

RI Drought Steering Committee NWS Update

Tuesday February 11th, 2025

Prepared by: National Weather Service Boston/Norton,

MA



Drought Indices from RI Water 2030



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Rhode Island Water 2030 Part 3 State Guide Plan 721

Table 2, Rhode Island Drought Indices and Phases

| Drought Phase | Palmer Drought Index + | Crop Moisture Index | Precipitation + | Ground Water** + | Stream flow + | Reservoirs** |
|---------------|---------------------------|---------------------------------|--|---|---|---|
| Normal | -1.0 to -1.99 | 0.0 to -1.0 | Slightly Dry | 1 month below normal 1 month below normal | 2 consecutive months below normal | Reservoir levels at or near normal for the time of year |
| Advisory | -2.0 to -2.99 | -1.0 to -1.9 Abnormally Dry | 2 month cumulative below 65% of normal | At least 2 out of 3 months below normal | 3 consecutive months below normal | Small index Reservoirs below normal |
| Watch | -3.0 to -3.99 | -2.0 to -2.9 Excessively Dry | 1 of the following criteria met: 3 month cum. <65% or 6 month cum. <70% or 12 month cum. <70% | 4-5 consecutive months below normal | At least 4 out of 5 consecutive months below normal | Medium index Reservoirs below normal |
| Warning | -4.0 and below | > -2.9 Severely Dry | 2 out of 3 of the above criteria met: 3 month cum. <65% and 6 month cum. <65% or 6 month cum. <65% and 12 month cum. <65% | 6-7 consecutive months below normal observation wells recording monthly record lows | At least 6 out of 7 consecutive months below normal | Large index reservoirs below normal |
| Emergency | -4.0 and below | > -2.9 Severely dry | Same criteria as Warning and Previous month was Warning or Emergency | >7 months below normal Observation wells recording monthly record lows | >7 months below normal | Continuation of previous month's conditions |

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Returning to Normal

| Current Drought Phase | Next Drought Phase | Reduce Drought Phase by one category | | |
|--------------------------|---|---|--|--|
| Emergency | Emergency-continued below normal conditions | Groundwater levels at or above normal and no precipitation deficit for past 3 months; and/or water resource problems which prompted the emergency have abated | | |
| Warning | Emergency-worsening conditions or continued below normal conditions | 2 consecutive months of groundwater levels at or above normal and near normal precipitation for past 6 months | | |
| Watch | Warning-worsening conditions Watch continued below normal | 2 consecutive months of groundwater levels at or above normal and near normal precipitation for past 6 months | | |
| Advisory | Watch-worsening conditions | 2 consecutive months of groundwater levels at or above normal and near normal precipitation for past 3 months | | |

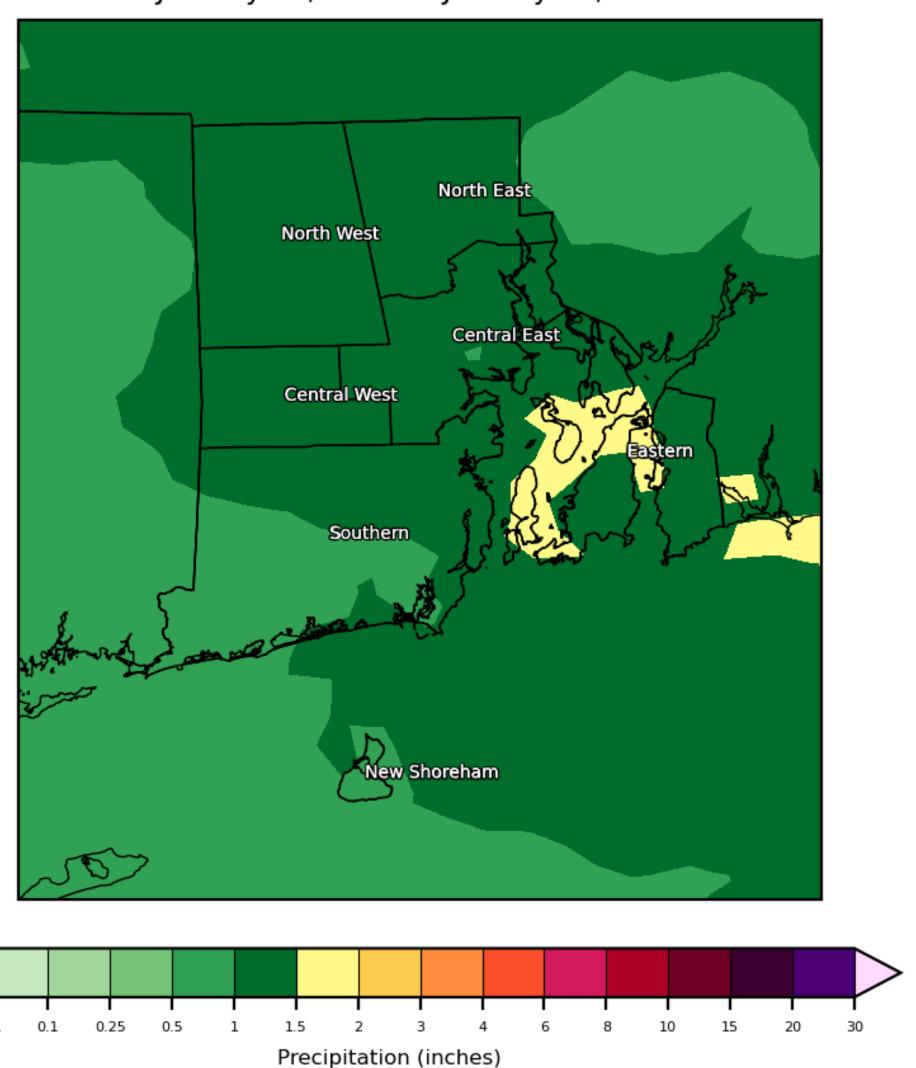
January 2025 Rainfall and Departure



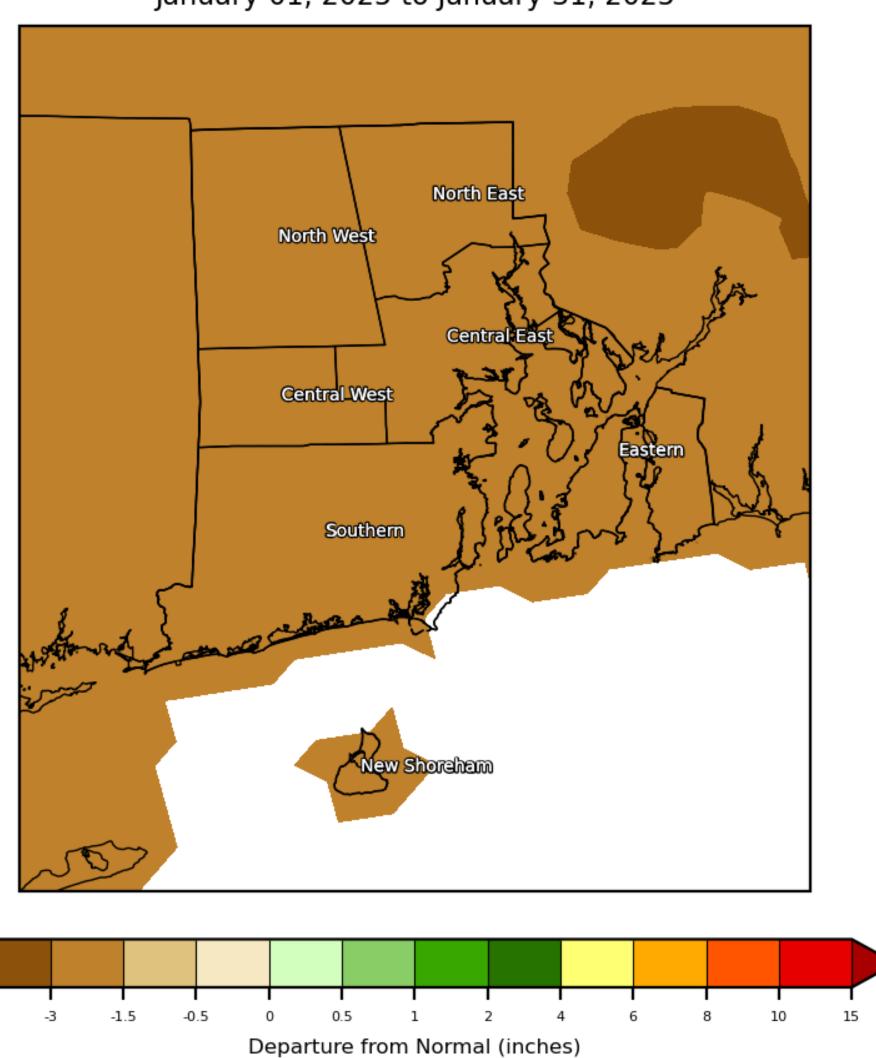
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Accumulated Precipitation (inches) January 01, 2025 to January 31, 2025



Precipitation Departure from Normal (inches) January 01, 2025 to January 31, 2025



-4.5

Nov-Jan and Aug-Jan Percent of Normal

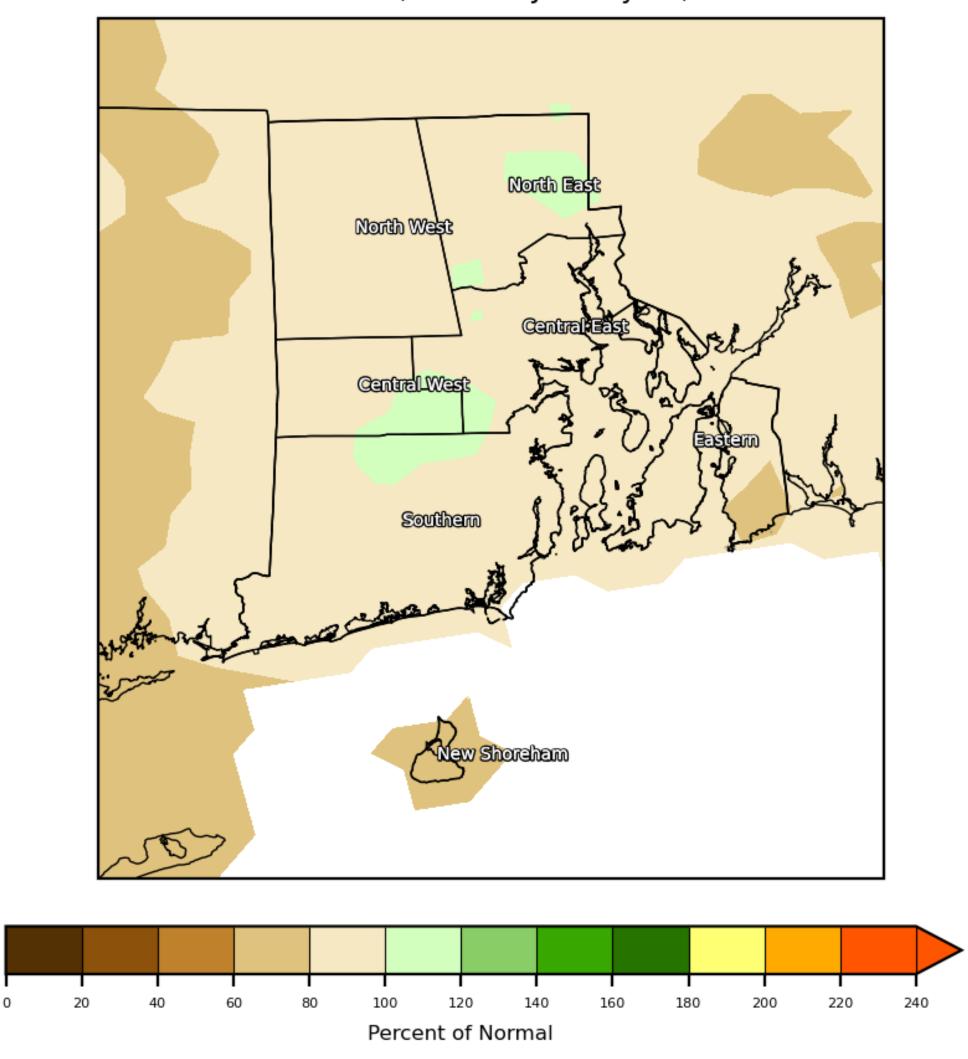
Near to Below Normal



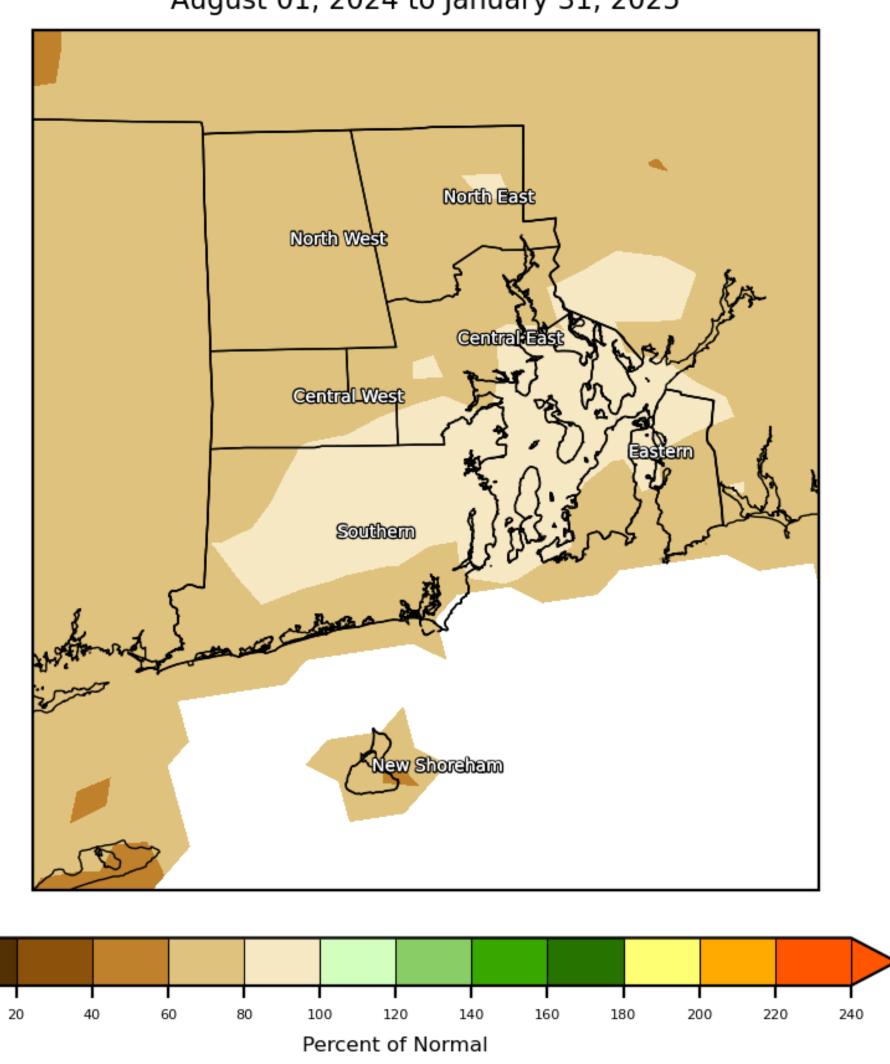
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Precipitation Percent of Normal November 01, 2024 to January 31, 2025



Precipitation Percent of Normal August 01, 2024 to January 31, 2025



Rainfall Percent by Region Last 6 Months



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| | AUG Percent | SEP Percent | OCT Percent | NOV Percent | DEC Percent | JAN Percent | 3 Month Percent (NOV- JAN) |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------------------------|
| Northwest | 84 | 41 | 12 | 63 | 114 | 35 | 73 |
| Northeast | 95 | 46 | 13 | 66 | 127 | 41 | 80 |
| Central West | 91 | 36 | 24 | 77 | 181 | 32 | 101 |
| Central East | 108 | 47 | 19 | 59 | 138 | 38 | 82 |
| Eastern | 95 | 75 | 22 | 59 | 128 | 39 | 78 |
| Southern | 131 | 45 | 22 | 76 | 143 | 38 | 89 |
| New Shoreham | 104 | 18 | 18 | 48 | 93 | 24 | 57 |
| RI Average | 101 | 44 | 19 | 65 | 132 | 35 | 80 |

- Need 3 consecutive months of near normal precipitation to come out of drought
- Nearly all regions above 65% threshold for the 3 month average due to December precipitation
- Three of the seven regions are at or above normal (65%) for two of the last three months.
- January precipitation resets criteria across the state

Rainfall Percent: Last 2,3, 6,12 Months



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Drought Phase

Normal

Advisory

Watch

Warning

Emergency

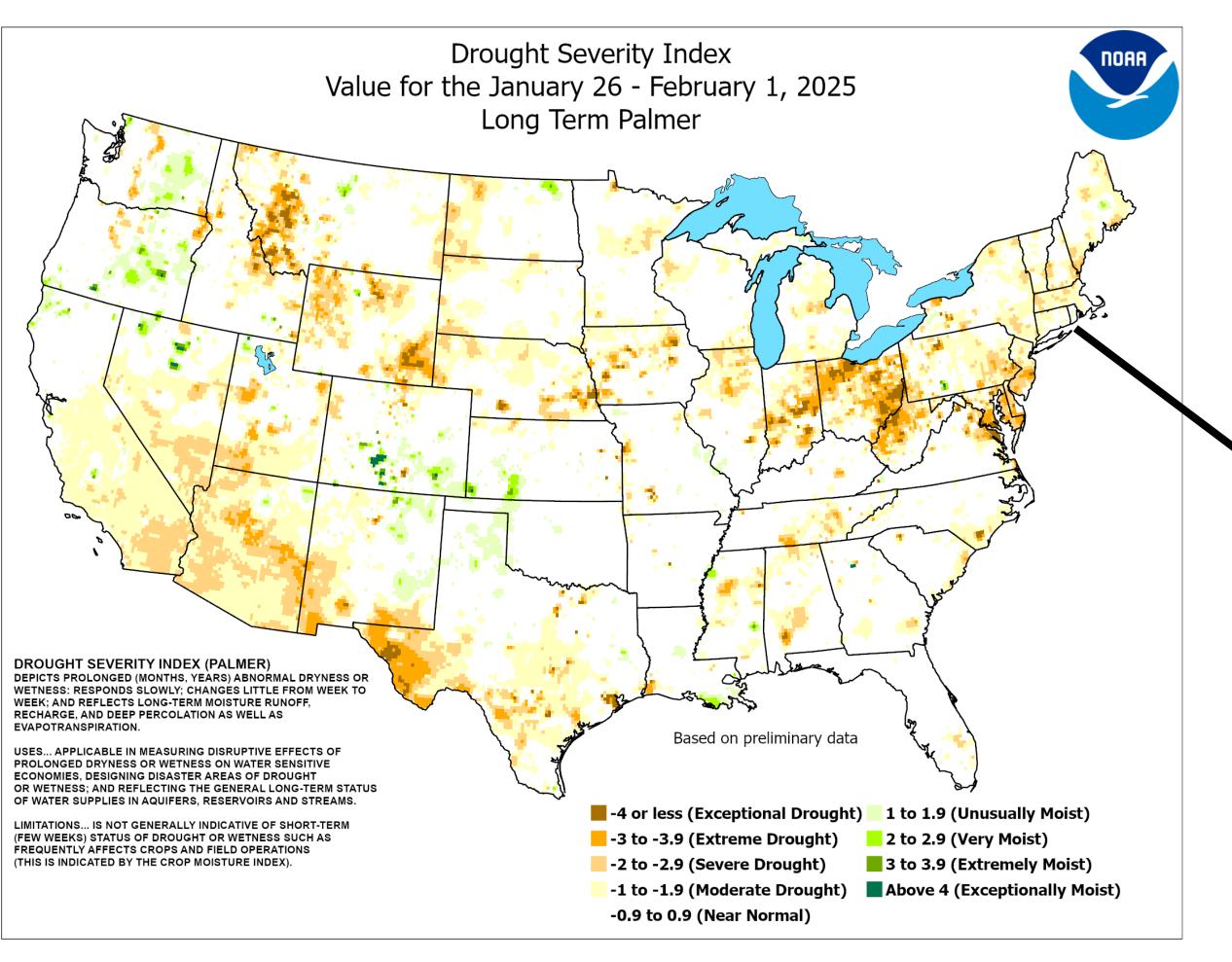
| | 2 Months Dec-Jan | 3 Months Nov-Jan | 6 Months Aug – Jan | 12 Months Feb-Jan |
|-----------------|---------------------|---------------------|-----------------------|----------------------|
| Northwest | 77 | 73 | 59 | 86 |
| Northeast | 87 | 80 | 65 | 88 |
| Central West | 112 | 101 | 76 | 122 |
| Central East | 93 | 82 | 69 | 101 |
| Eastern | 87 | 78 | 70 | 98 |
| Southern | 95 | 89 | 77 | 106 |
| New Shoreham | 61 | 57 | 51 | 79 |
| RI Average | 87 | 80 | 67 | 97 |

- Dry conditions in October no longer reflected in the 3-month average
- Four of seven regions meeting watch criteria (3 month cum. <65 or 6 month cum. <70)
- New Shoreham meeting Warning Criteria (3 and 6 month cum. < 65)
- Six of seven regions are normal with respect to two and three month cum. averages

Palmer Drought Severity Index

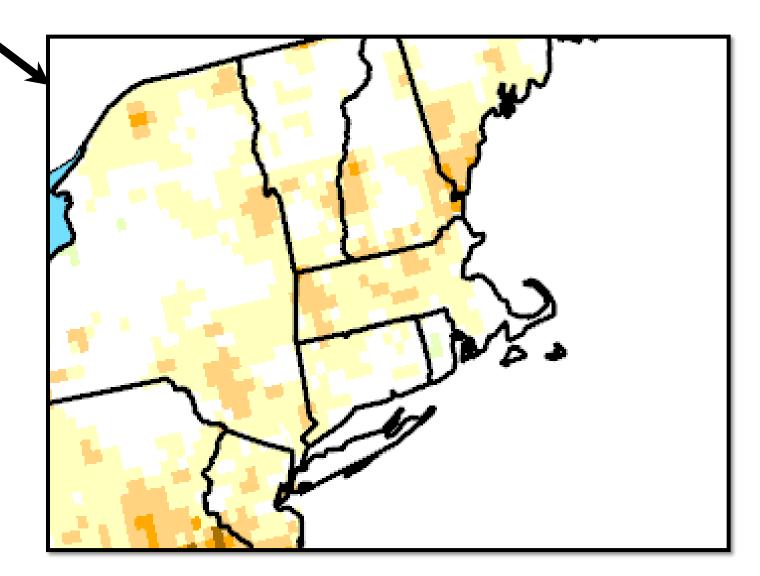
Valid through Week ending February 1st





PDSI for RI: -0.9 to 1.9

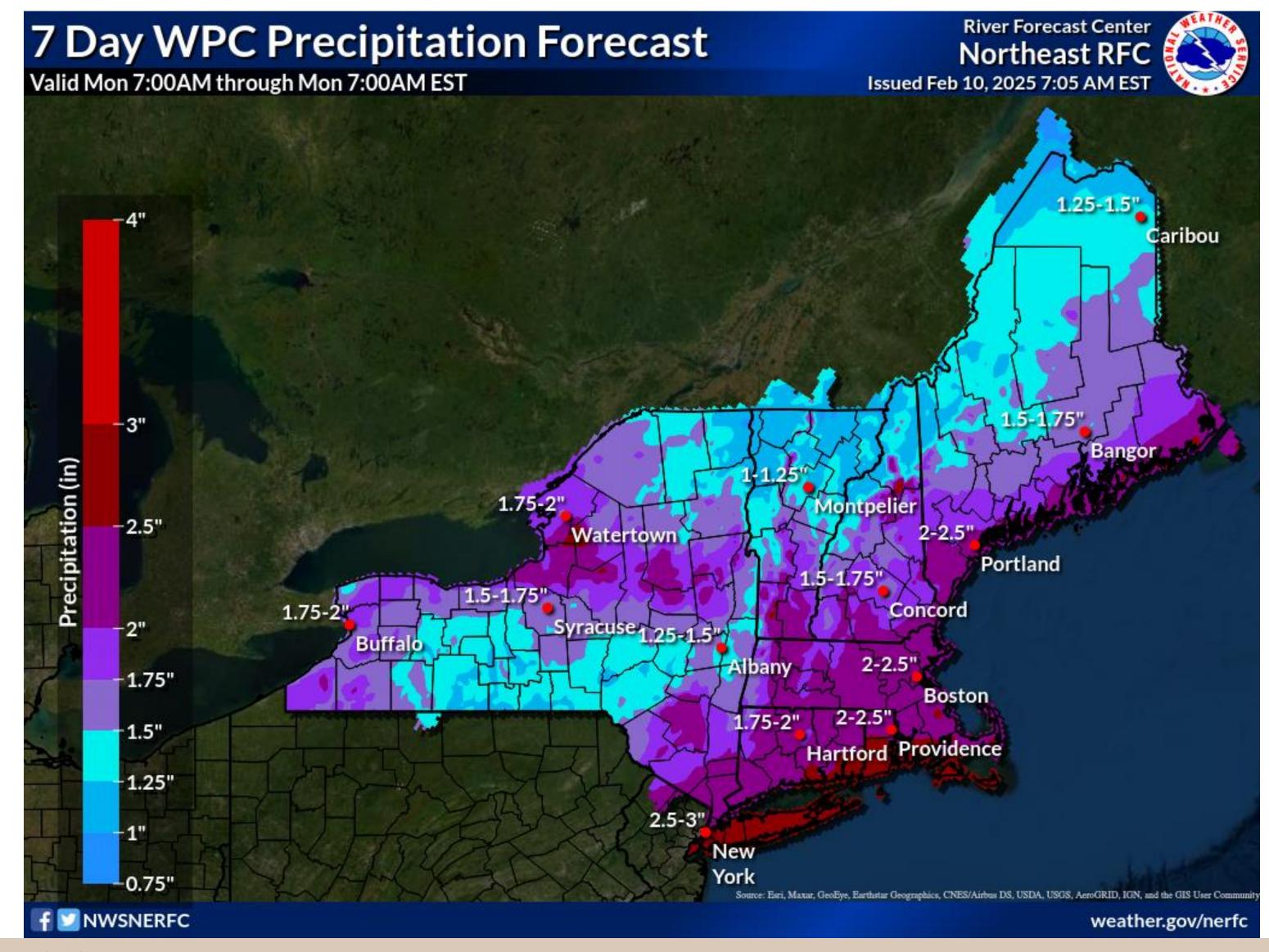
Near to Above Normal



7 Day Precipitation Forecast

Valid 7AM Mon 02/10 - 7AM Mon 02/17





Details

- Active 7 days ahead with multiple opportunities for precipitation
- First event Wed night Thursday
- Second event late Saturday through early Monday (high uncertainty)
- 2-3" of new precip possible by next Monday

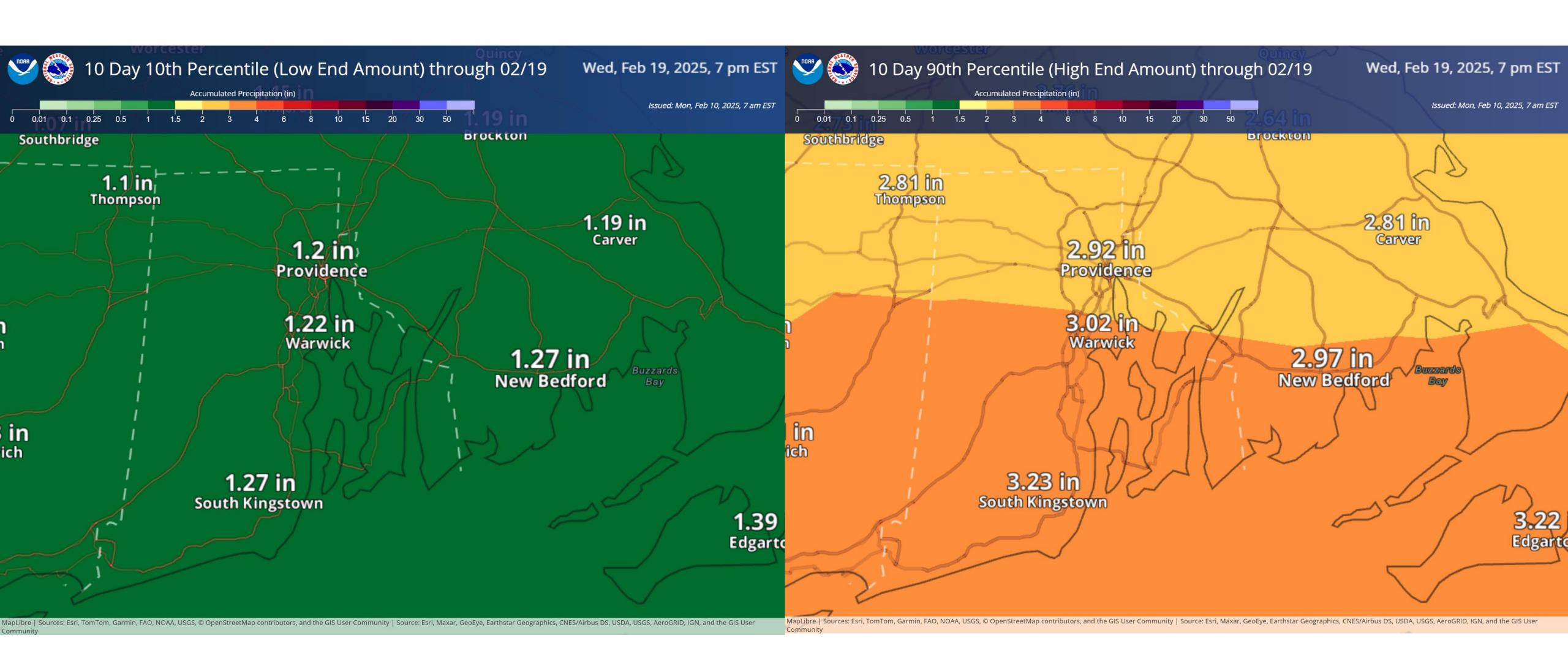
10 Day Ensemble Precipitation Forecast

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Valid 7AM Mon 02/10 - 7AM Mon 02/17



February Precipitation to Date

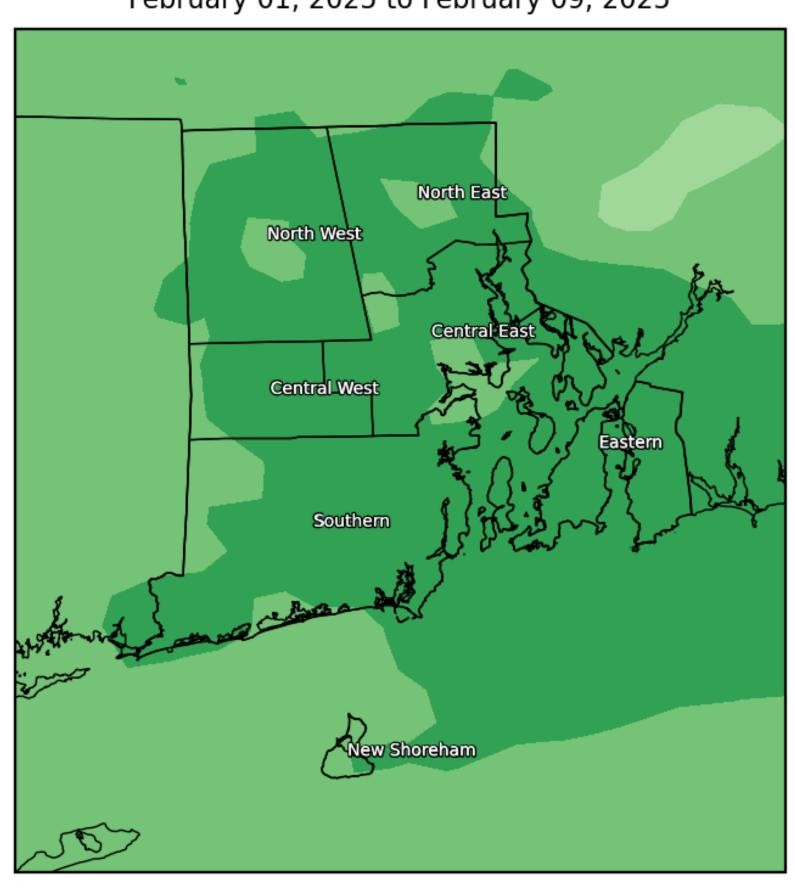
02/01-02/09

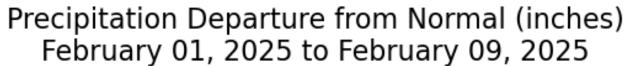


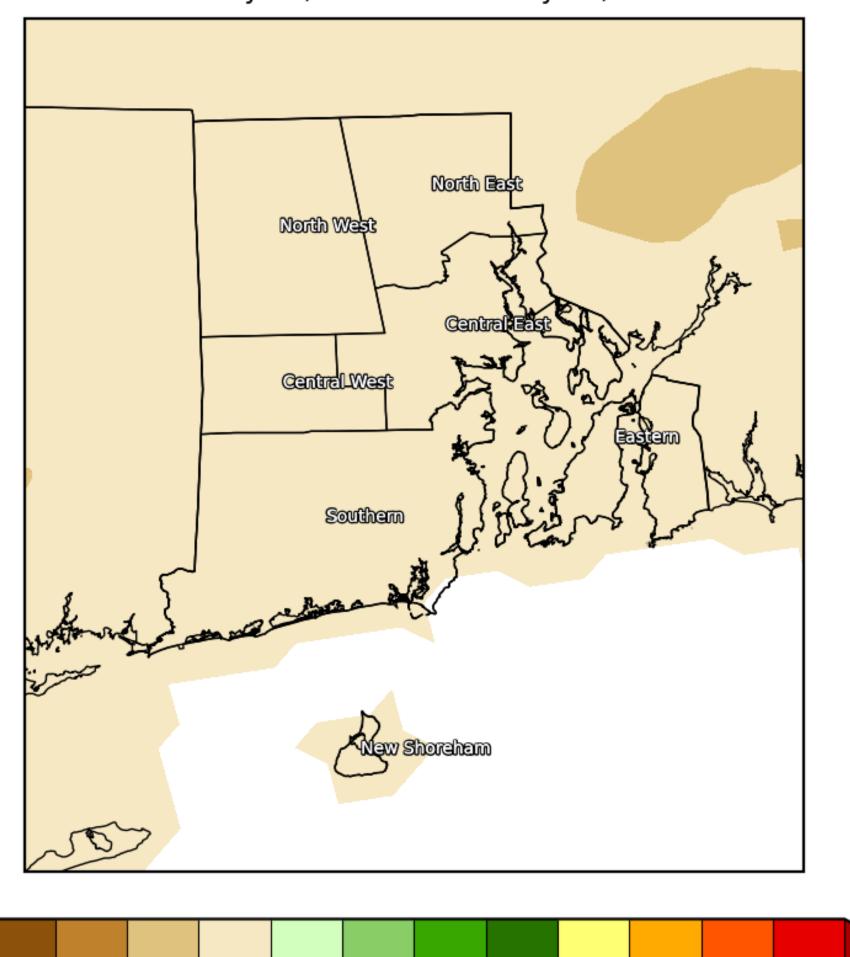
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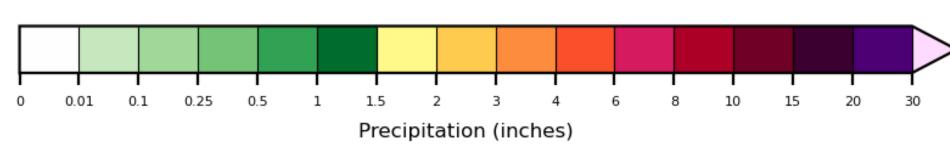
Accumulated Precipitation (inches) February 01, 2025 to February 09, 2025

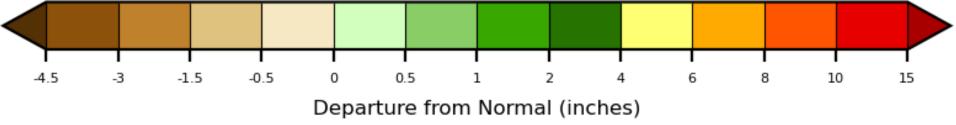






Near Normal

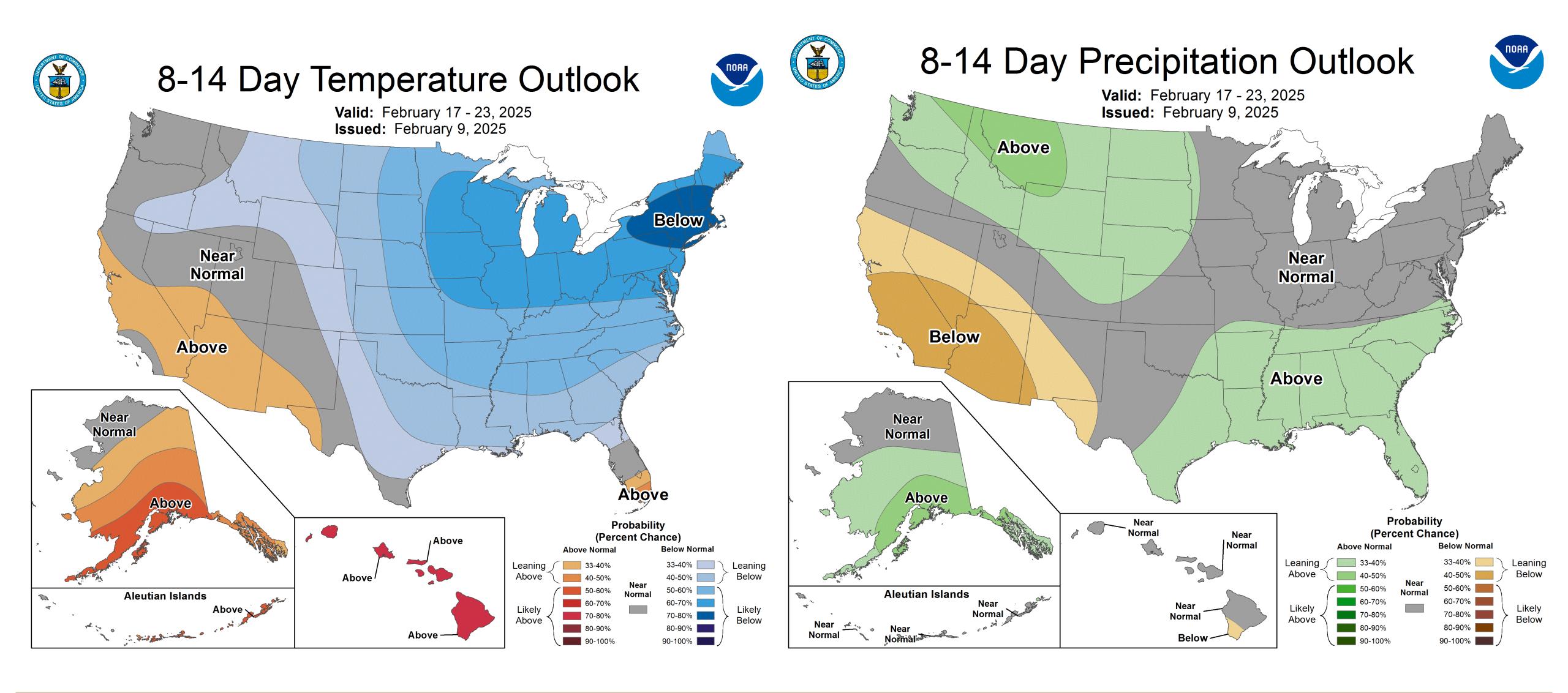




CPC 8-14 Day Outlook

February 17- February 23, 2025

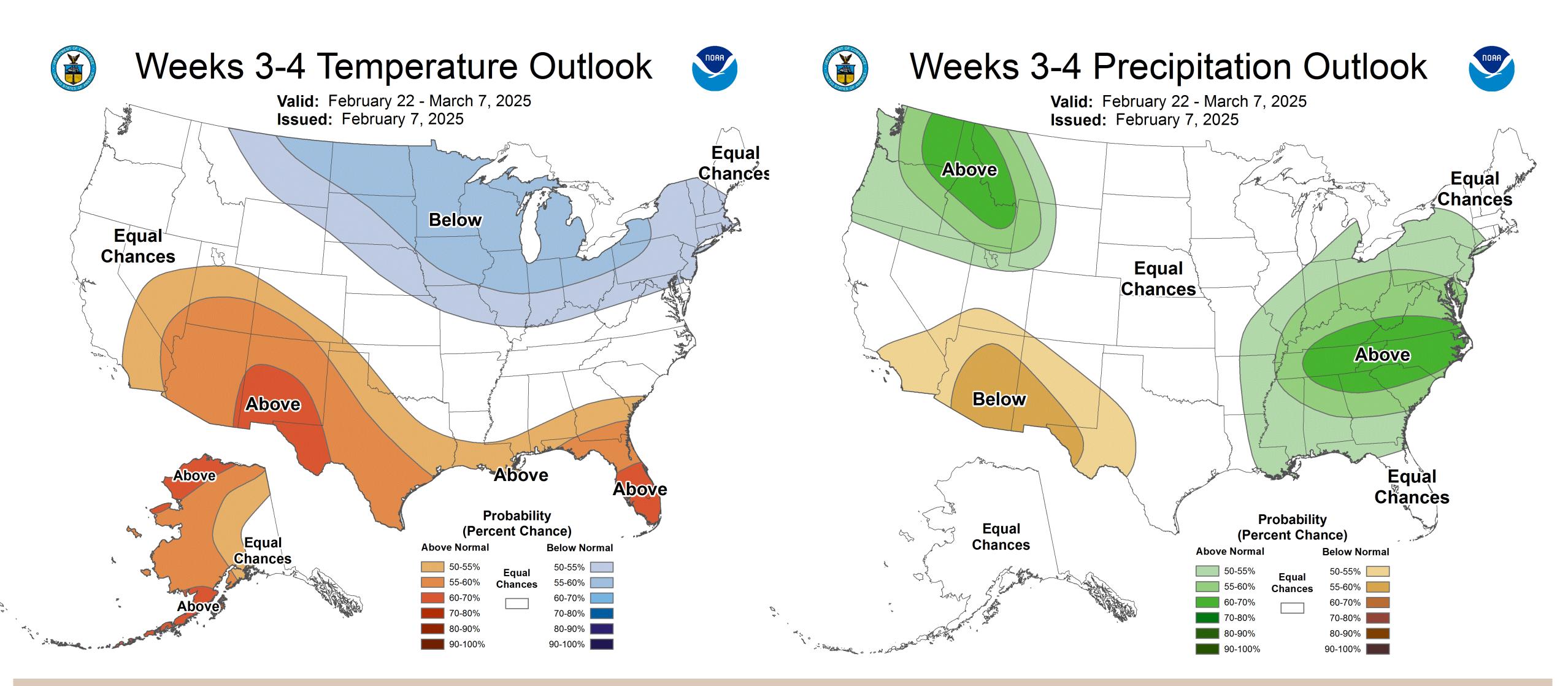




CPC 3-4 Week Outlook

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February 22- March 7, 2025



CPC Outlook for Feb/Mar/Apr



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