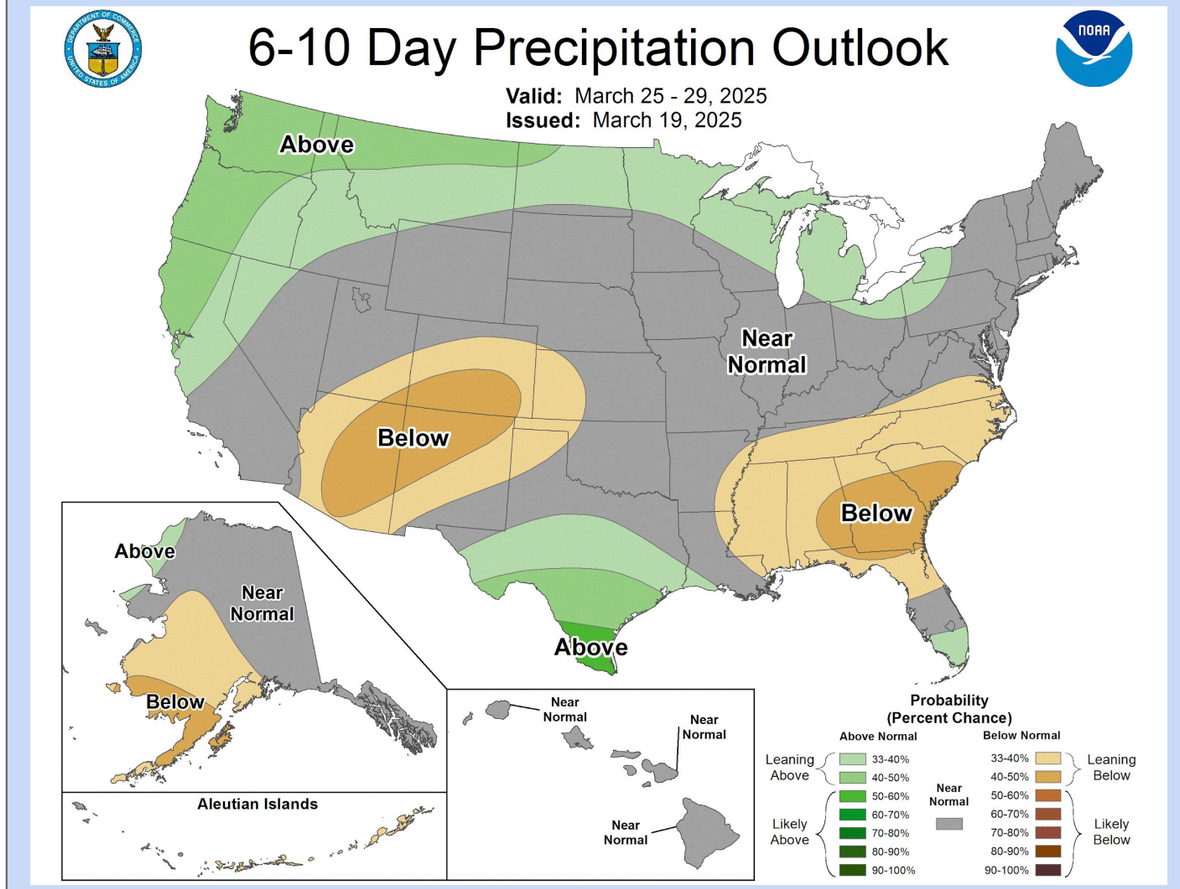

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8-14 Day Temperature and Precipitation Outlooks

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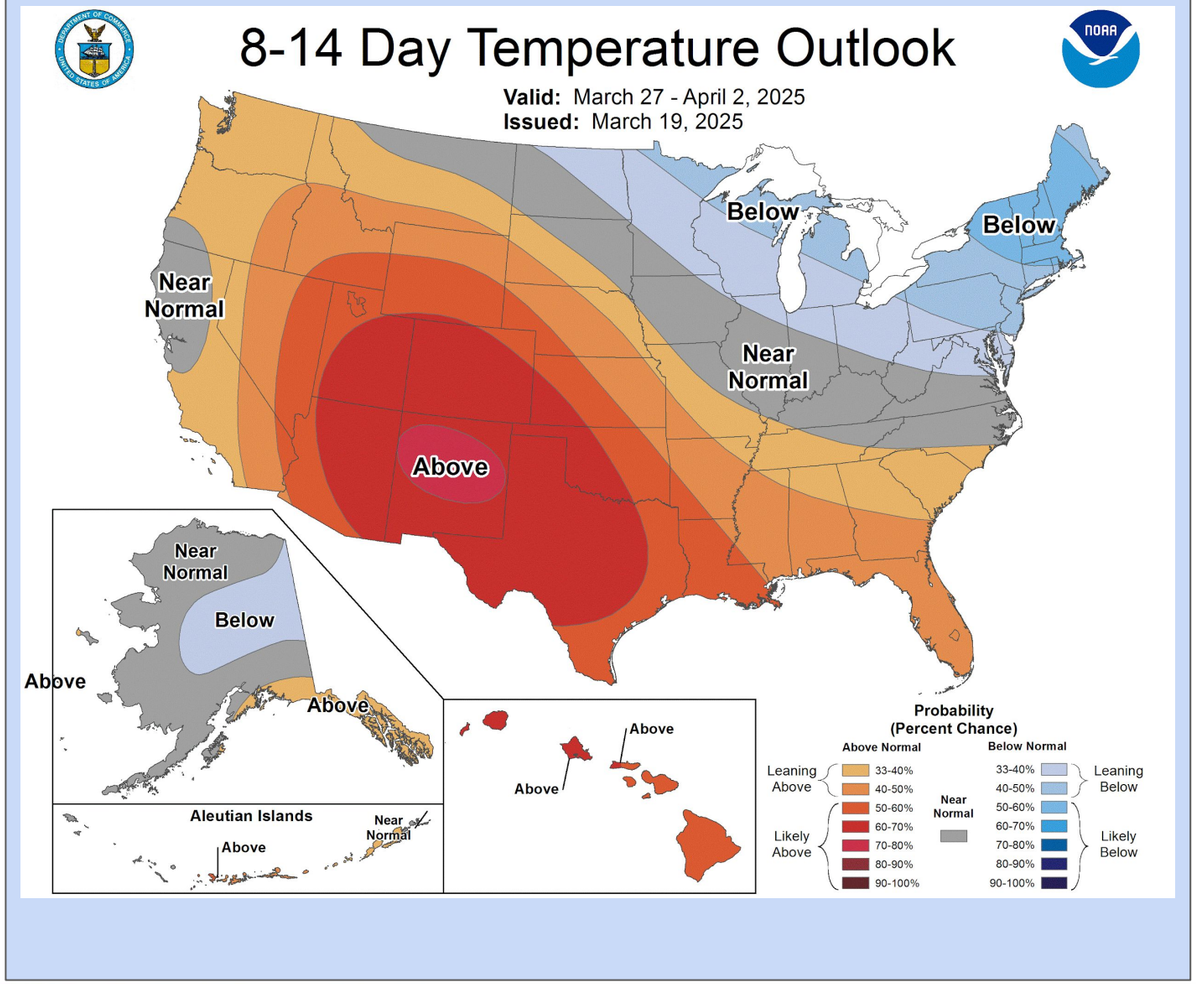

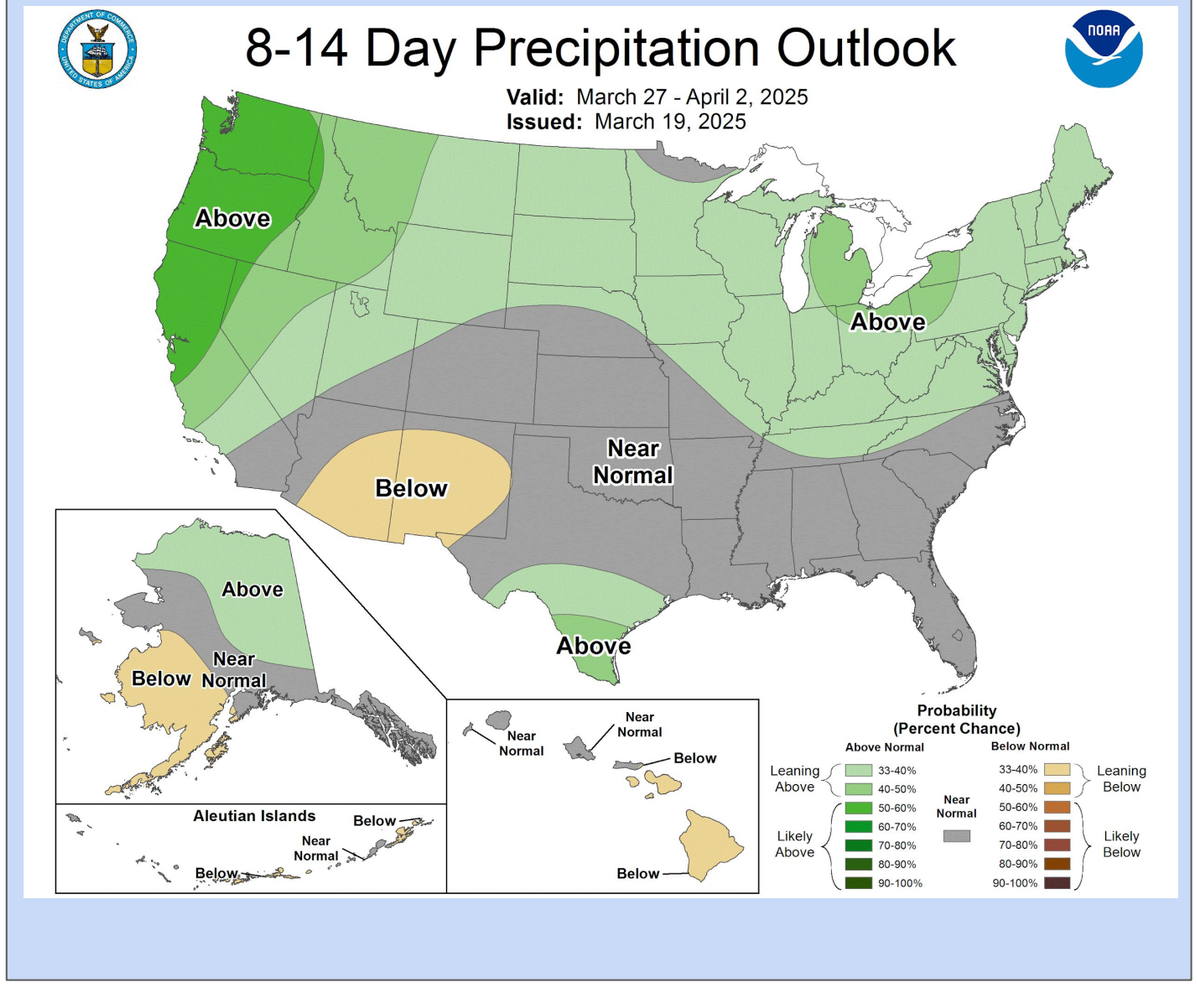

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Ground Conditions

March 20, 2025
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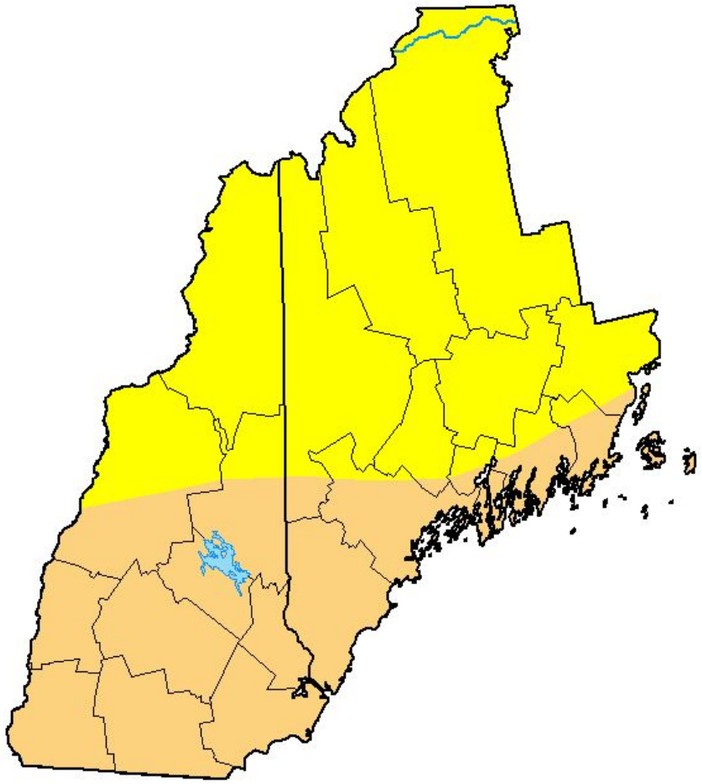
U.S. Drought Monitor

Gray/Portland, ME WFO



March 18, 2025
(Released Thursday, Mar. 20, 2025)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	41.05	0.00	0.00	0.00
Last Week *03-11-2025*	0.00	100.00	41.05	0.00	0.00	0.00
3 Months Ago *12-17-2024*	0.00	100.00	76.11	5.22	0.00	0.00
Start of Calendar Year *01-07-2025*	0.00	100.00	53.86	0.00	0.00	0.00
Start of Water Year *10-01-2024*	57.15	42.85	6.75	0.00	0.00	0.00
One Year Ago *03-19-2024*	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

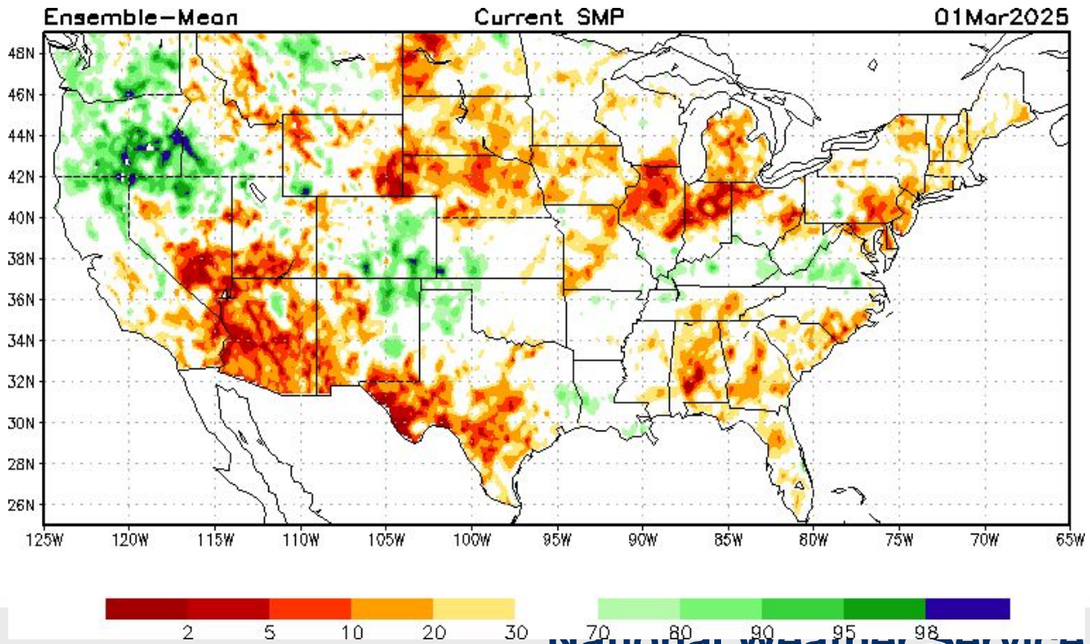
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
Brad Rippey
U.S. Department of Agriculture

droughtmonitor.unl.edu

Key Messages

- Below average soil moisture and groundwater levels, carried over from the fall drought, suggests that once the frost is out of the ground, the soil will be able to absorb snow melt and spring rain
- Some thawing of the top layer has recently occurred in southern locations
- Drought conditions limits the flood risk through spring once the frost is gone



Spring Flood Outlook Summary

March 20, 2025
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7 Day Flood Risk Level

There is a **Normal Risk** for flooding through late March due to elevated streamflows, frozen ground, and residual snow and river ice in the north

Long Term Flood Risk Level

A lack of significant liquid water contained in the snow cover combined with diminished river ice levels and antecedent drought all point towards a **Below Normal** river flood risk through the spring

Key Messages:

- **Despite the declining snowpack, the deep frost across the region keeps concerns for increased runoff should a heavy rain event occur prior to the thaw**
- **River and streams expected to continue seasonal high flows through late March**
- **Ice jam risk decreasing though stream rises Friday and Mon/Tue could result in localized jams**
  - **Most southern streams have flushed leaving river ice present only in northern headwaters**
  - **Residual ice expected to undergo thermal rot with most of it melting in place**
- **Long term spring flood risk is below normal due to well below average snowpack, reservoir capacity, and a low water table**
- **Note: The potential for rapid runoff remains elevated until the seasonal green-up is underway and flooding could occur anytime given sufficient rainfall**

Resources

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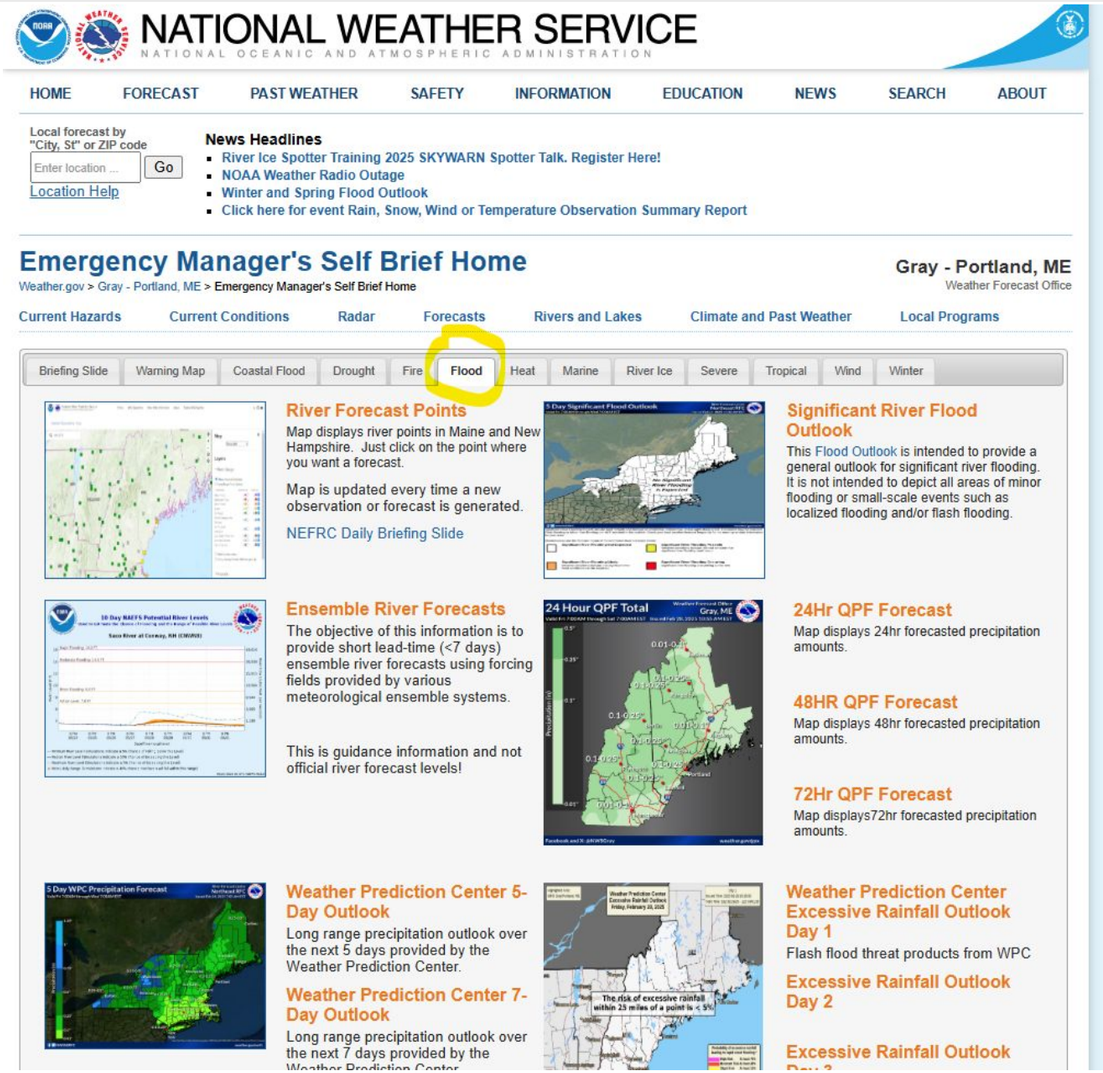
Updated Spring Flood Outlooks will be issued weekly until the snowmelt no longer poses a flood risk

- River observations at forecasts on NWPS
- Snowpack Conditions on NOAA's NOHRSC
- Northeast River Forecast Center Spring Flood Potential Outlook
- Latest GYX Spring Flood Outlook



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Contacts

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