

Streamflow and Groundwater Conditions in Massachusetts

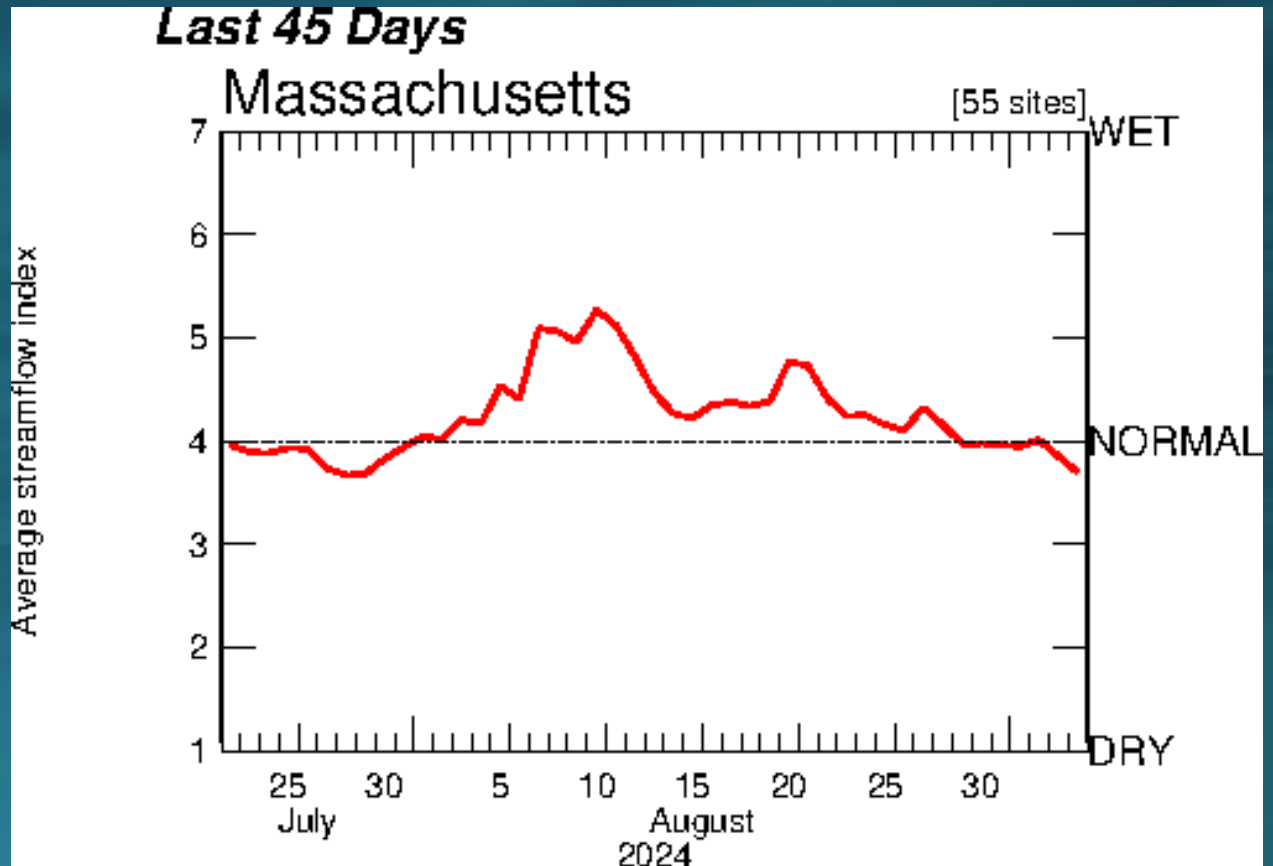
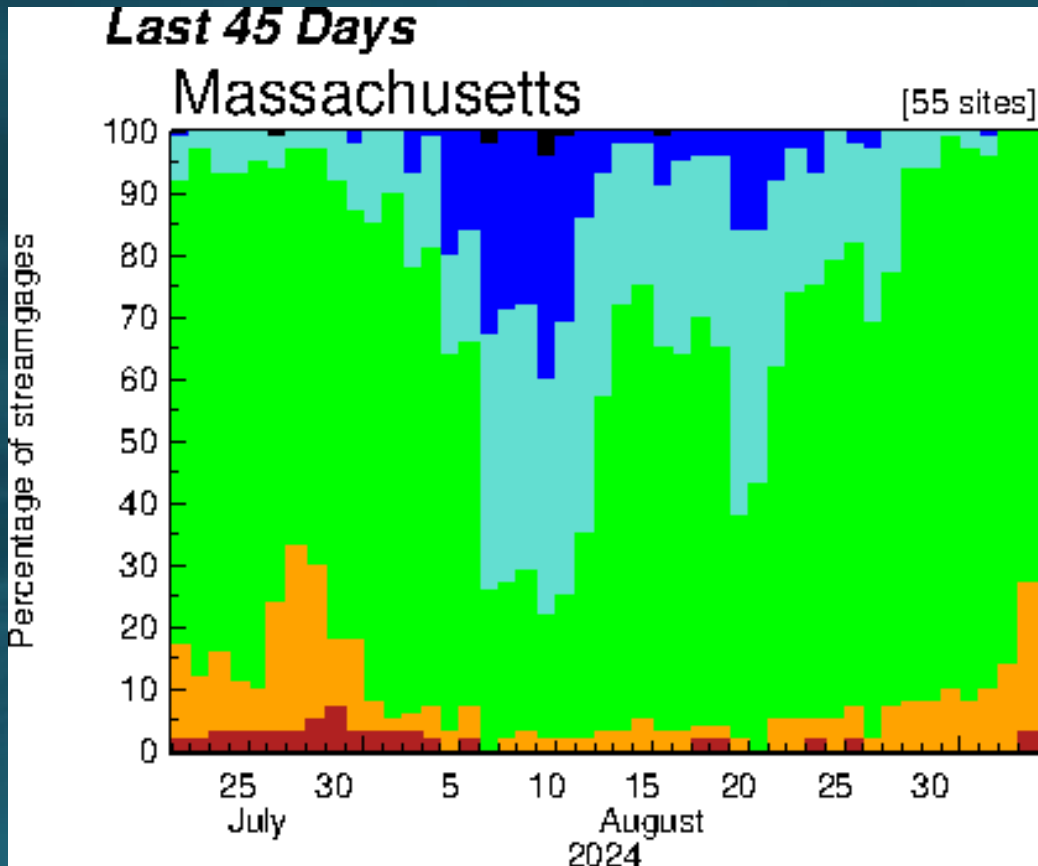
Massachusetts Drought Task Force Meeting
September 9, 2024

U.S. Geological Survey
New England Water Science Center

Brian Loving



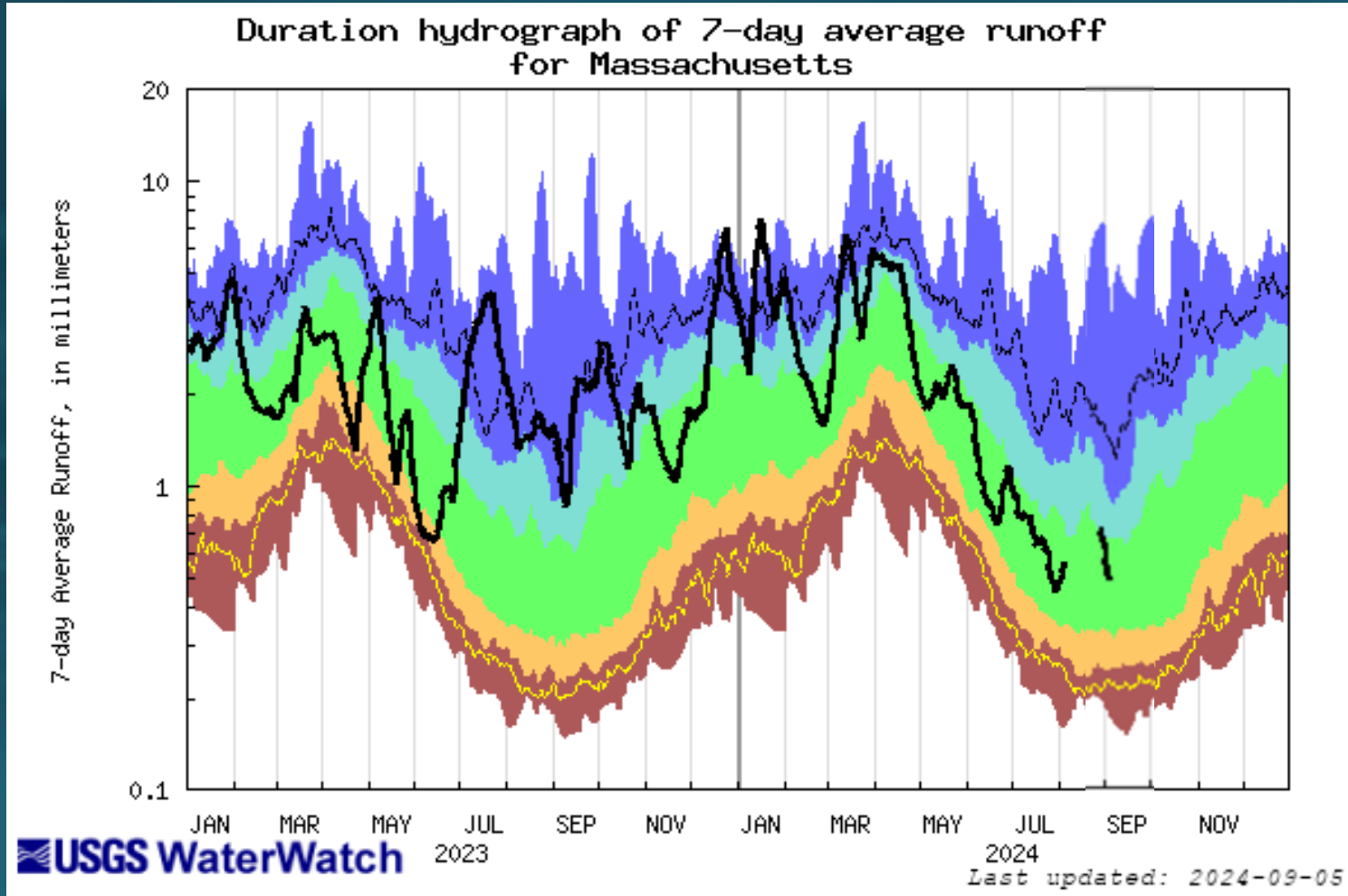
Streamflow Conditions – last 45 days



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			

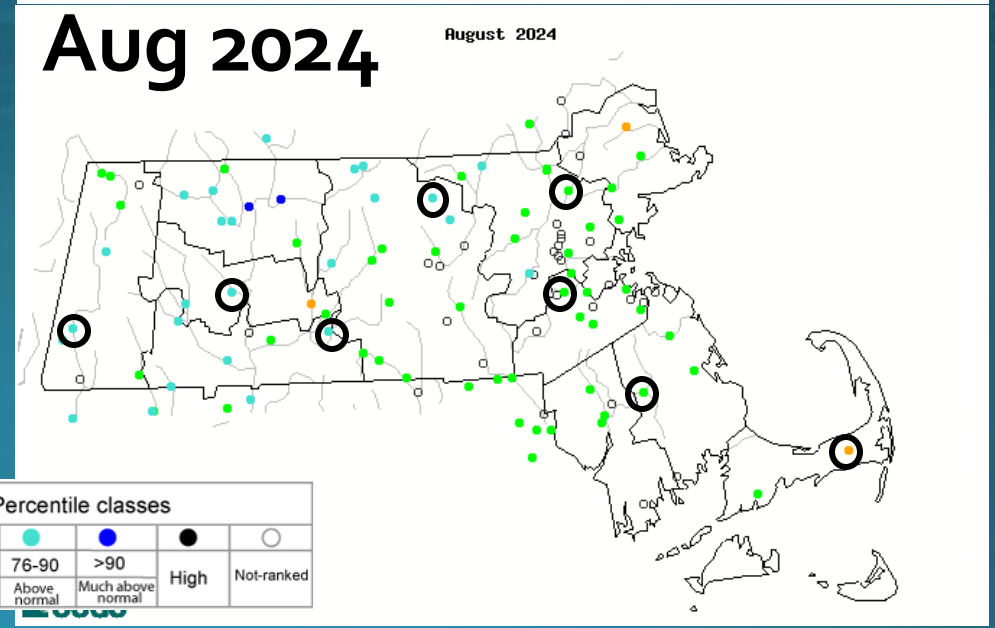
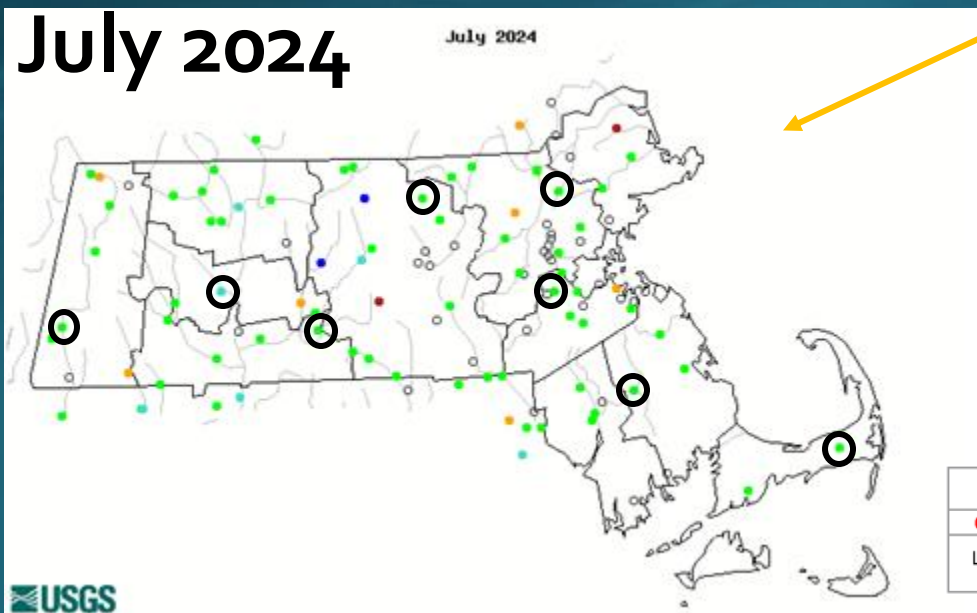
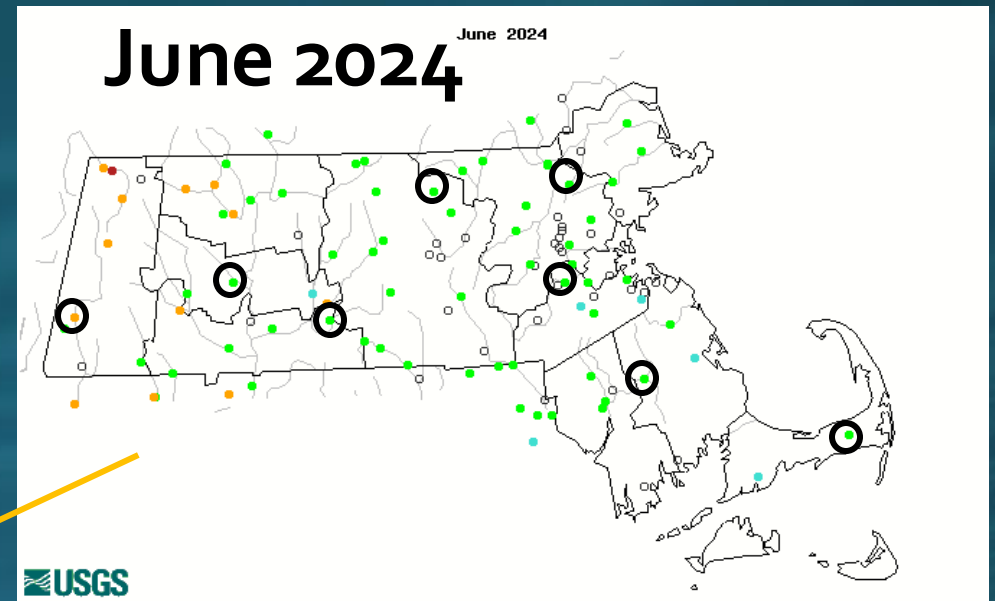
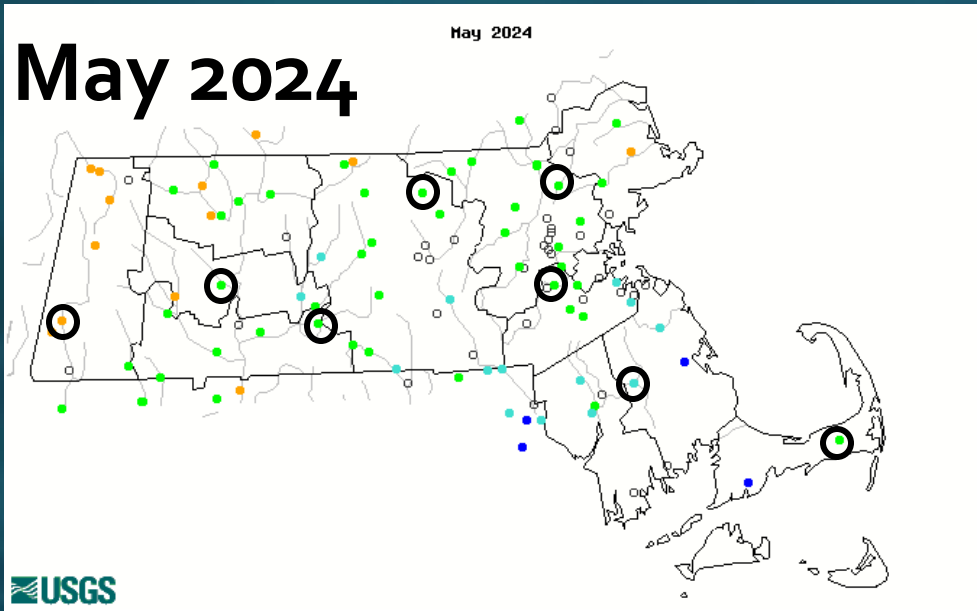
Streamflow Conditions 7-Day Moving Average



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			

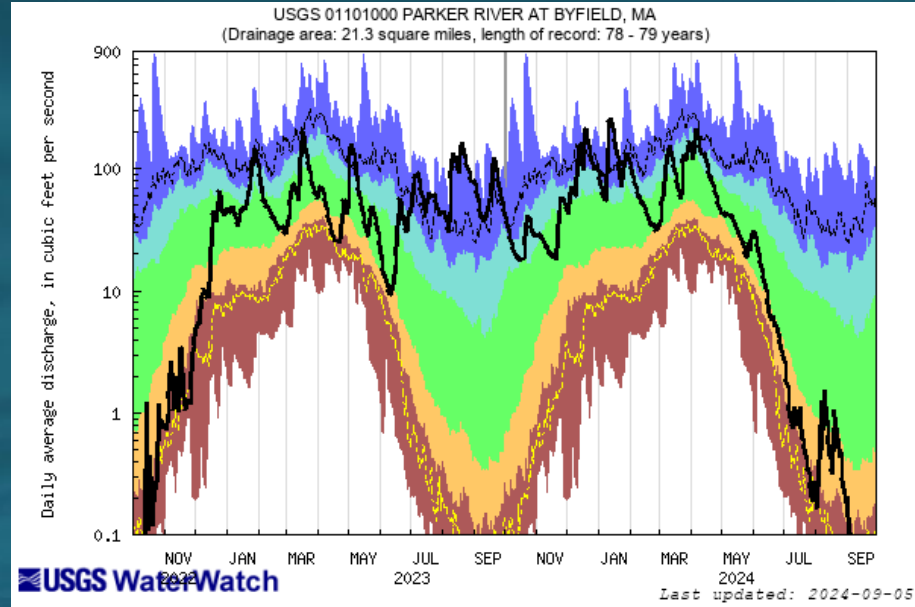
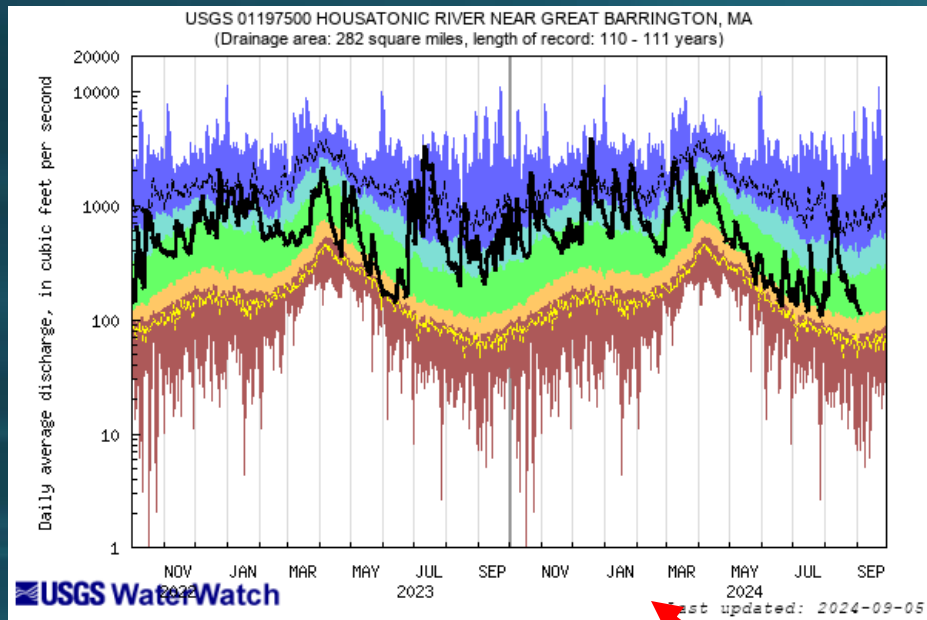
Streamflow Conditions – Monthly Average



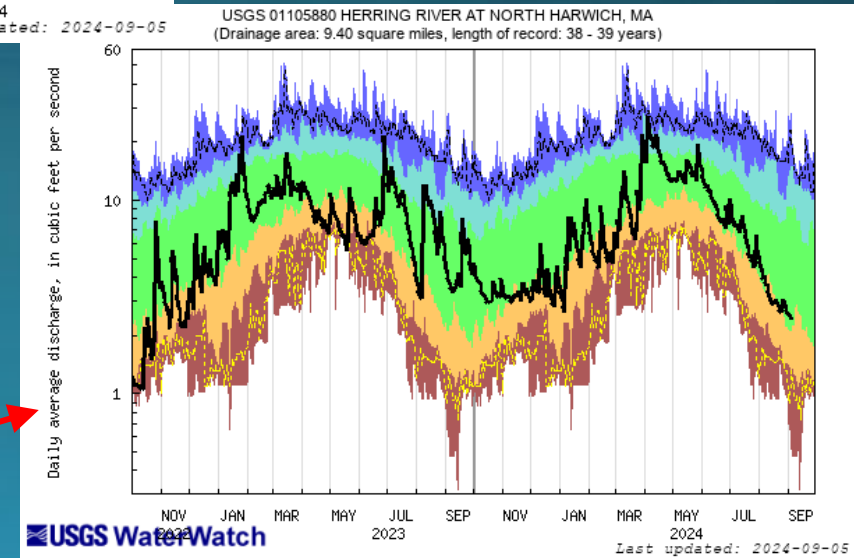
Explanation - Percentile classes

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

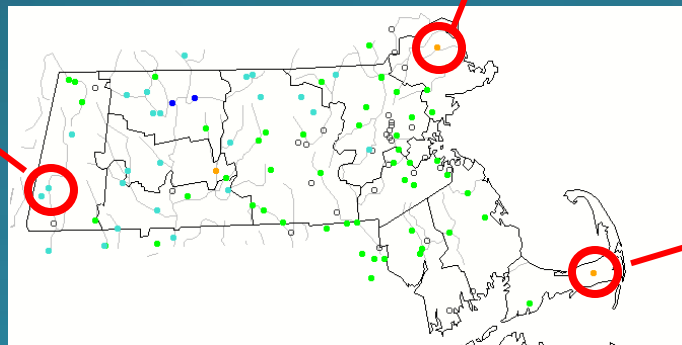
SW Conditions 7-Day Average



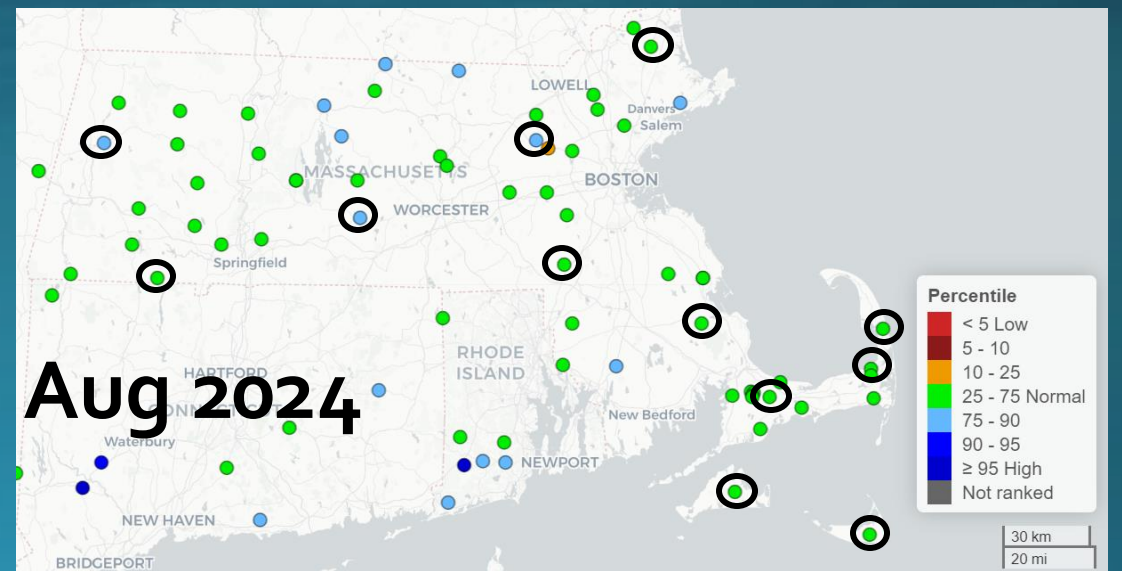
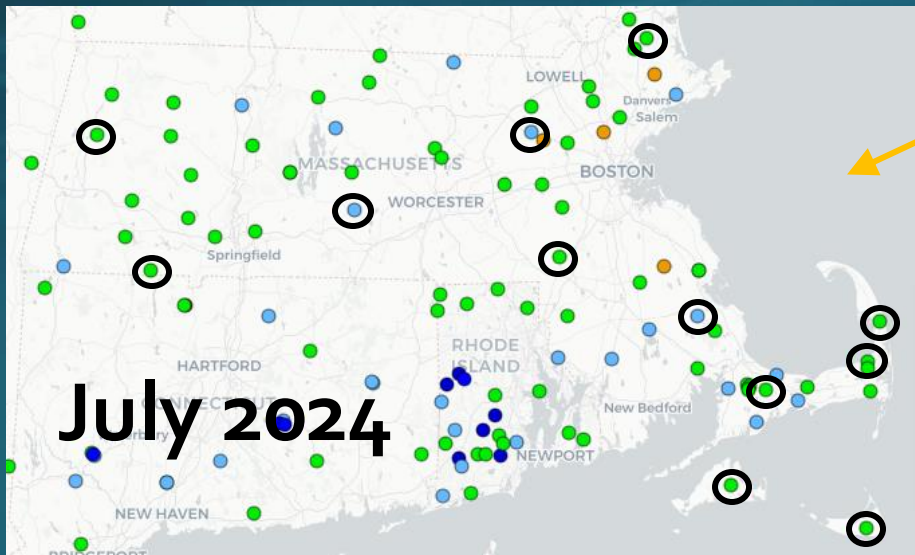
Parker at Byfield was
0.10 cfs on 9/5/24;
median is 2.0 cfs



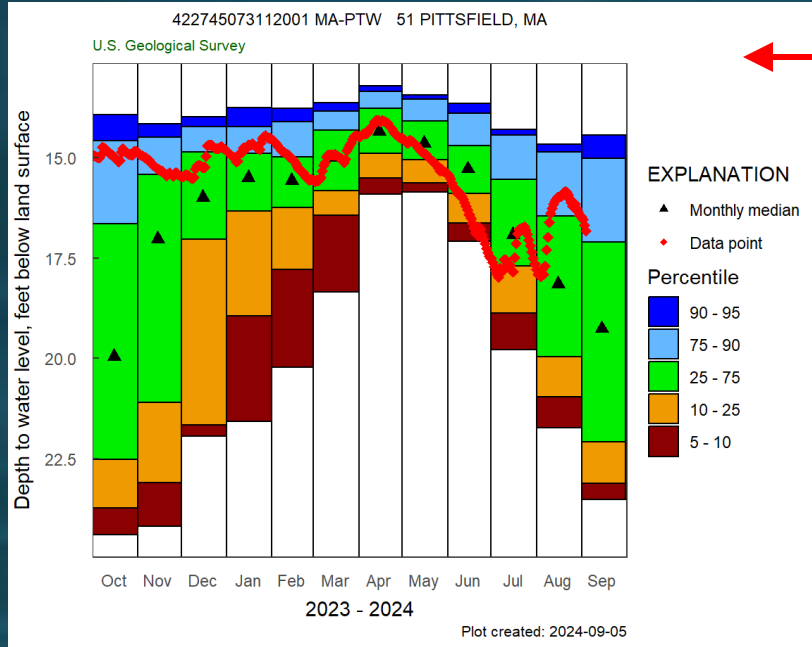
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile - highest
Much below Normal	Below normal	Normal	Above normal	Much above normal	Runoff	



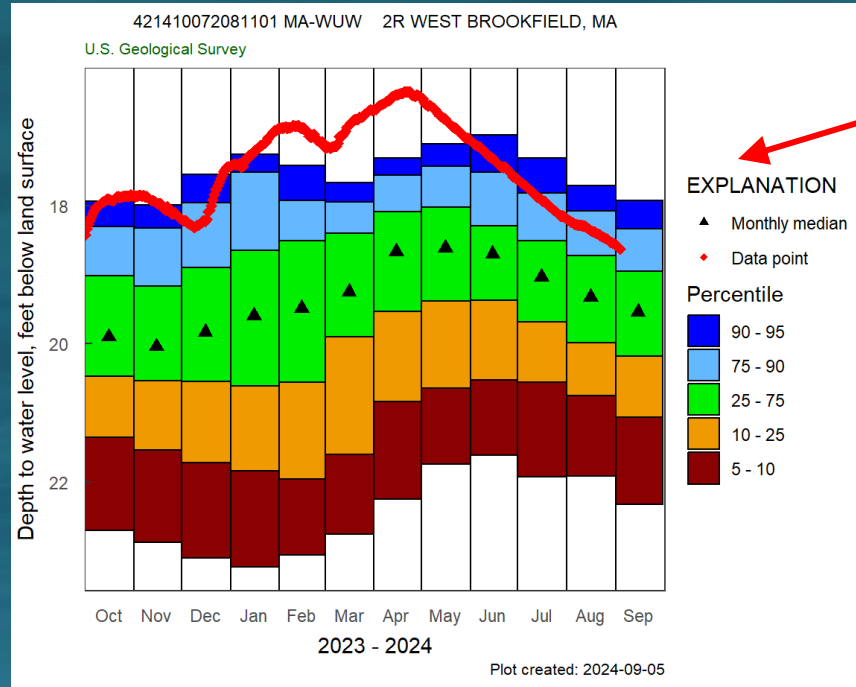
Groundwater Conditions – End of Month



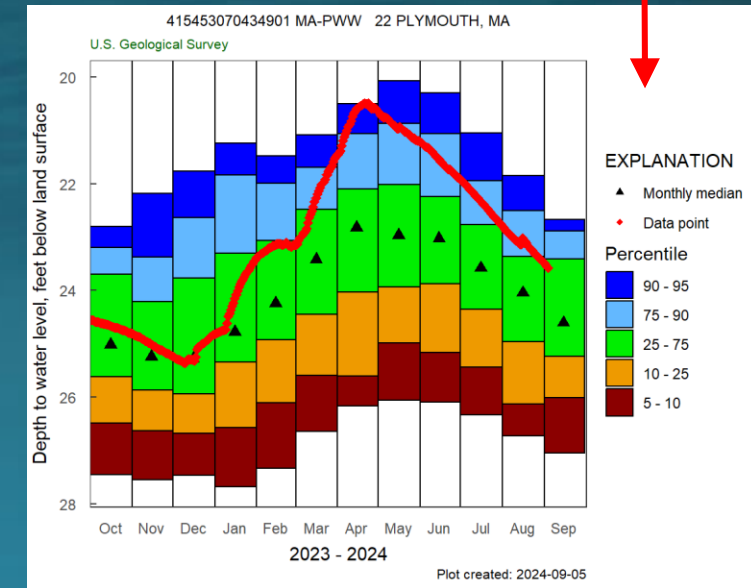
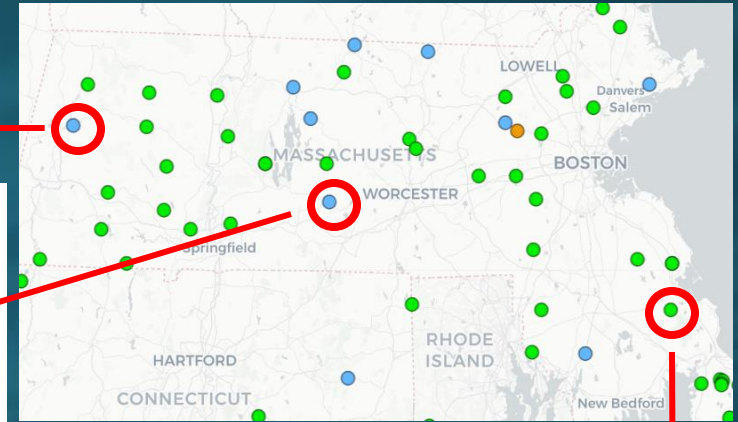
GW - Western, Central, and Southeast Regions



Period of Record: 60 yrs; Cont. 39 yrs



Period of Record: 64 yrs; Cont. 6 yrs



Period of Record: 64 yrs; Cont. 10 yrs

Summary of Conditions

- Streamflow conditions improved from July to August in all drought regions across Massachusetts except the Cape, where one of the two index monitoring stations trended down from normal to below normal.
- All but one of the groundwater stations monitored by USGS for climate response in Massachusetts were in the normal to above normal range during August, which is a slight improvement from the July conditions.