



NERFC Drought Task Force Briefing

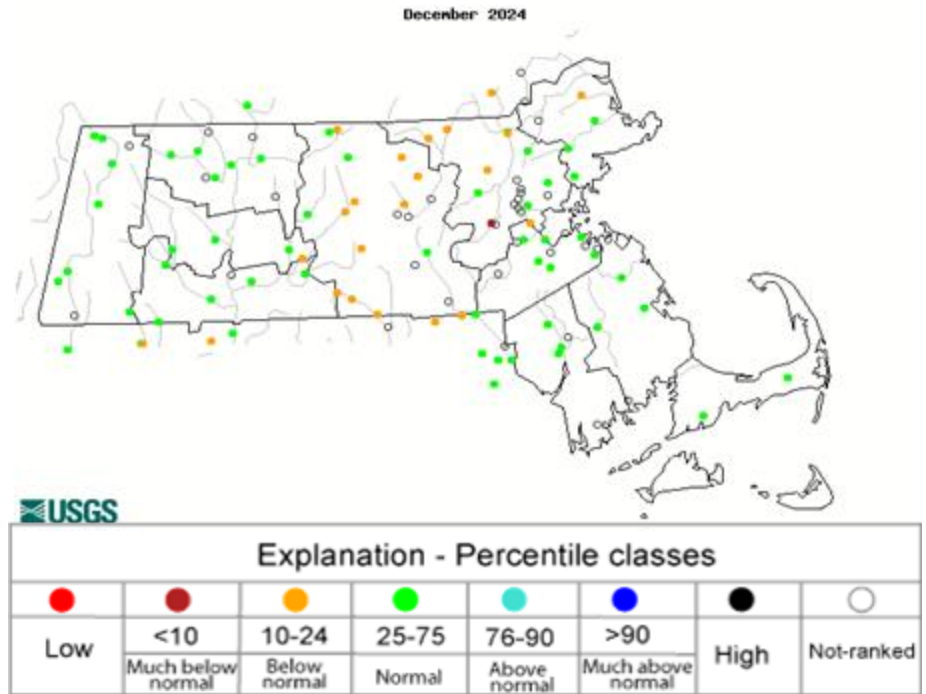
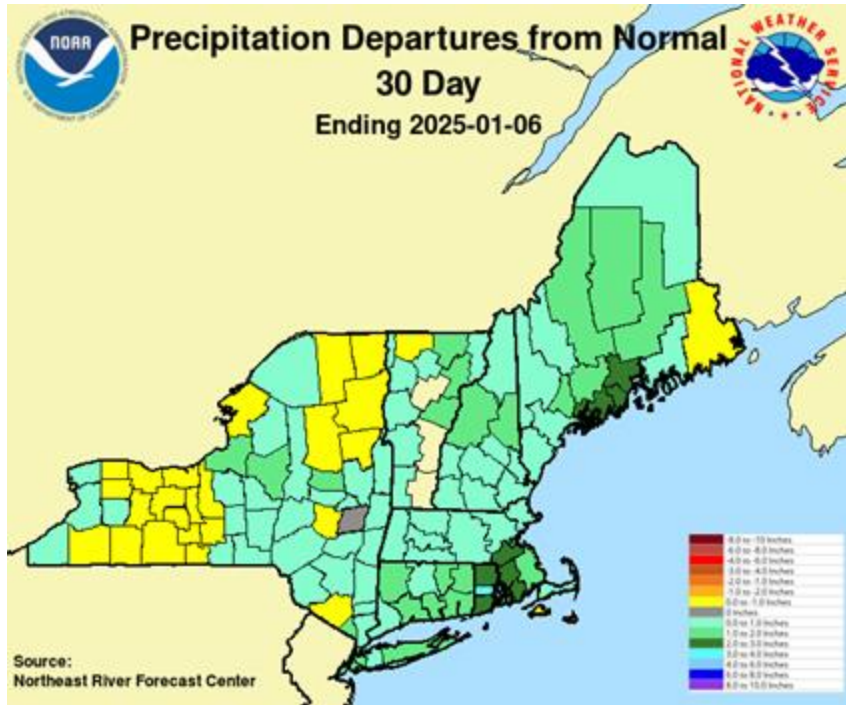
Jan 7th, 2025

Abe Farley, Hydrologist





Conditions Since Dec 5th Meeting



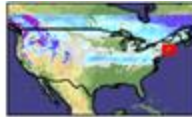
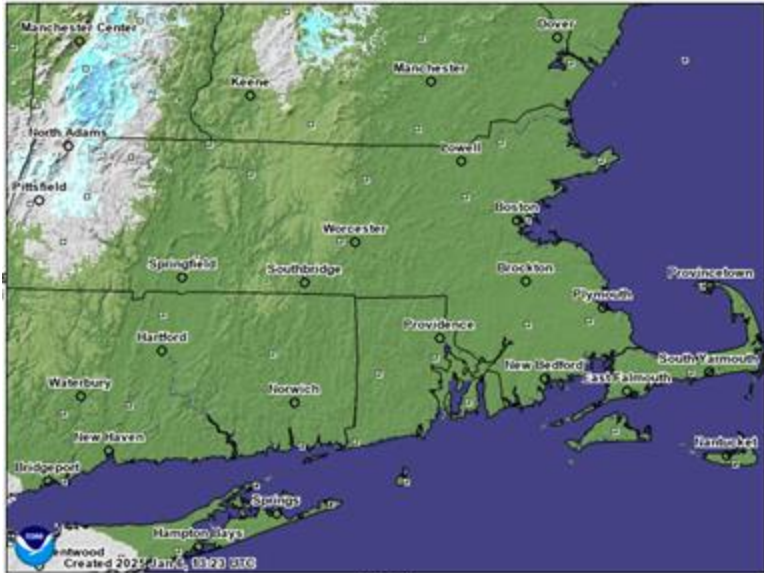
- Near normal to slightly above precipitation in last 30 days
- Monthly streamflows below normal for central MA, near normal elsewhere



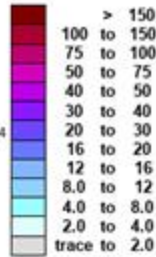
Snow and River Ice Conditions in MA

Modeled Snow Depth forecasted for 2025 January 6, 17:00 UTC

174.6 mi

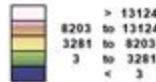


Inches of depth



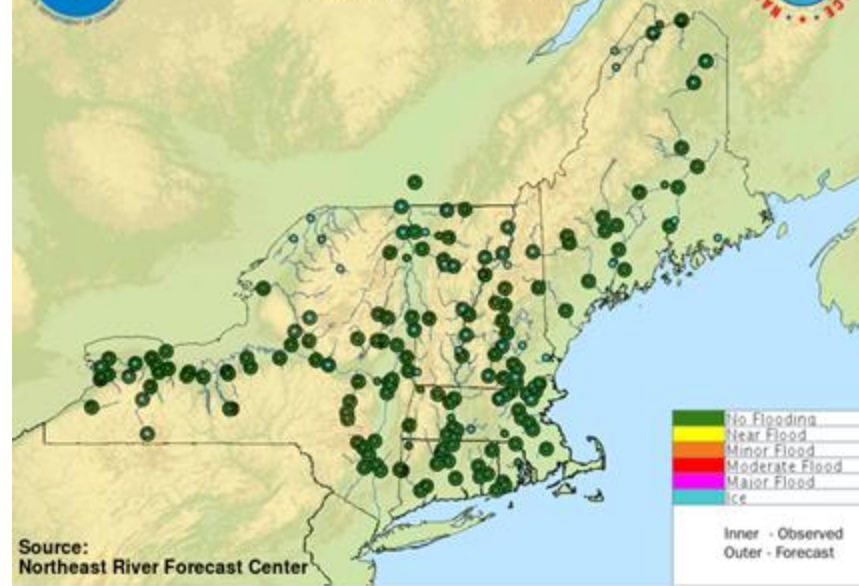
Not Estimated

Elevation in feet

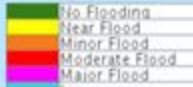


Observed and Forecast River Conditions

January 06, 2025 - 1 PM



Source: Northeast River Forecast Center

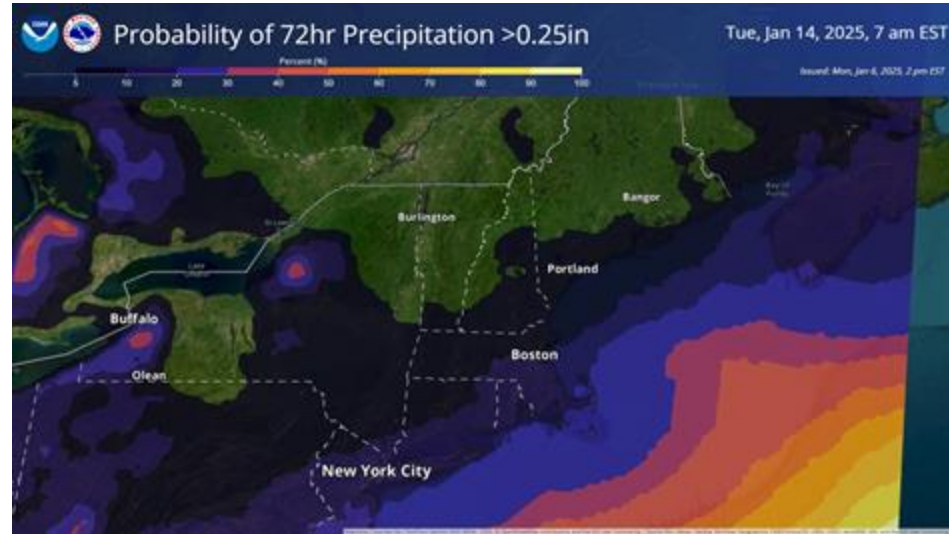
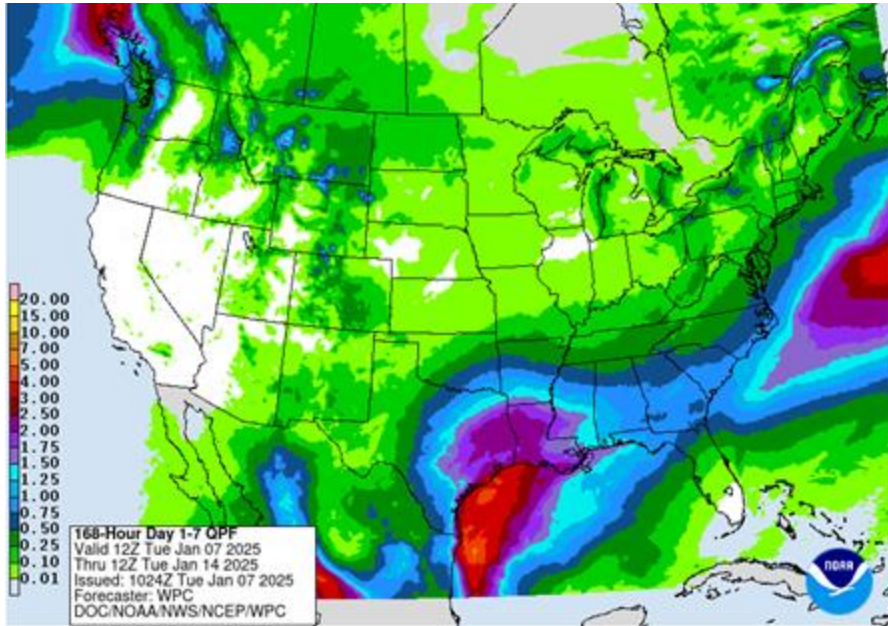


Inner - Observed
Outer - Forecast





Future Precipitation Forecast and Probabilities



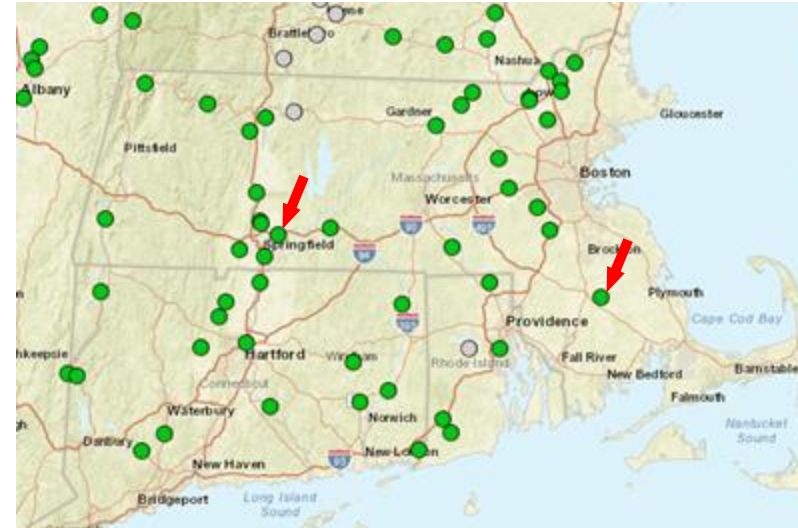
NWS 7 day QPF forecast (left) and National Blend of Models probability over 0.25in (right)



NERFC River Ensemble Forecast Outlook

- A 52 member ensemble run for all NERFC forecast points to give us an idea of the possible range of river flows out 10 days.
- Will show results for...
 - Taunton River at Bridgewater (BDGM3)
 - Chicopee River at Indian Orchard (INDM3)

Map Legend			
Chance of Exceedance			River Forecast Centers
30%	Level	70%	
●	Action	■	Middle Atlantic River Forecast Center
●	Minor Flood	■	Northeast River Forecast Center
●	Moderate Flood	■	Ohio River Forecast Center
●	Major Flood	■	Southeast River Forecast Center
●	= less than 30% chance of reaching Action level		
○	= no critical levels defined for this point		





NERFC River Ensemble Forecast Outlook (Bridgewater, MA)

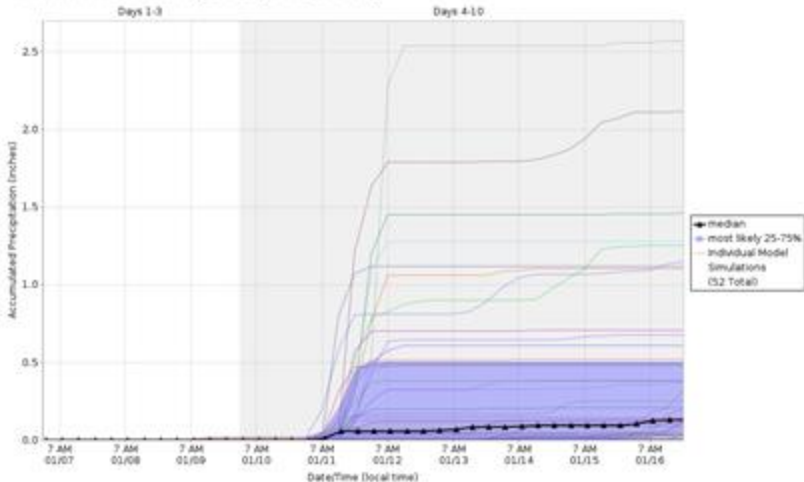
NAEFS - 10 Day Accumulated Precipitation Probabilities

Based on North American Ensemble Forecast System Model Simulations
Used to Estimate the Range of Possible River Levels



Jan 07 - Jan 17, 2025

Taunton River at Bridgewater, MA (BDGM3)



Model runtime: 01:00 AM EST Jan 07 2025
Northeast River Forecast Center

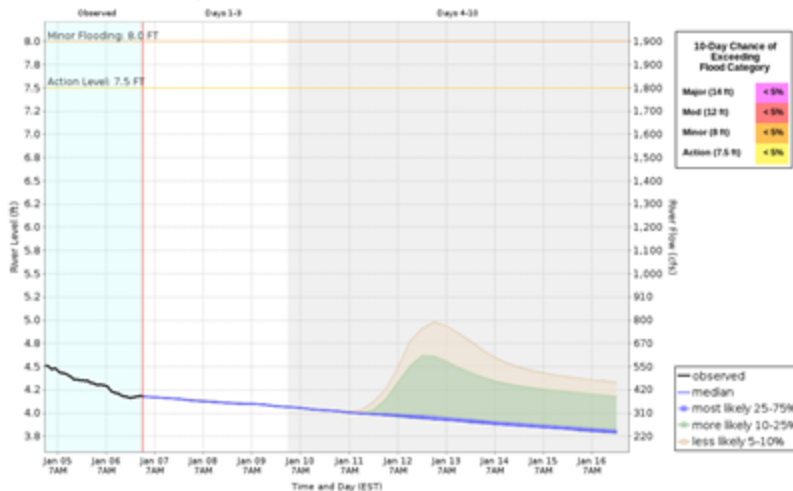
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Taunton River at Bridgewater, MA (BDGM3)



Model runtime: 01:00 AM EST Jan 07 2025
Northeast River Forecast Center

- Handful of ensembles runs showing precipitation amounts over 0.5in in the next 10 days





NERFC River Ensemble Forecast Outlook (Indian Orchard, MA)

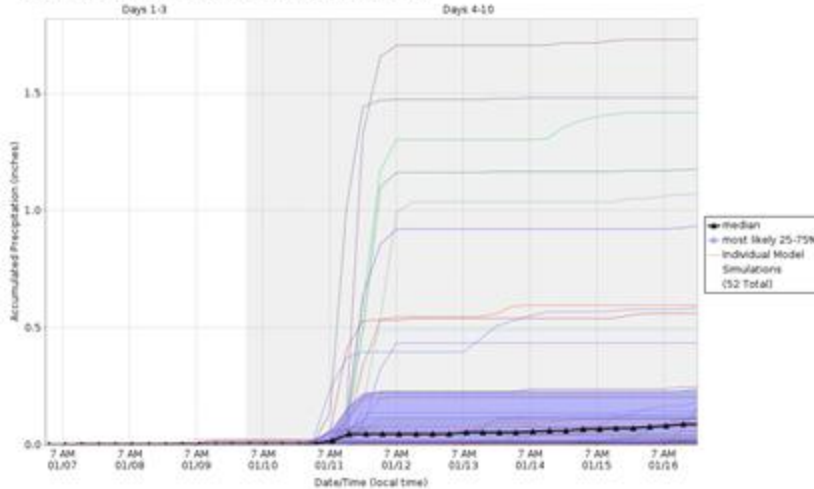
NAEFS - 10 Day Accumulated Precipitation Probabilities

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Jan 07 - Jan 17, 2025

Connecticut River at Indian Orchard, MA (INDM3)



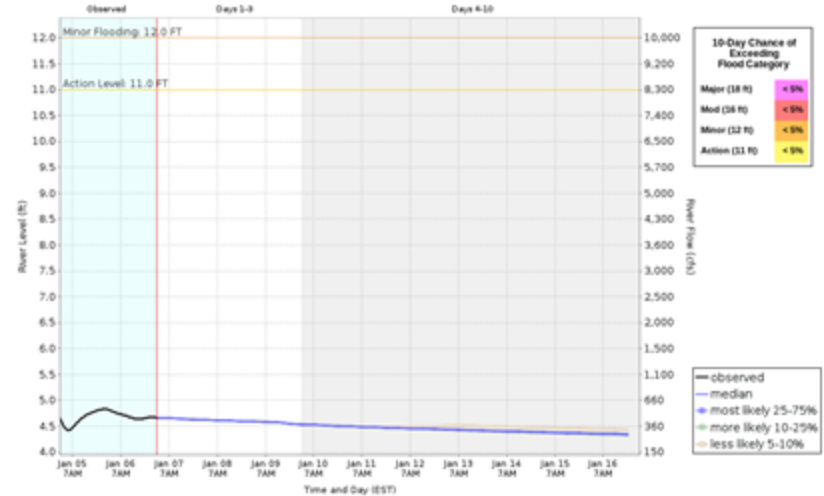
NAEFS - 10 Day River Level Probabilities

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Jan 07 - Jan 17, 2025

Connecticut River at Indian Orchard, MA (INDM3)



- Handful of ensembles runs showing precipitation amounts over 0.5in in the next 10 days
- Below freezing temperatures for majority of ensemble cause lack of response on future river flows





Conclusions

- Presently, minimal chances for significant precipitation in the 10 day ensemble window. However, there is quite a bit of uncertainty into this weekend.
- Continued river ice development with below freezing temperatures expected to continue in the short term.
- Streamflows are expected to continue to remain stable or recede without much in the way of snowmelt or liquid precipitation in the ensemble forecast period.