

Streamflow and Groundwater Conditions in Massachusetts

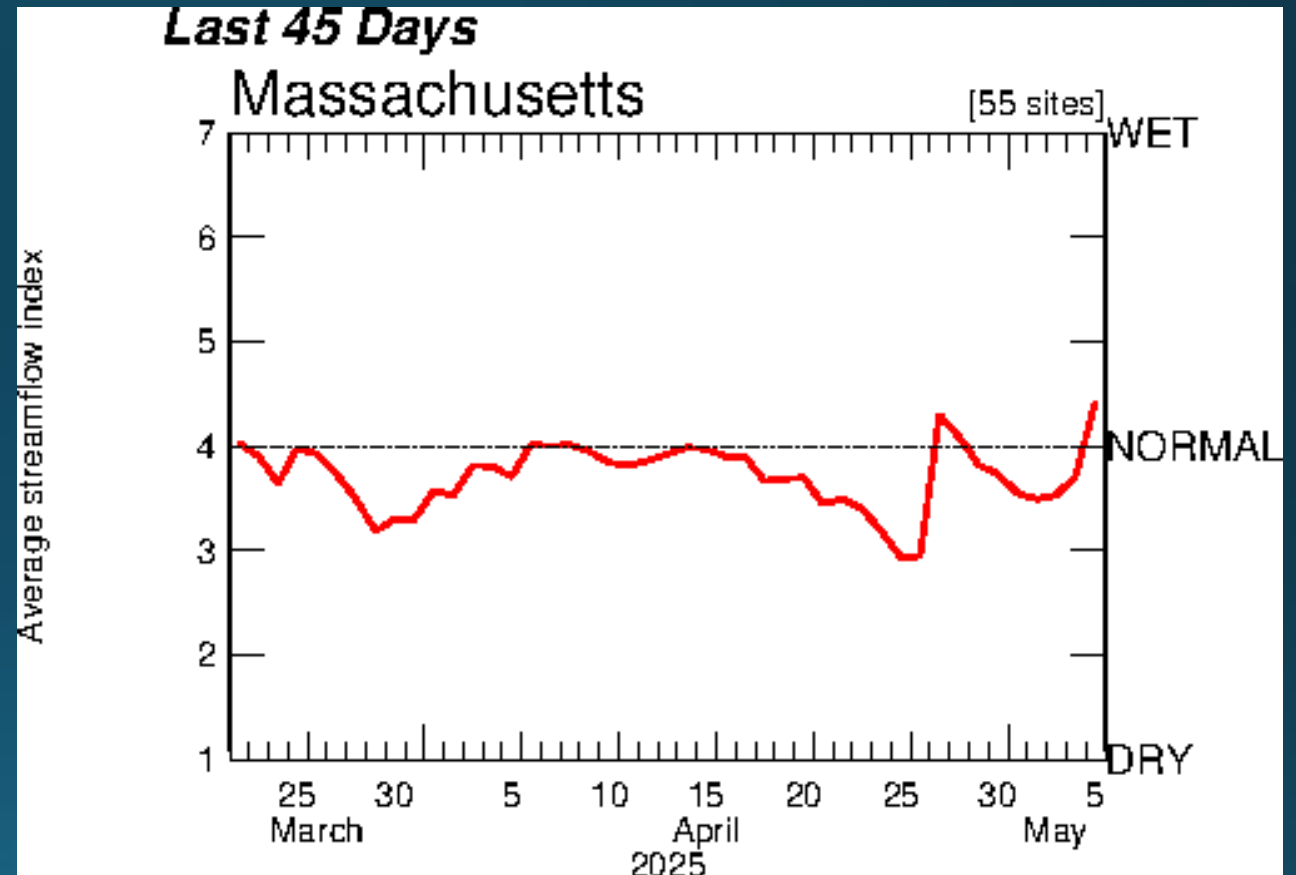
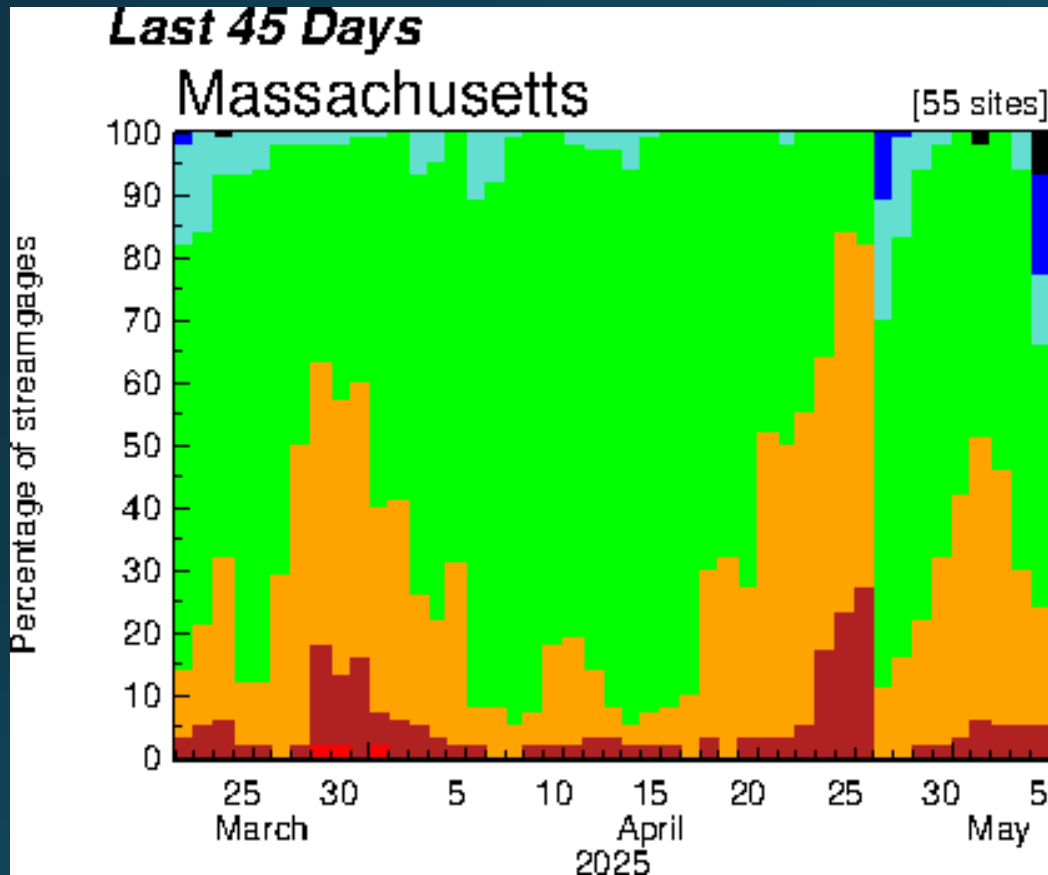
Massachusetts Drought Task Force Meeting

May 7, 2025

U.S. Geological Survey
New England Water Science Center
Brian Loving

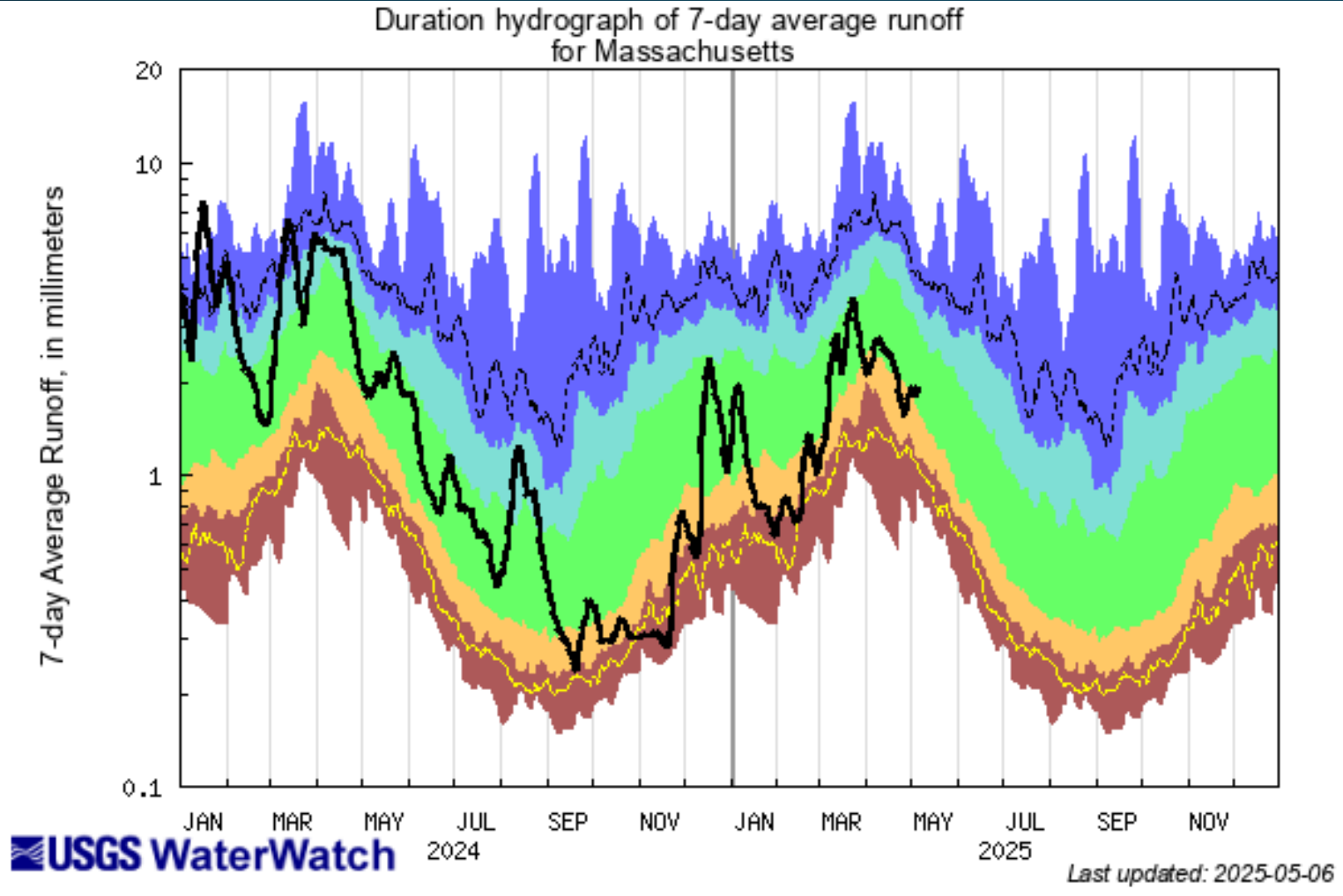


Streamflow Conditions – last 45 days



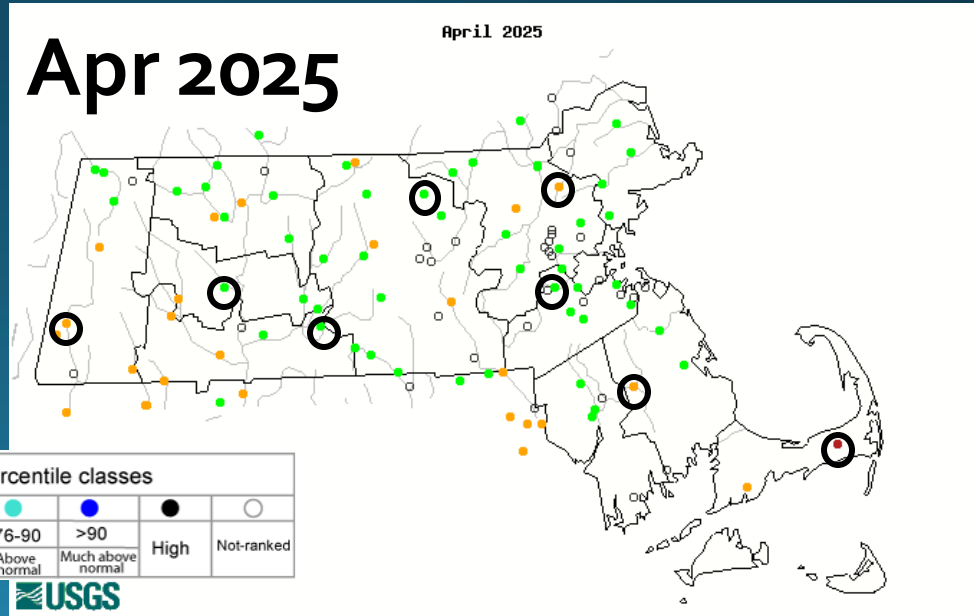
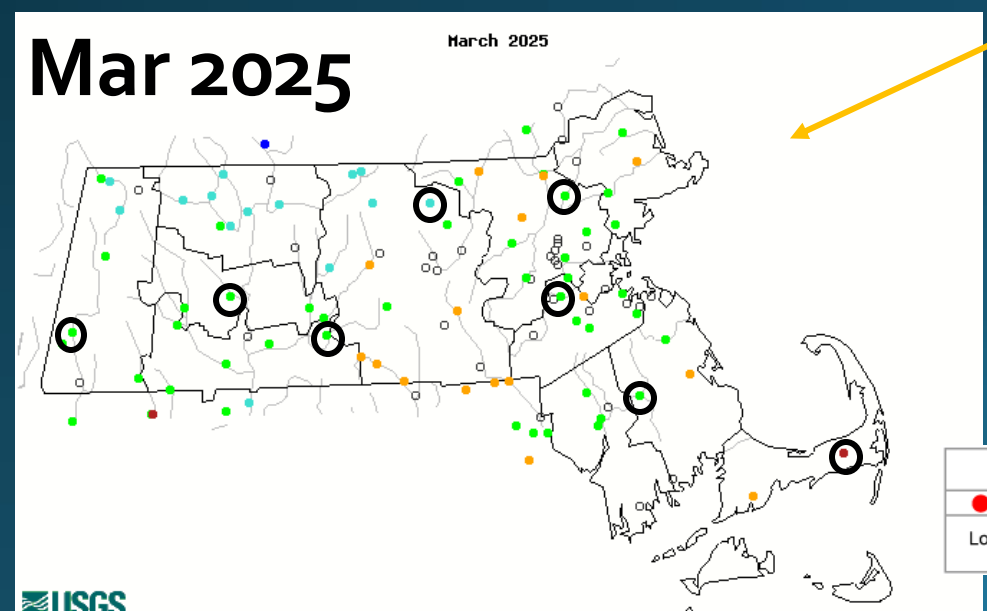
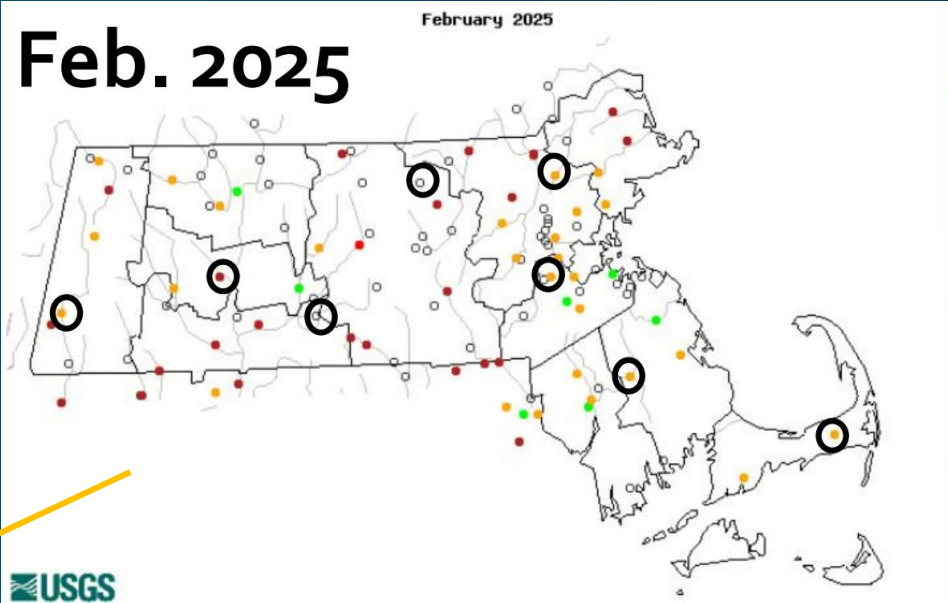
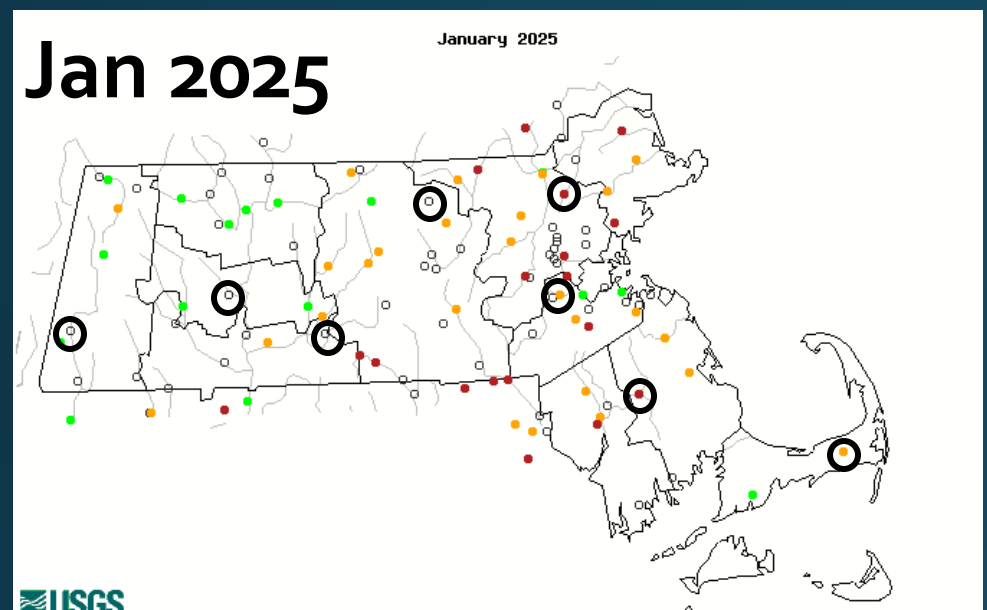
Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Streamflow Conditions 7-Day Moving Average



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

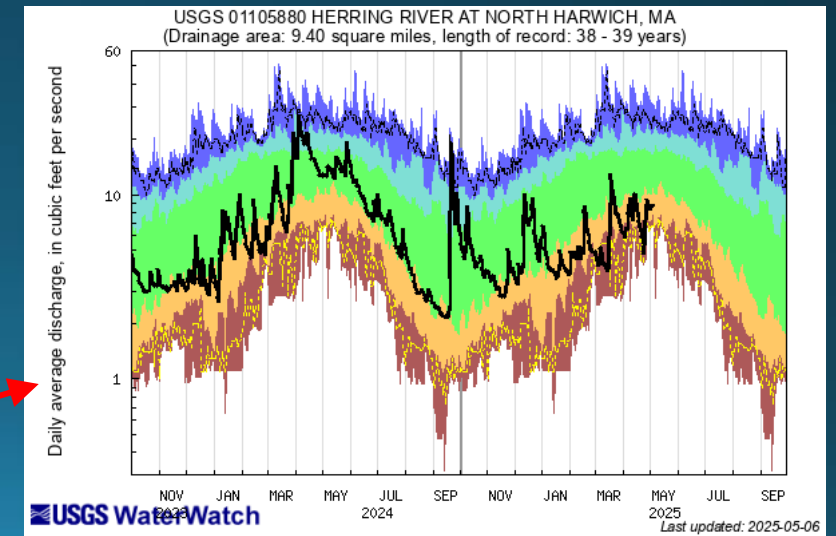
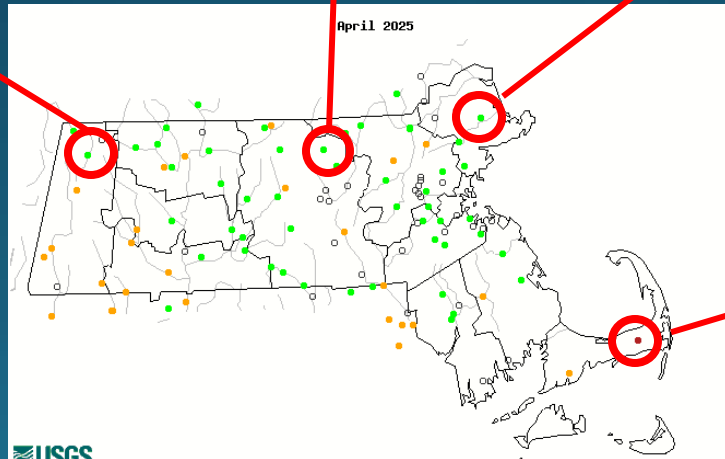
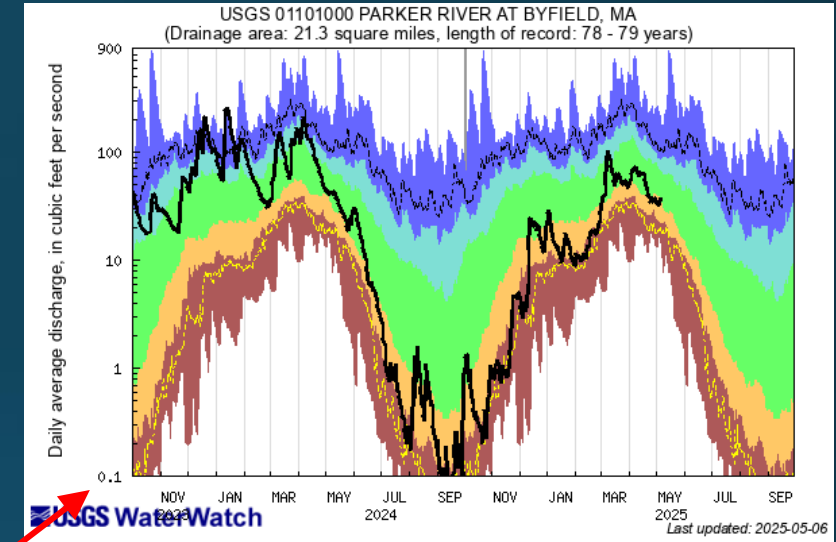
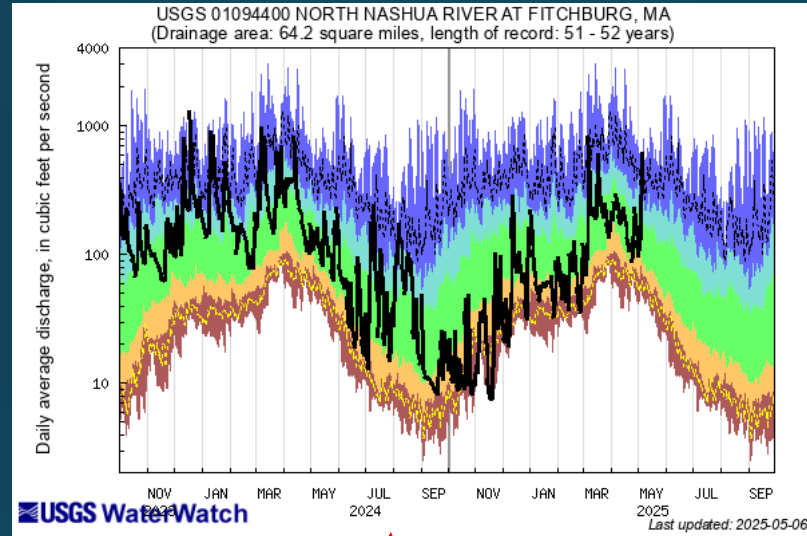
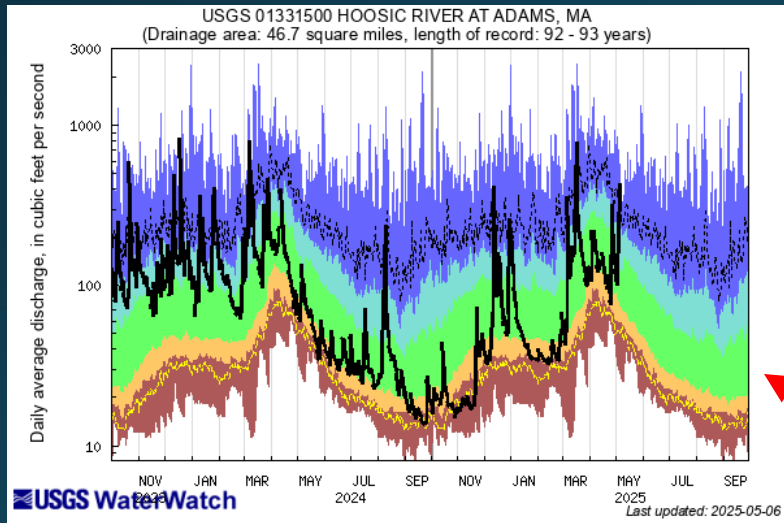
Streamflow Conditions – Monthly Average



Explanation - Percentile classes

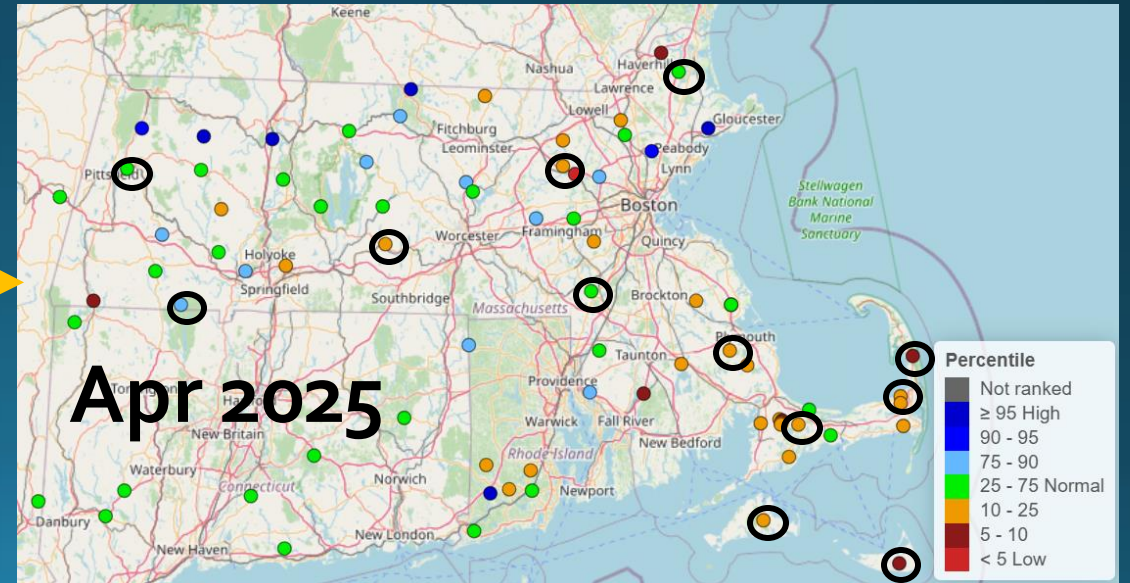
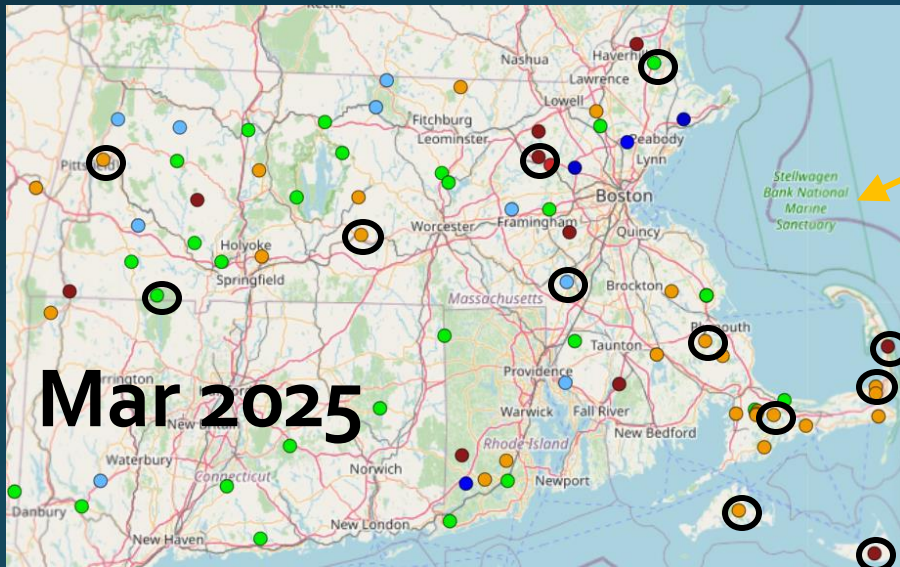
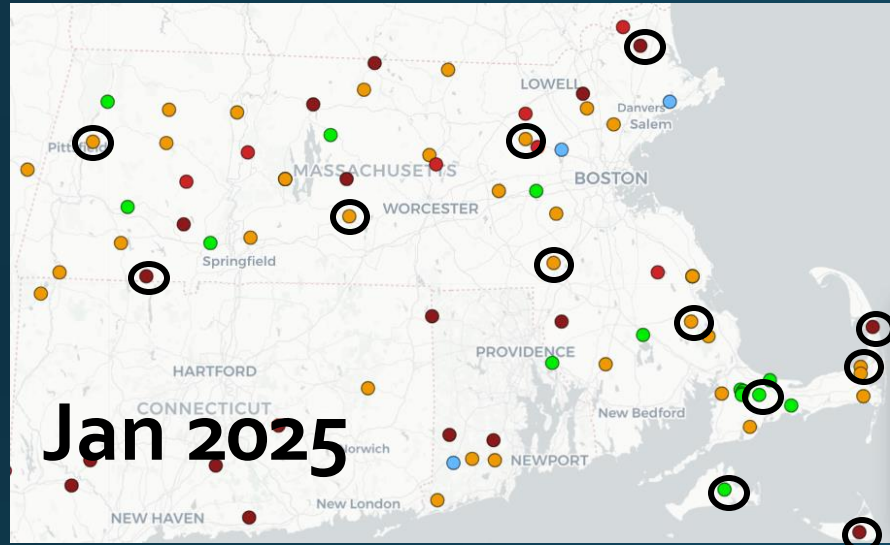
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

SW Conditions 7-Day Average

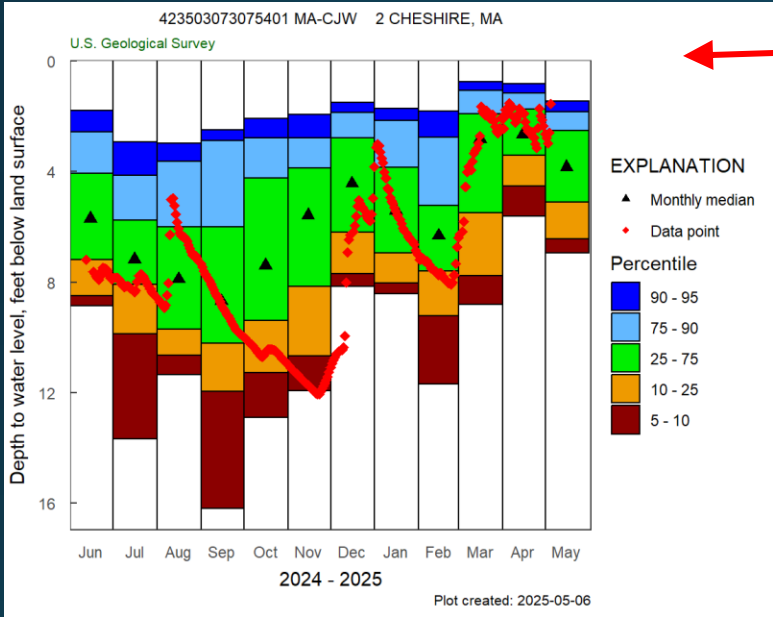


Explanation - Percentile classes							Runoff
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile - highest	
Much below Normal	Below normal	Normal	Above normal	Much above normal			

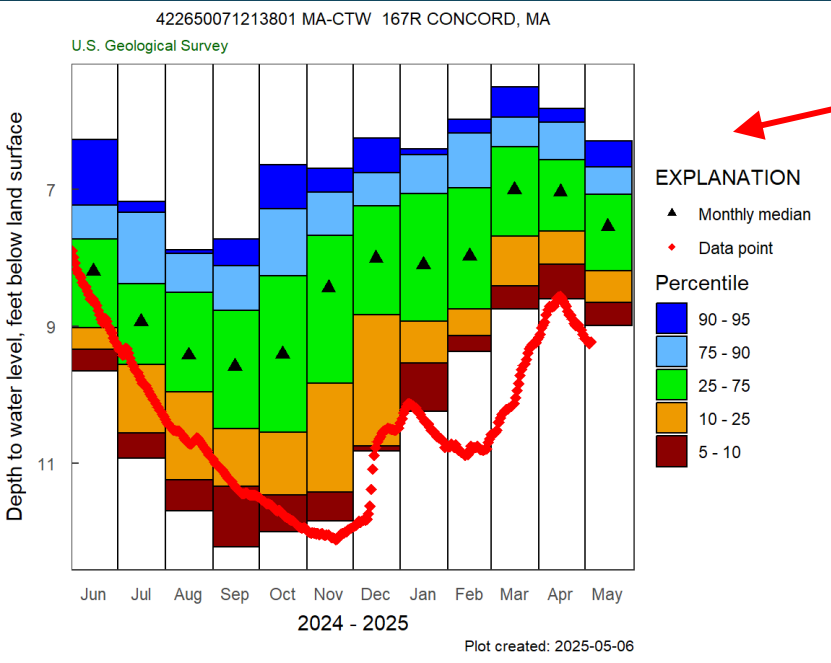
Groundwater Conditions –End of Month



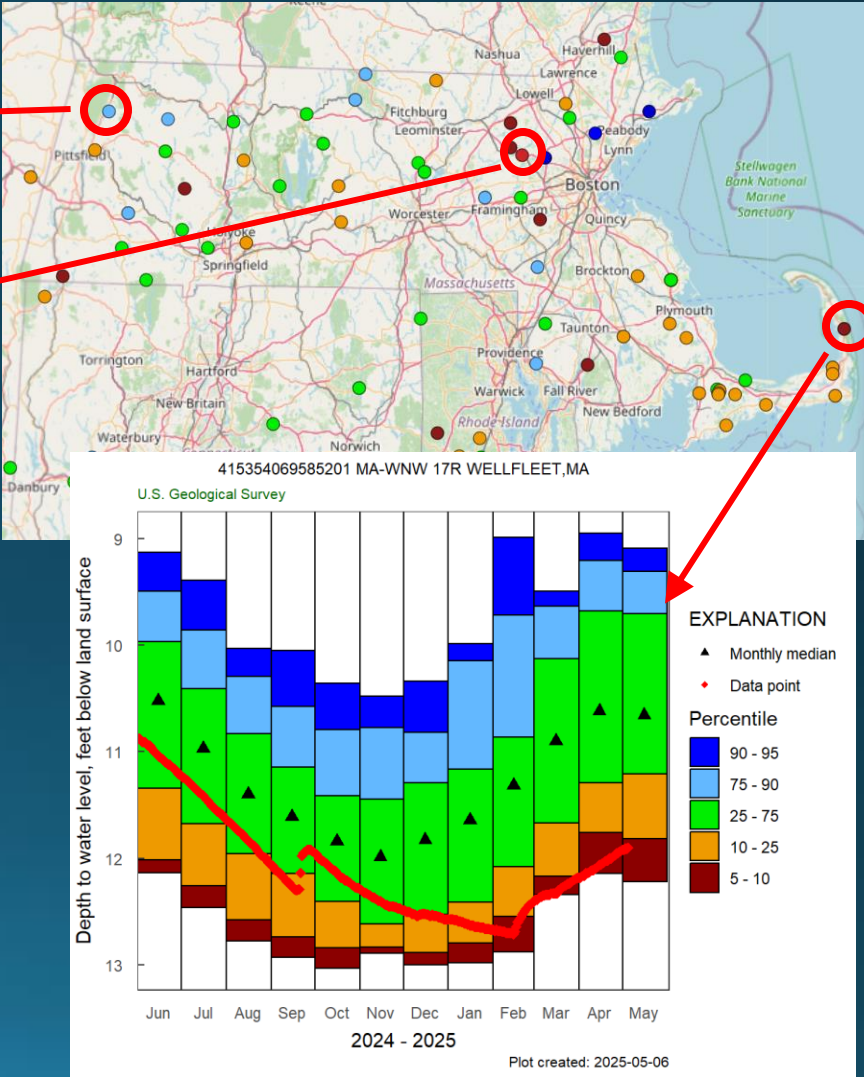
Groundwater Conditions – Specific Wells



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

- Other than runoff from one significant precipitation event around April 26-27, streamflow generally declined during April across Massachusetts. April streamflow percentiles were lower in April than March at nearly all sites, with exceptions at a few sites in the Northeast Region and the Quinebaug. The Cape continues to be the region with the lowest flows relative to normal.
- Groundwater-level conditions in April were generally a little better than March, as March had more precipitation than other recent months and GW conditions lag precip. Still “below” to “much below” normal conditions for most wells in Middlesex County and the Cape and Islands.