

Streamflow and Groundwater Conditions in Massachusetts

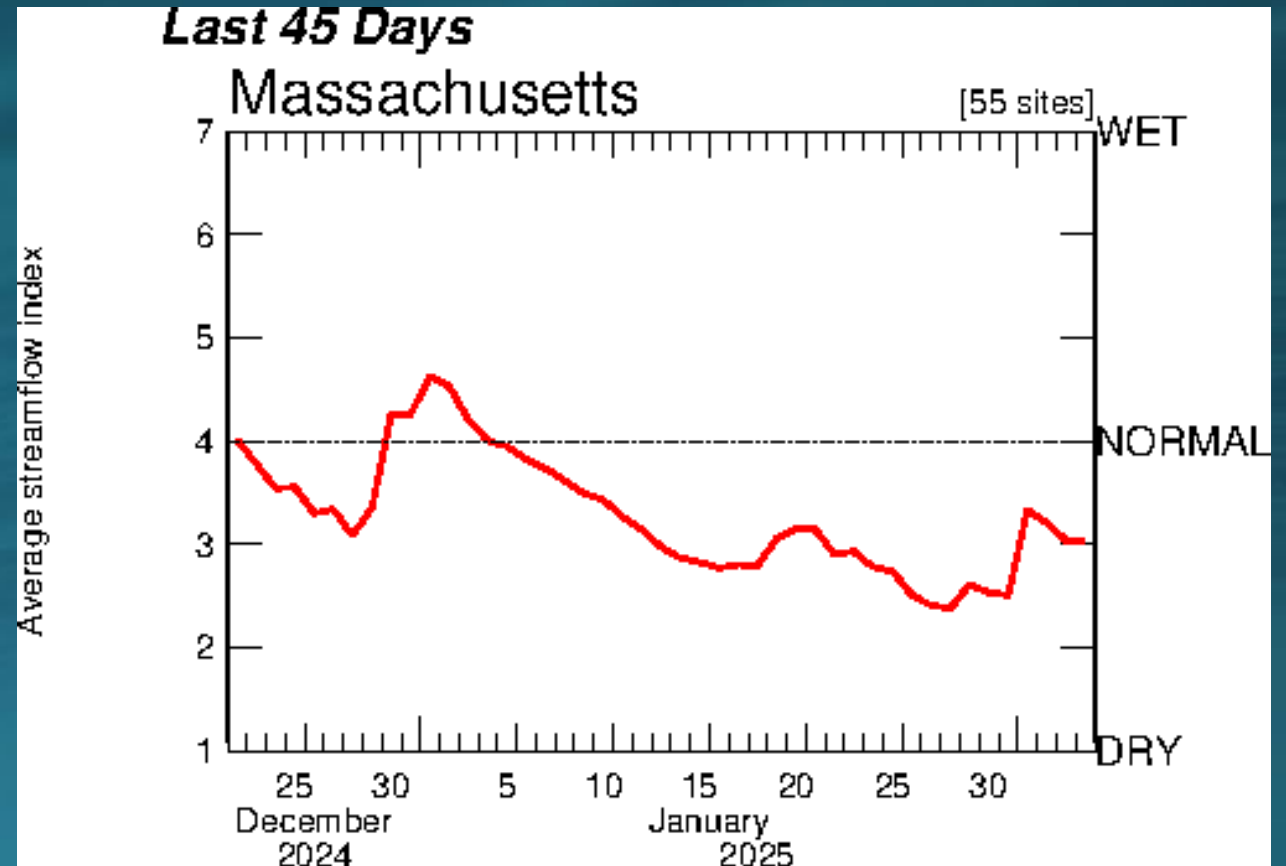
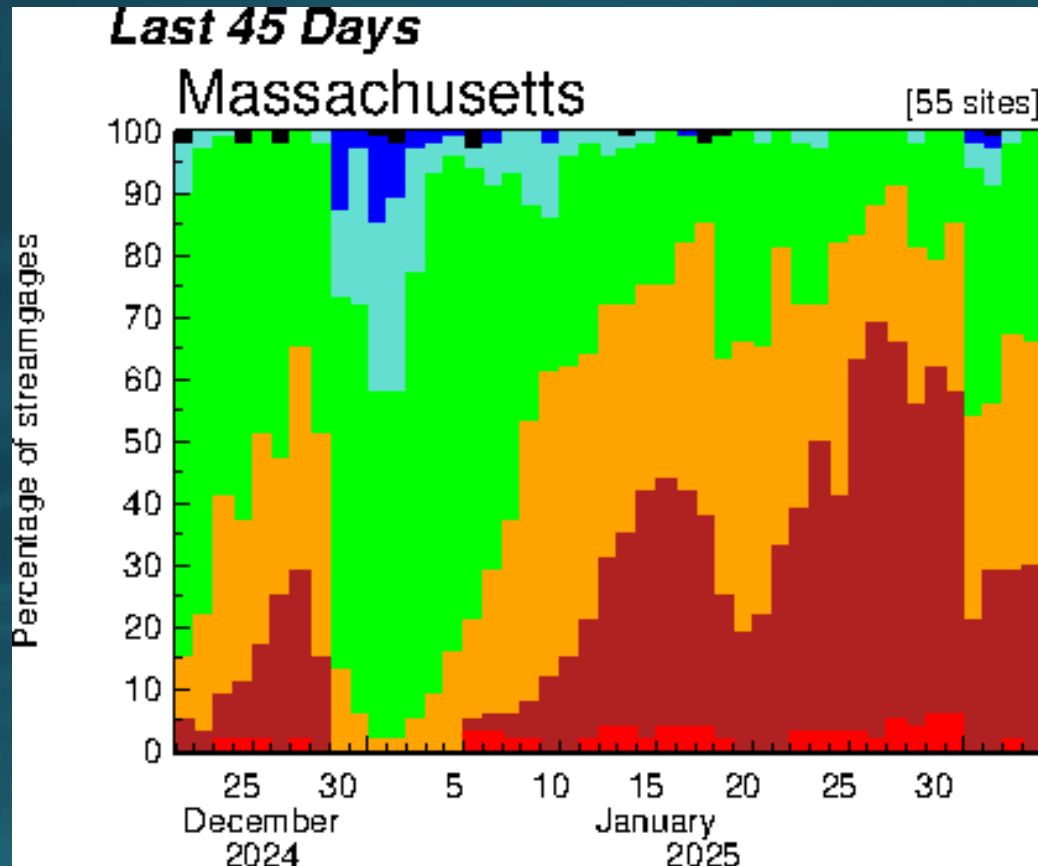
Massachusetts Drought Task Force Meeting
February 6, 2025

U.S. Geological Survey
New England Water Science Center

Brian Loving



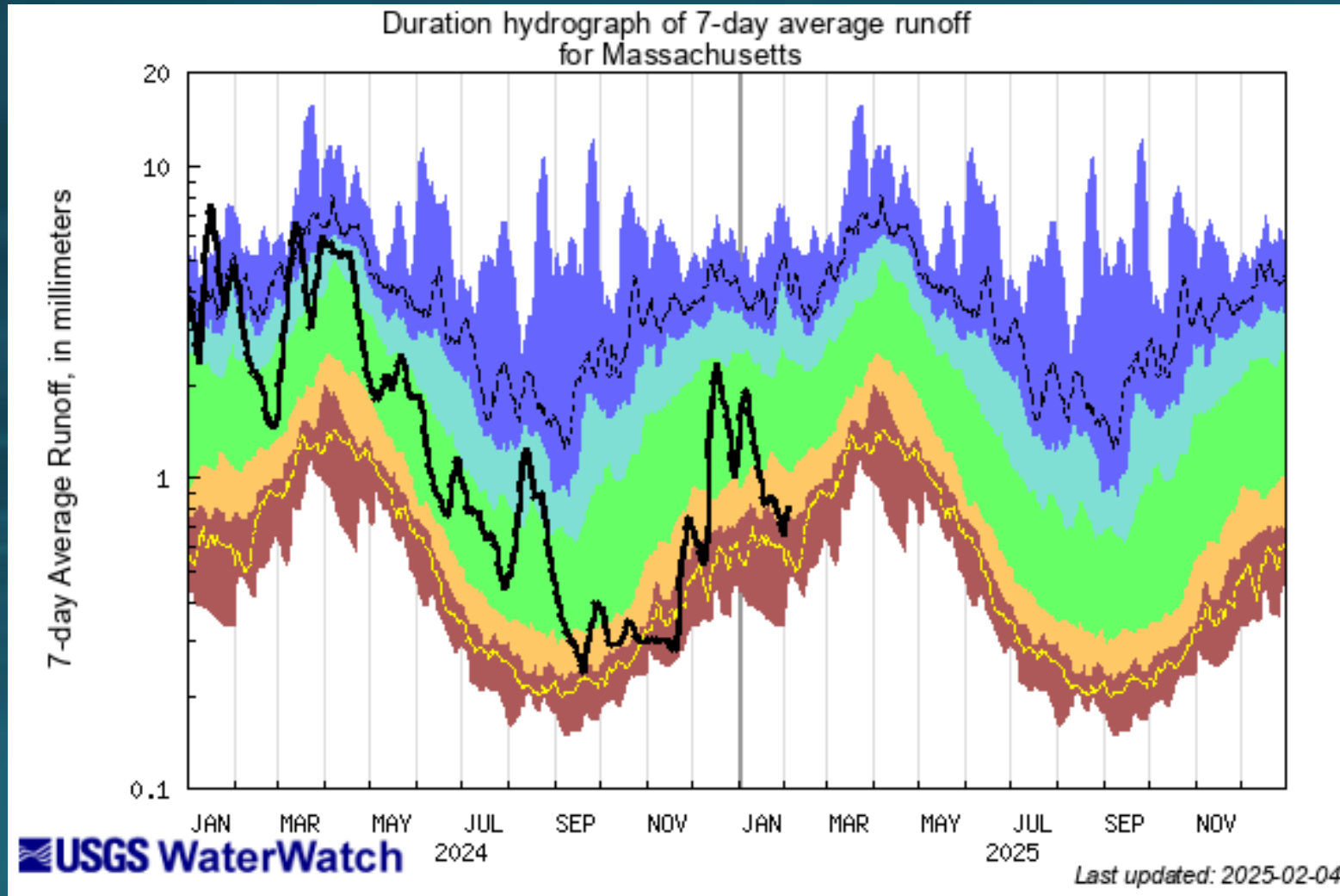
Streamflow Conditions – last 45 days



Explanation - Percentile classes

Low	<10	10-24	25-75	76-90	>90	High	No Data	
	Much below normal	Below normal	Normal	Above normal	Much above normal			

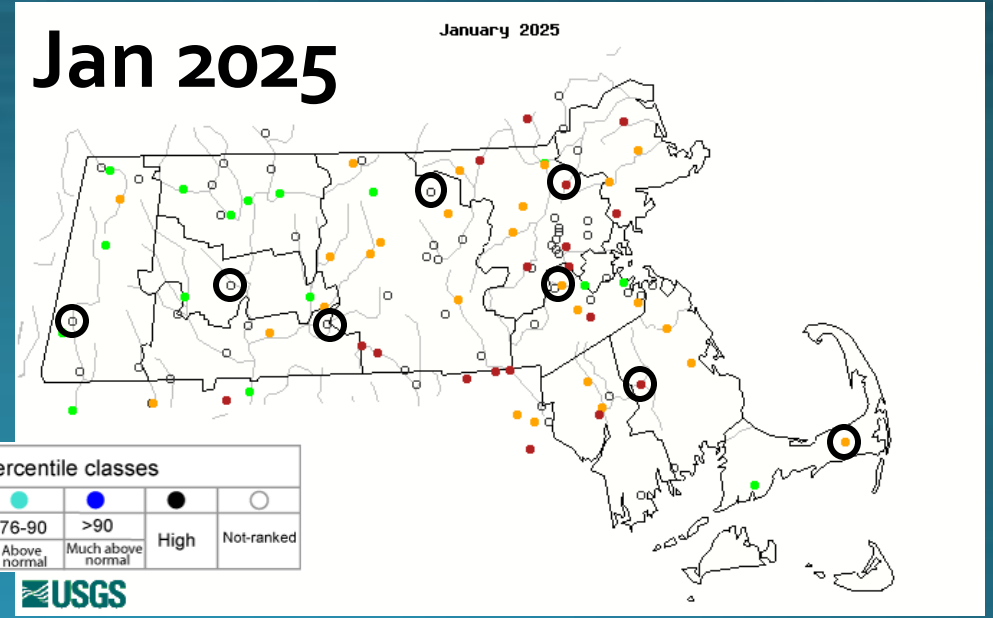
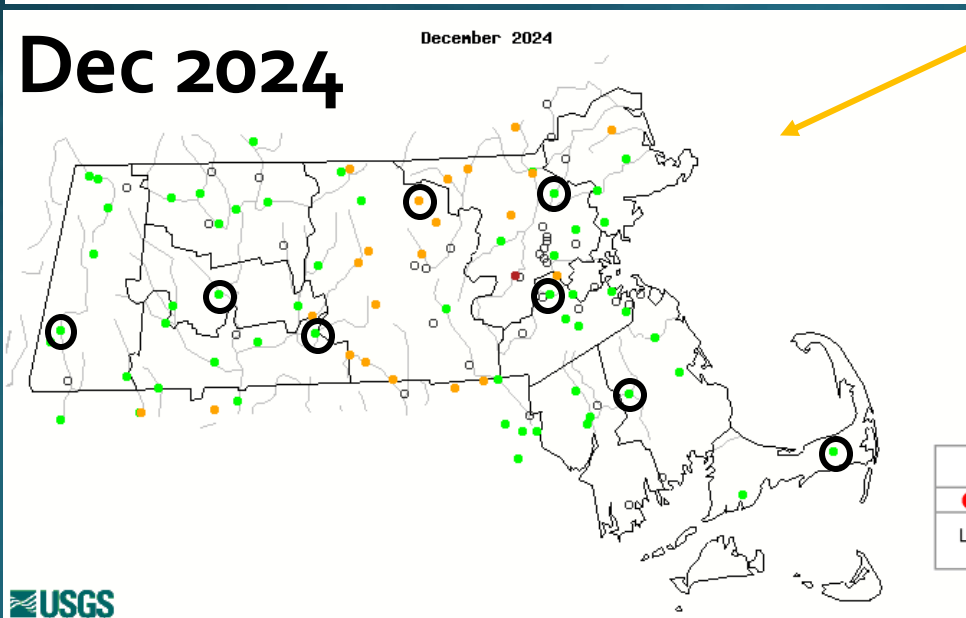
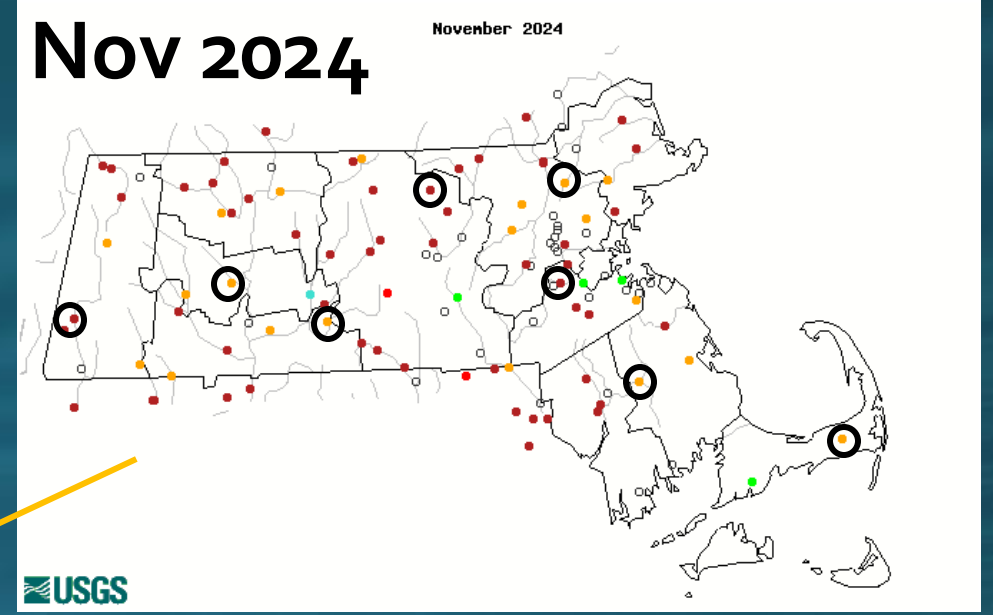
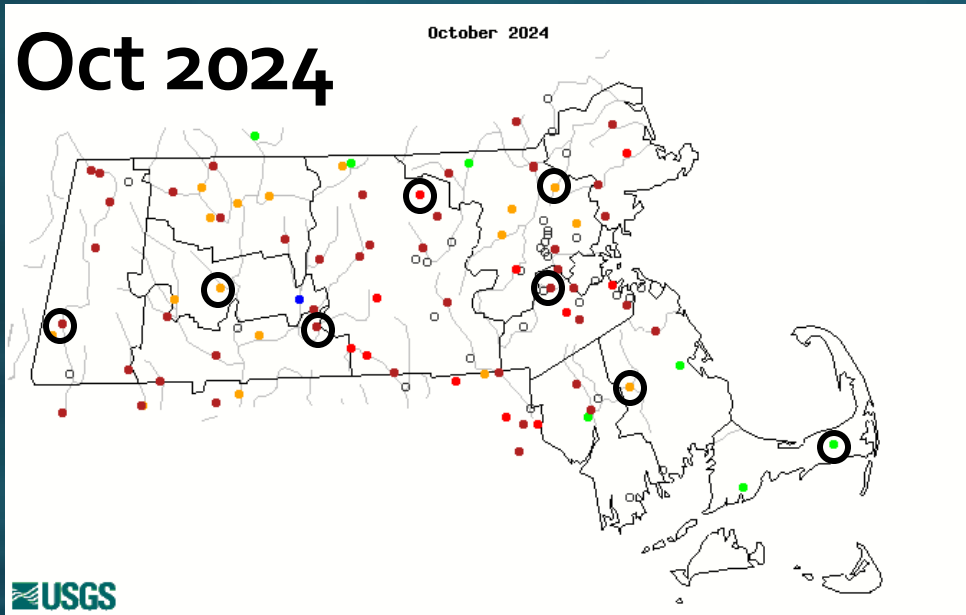
Streamflow Conditions 7-Day Moving Average



Explanation - Percentile classes

lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest	Runoff
Much below Normal		Below normal	Normal	Above normal	Much above normal		

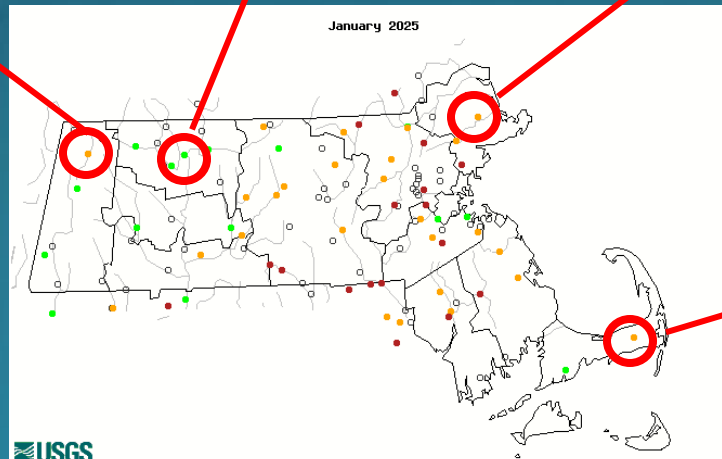
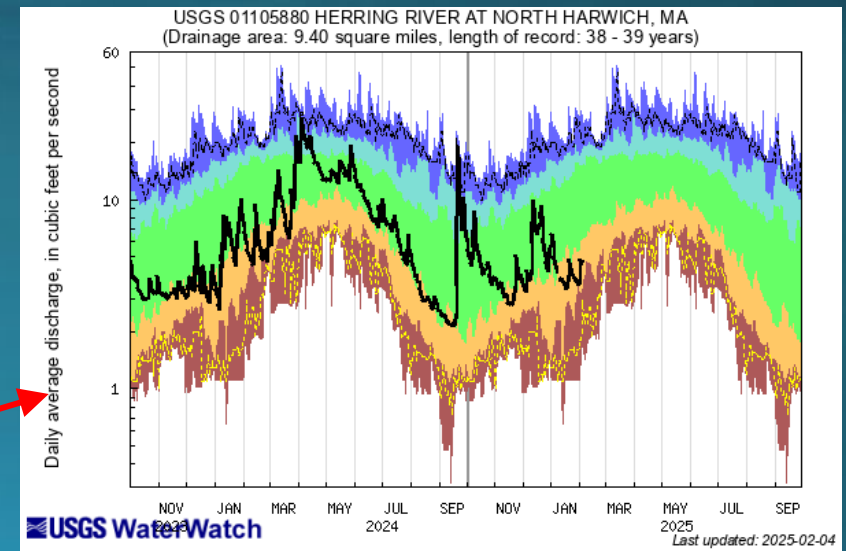
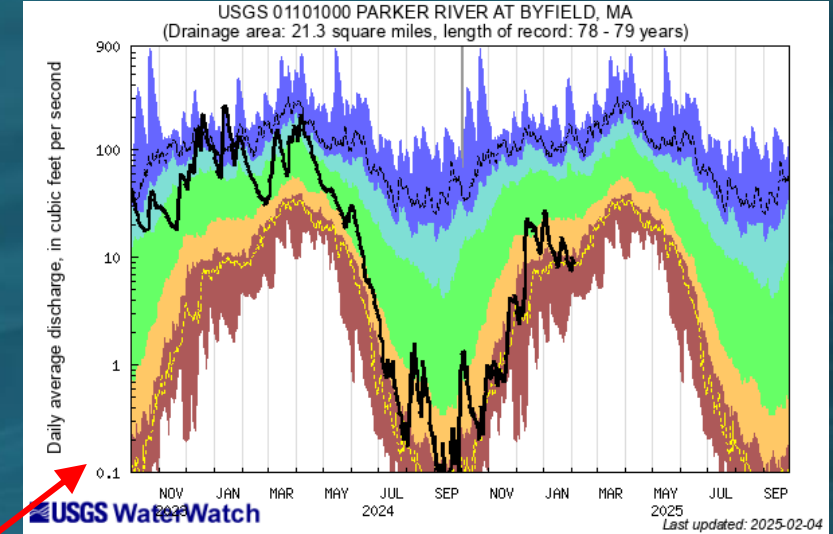
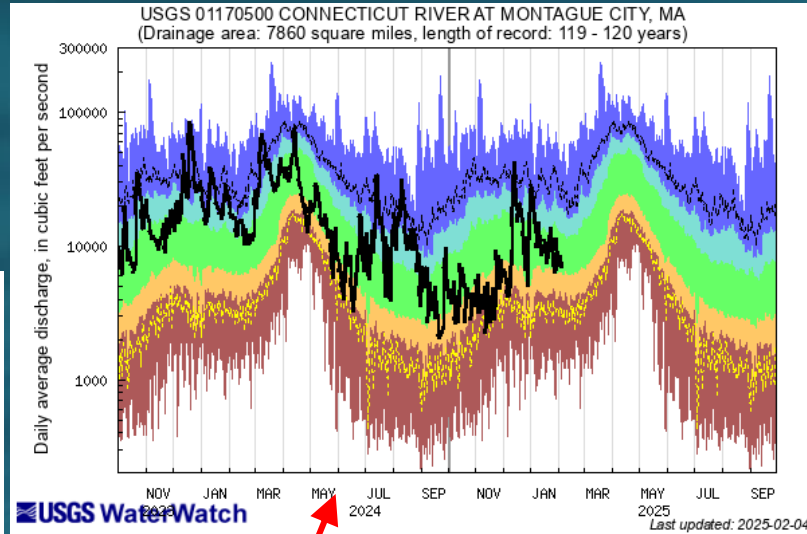
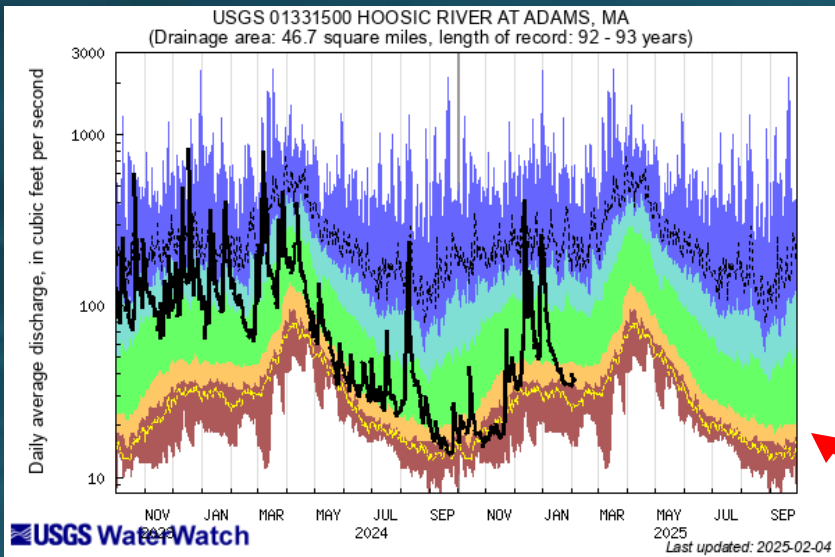
Streamflow Conditions – Monthly Average



Explanation - Percentile classes

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

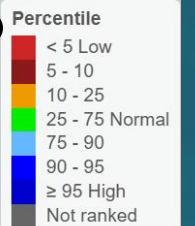
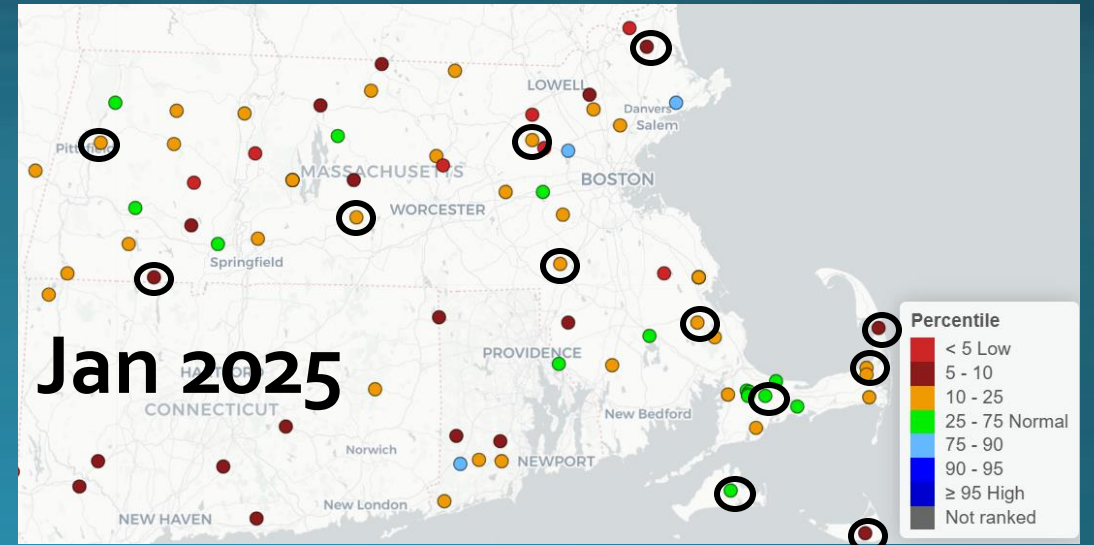
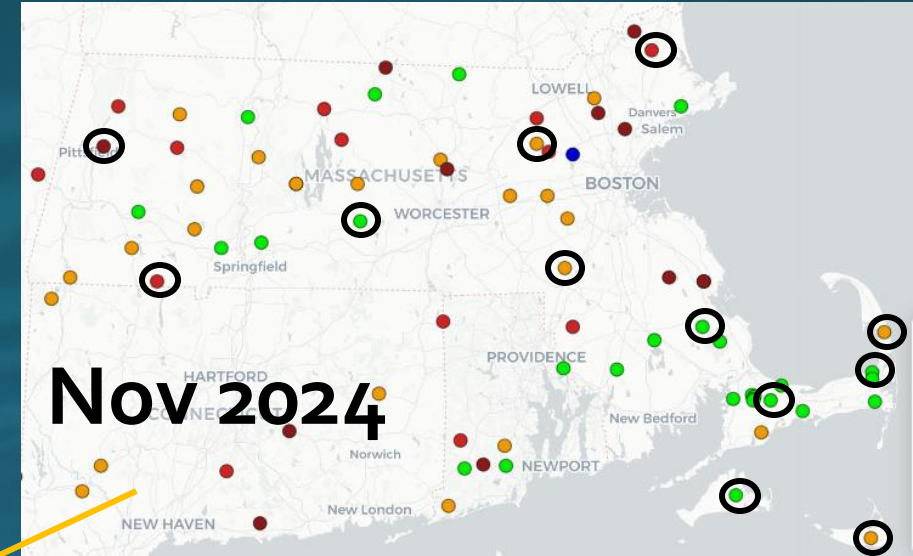
SW Conditions 7-Day Average



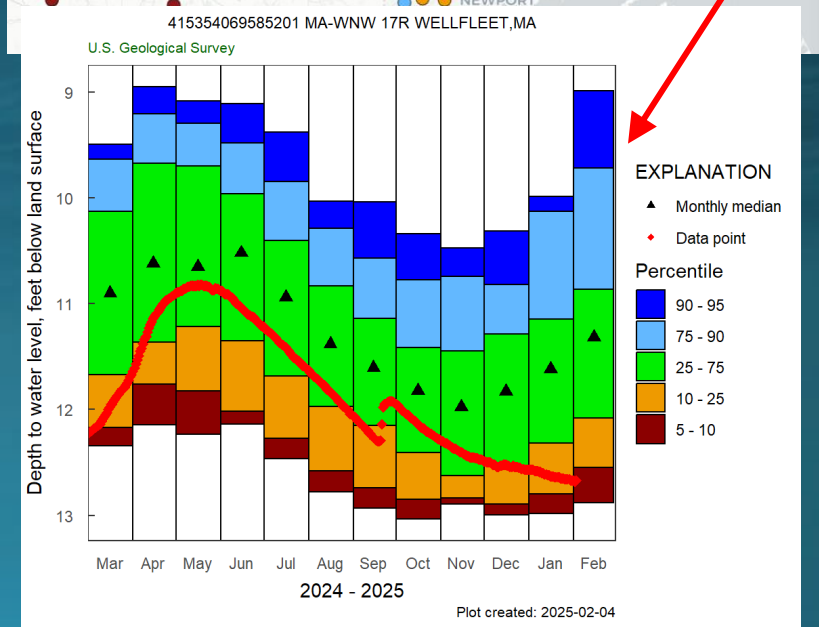
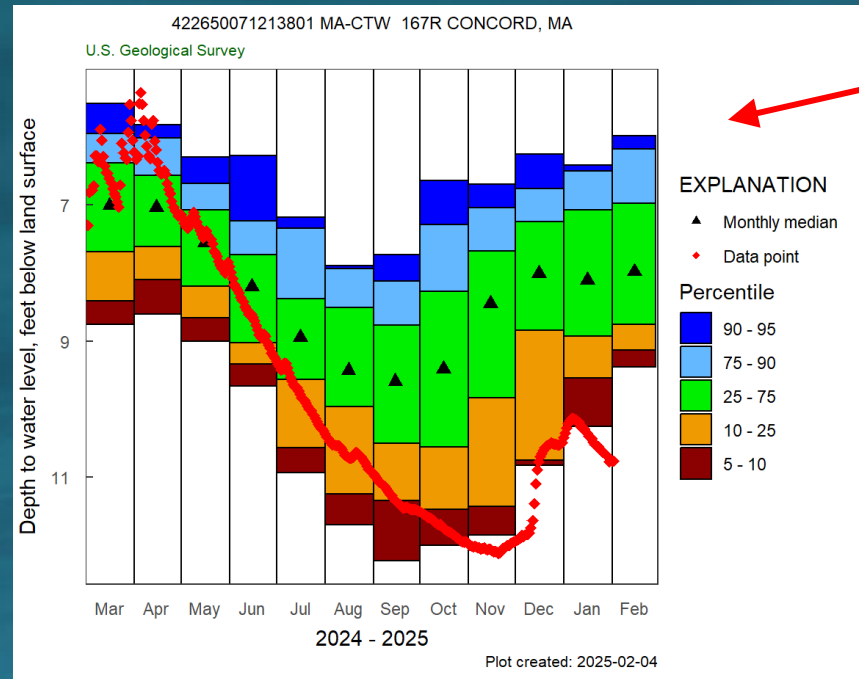
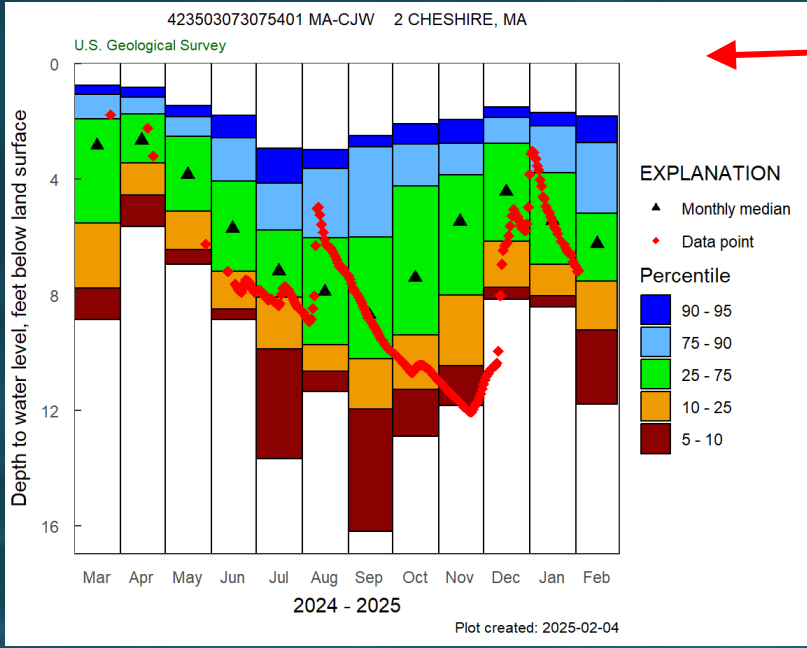
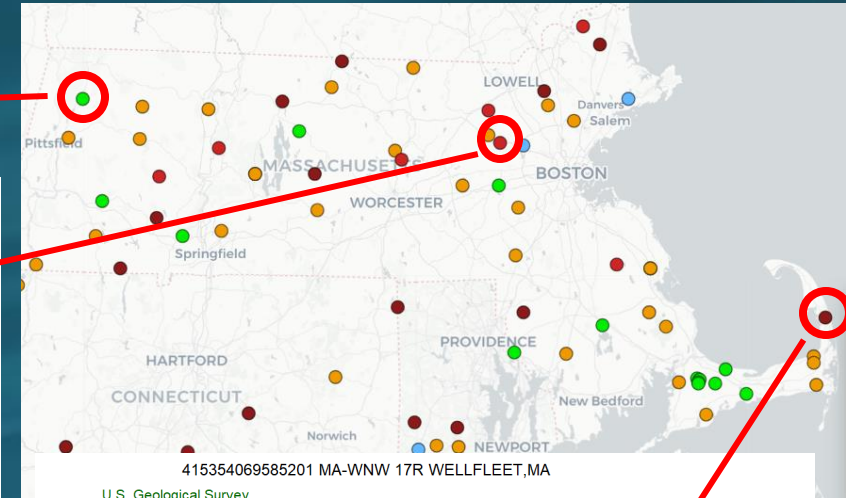
Explanation - Percentile classes

lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest	Runoff
Much below Normal	Below normal	Normal	Above normal	Much above normal			

Groundwater Conditions –End of Month



Groundwater Conditions – Specific Wells



Period of Record: 70 yrs; Cont. 0.6 yrs

Period of Record: 58 yrs; Cont. 2 yrs

Period of Record: 62 yrs; Cont. 6 yrs

Summary of Conditions

- The presence of ice in the stream is preventing computations of streamflow at many gages. Where we have streamflow data, nearly all are lower at the end of January than at the beginning. Average January streamflow conditions were normal to below normal in the Western, Connecticut River, and Cape Regions, and below to much below normal elsewhere.
- Groundwater-level conditions also moved lower during the month of January at nearly all sites in the Commonwealth. Most wells in all regions are at levels that are below or much below normal. There are a few anomalous wells with above normal conditions.