

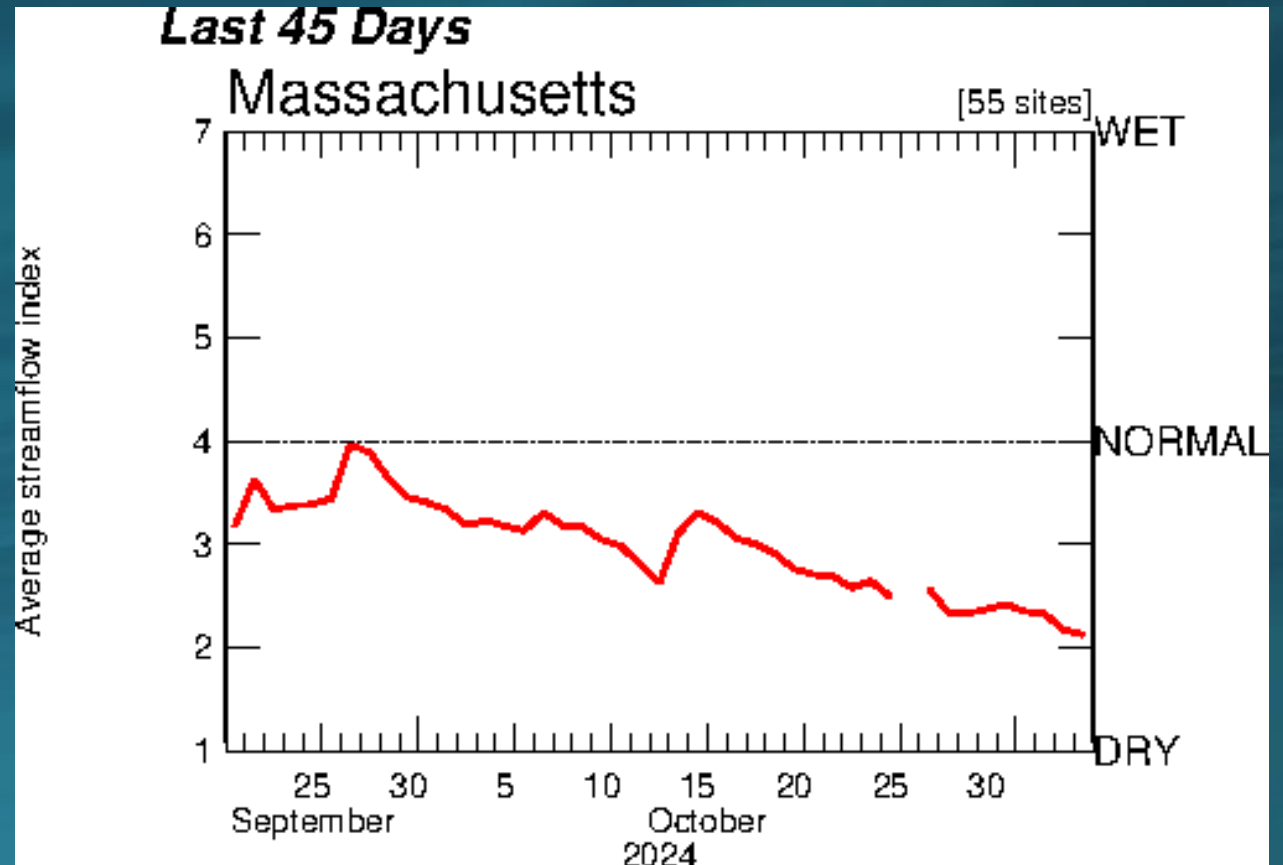
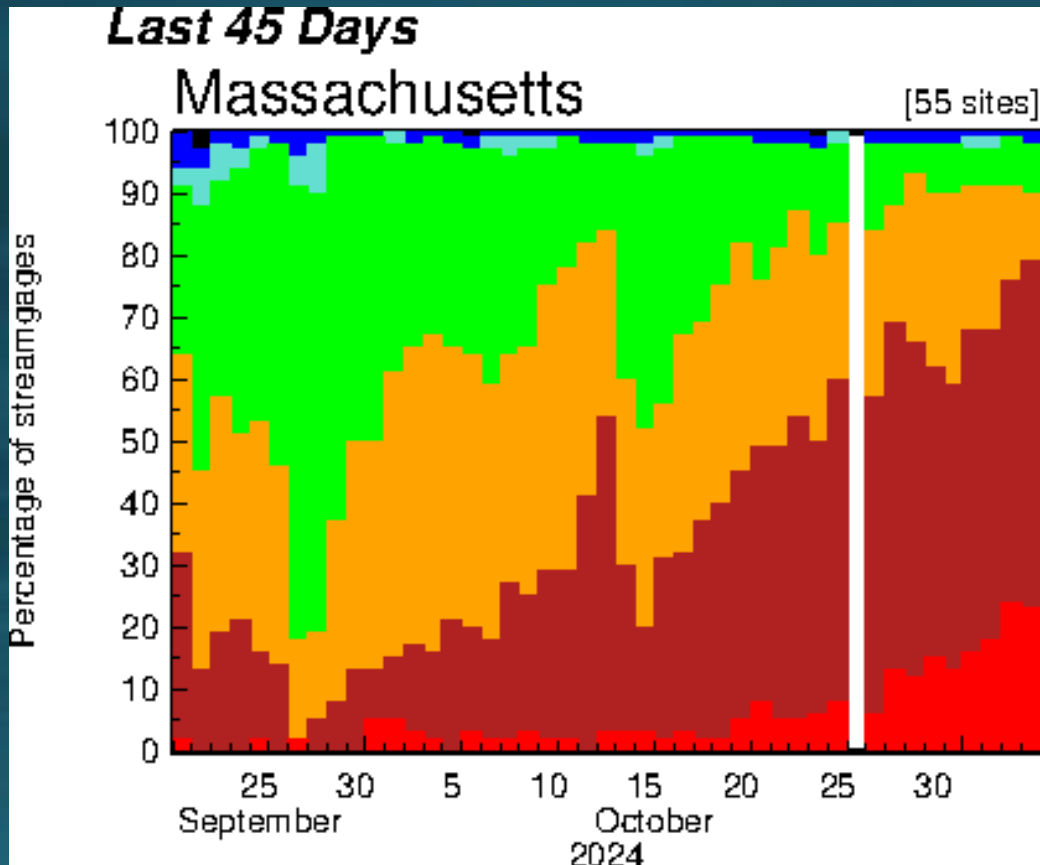
Streamflow and Groundwater Conditions in Massachusetts

Massachusetts Drought Task Force Meeting
November 6, 2024

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



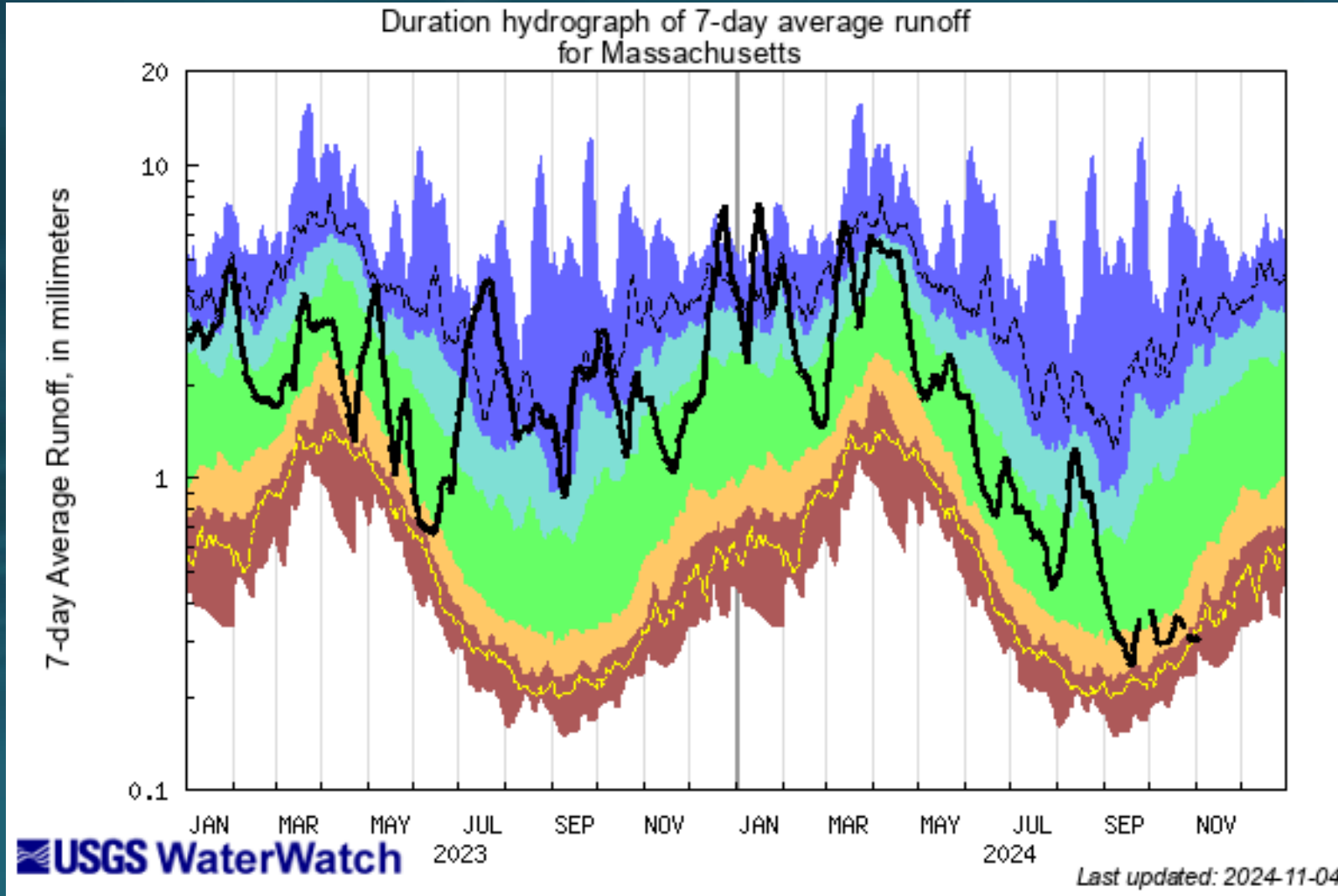
Streamflow Conditions – last 45 days



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			

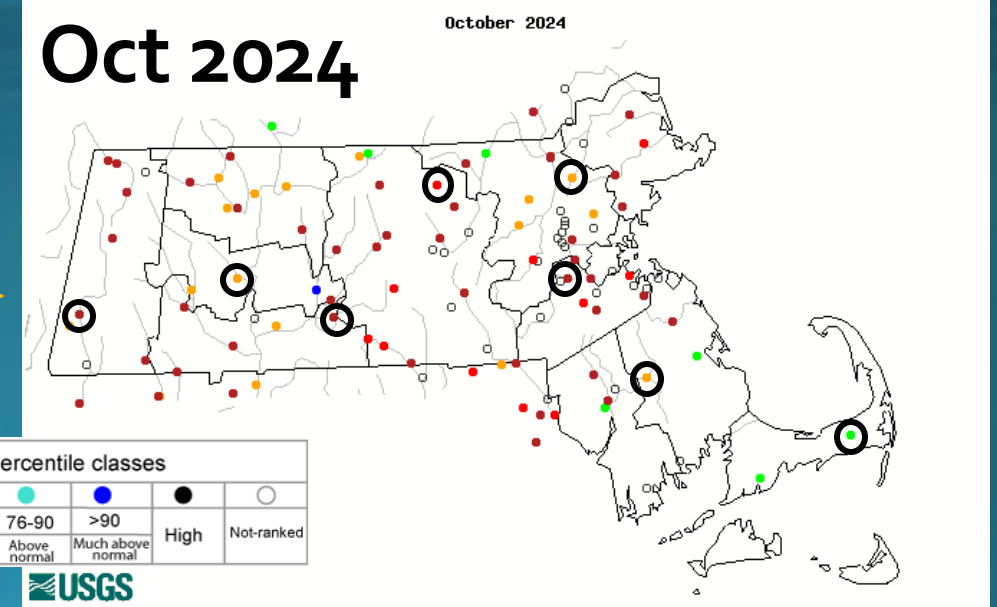
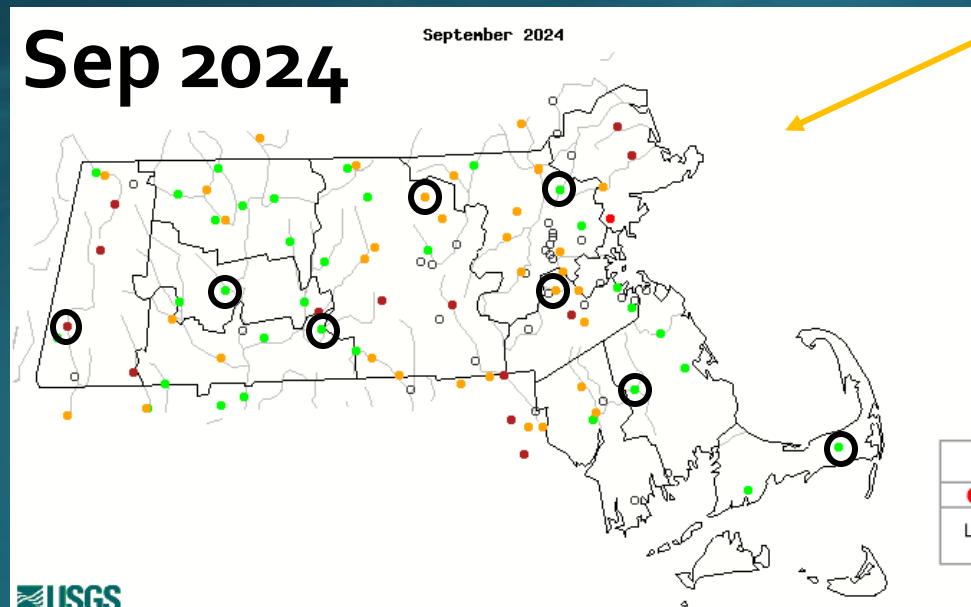
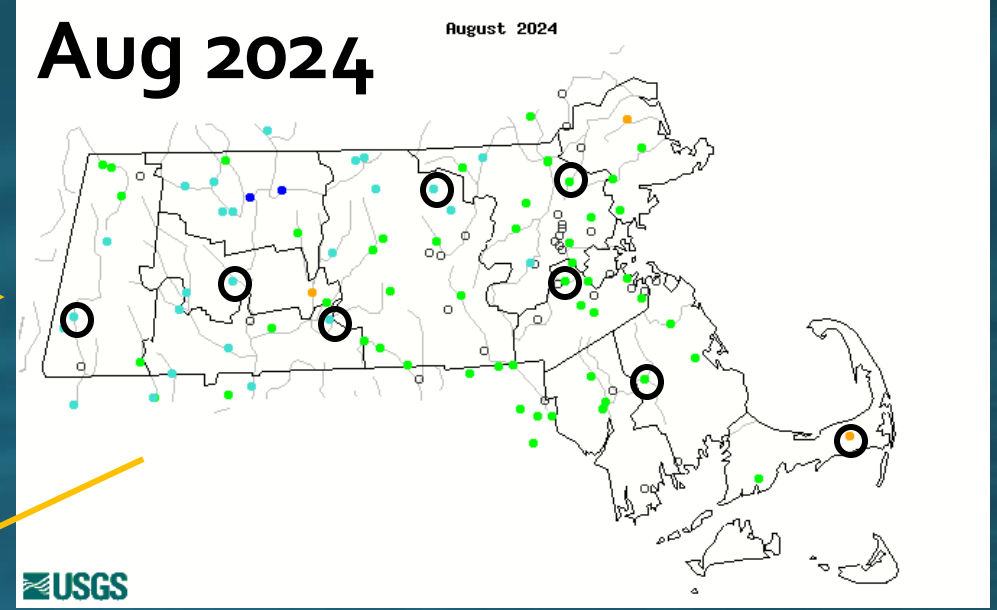
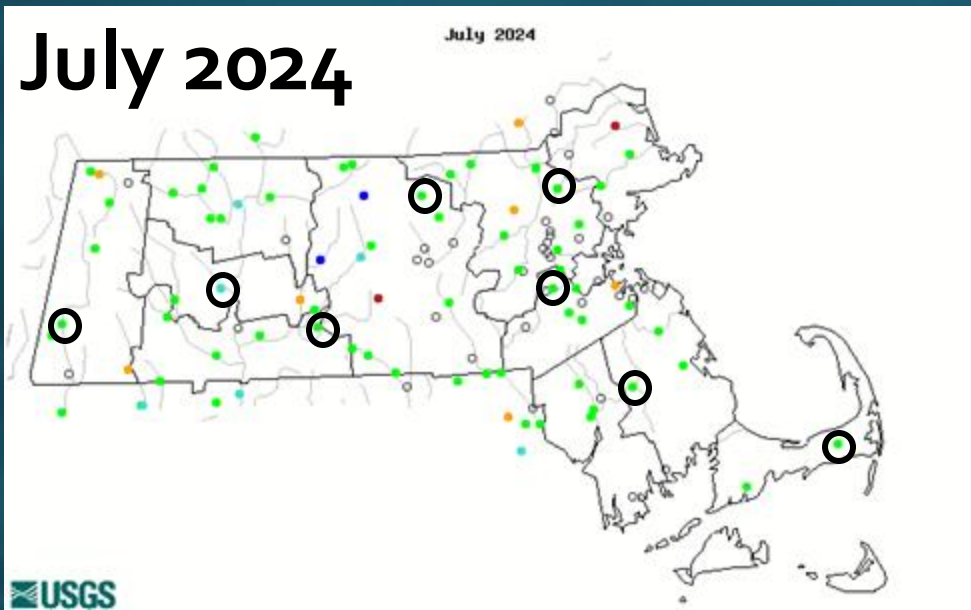
Streamflow Conditions 7-Day Moving Average



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			

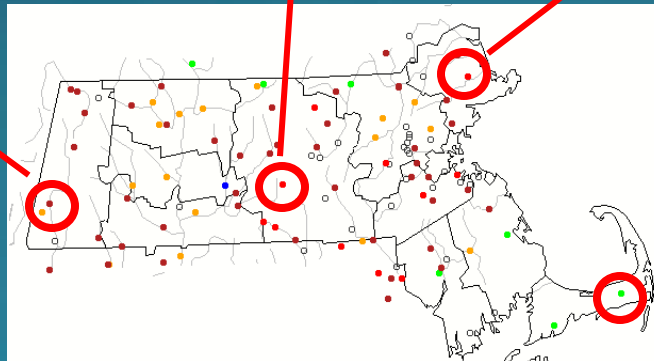
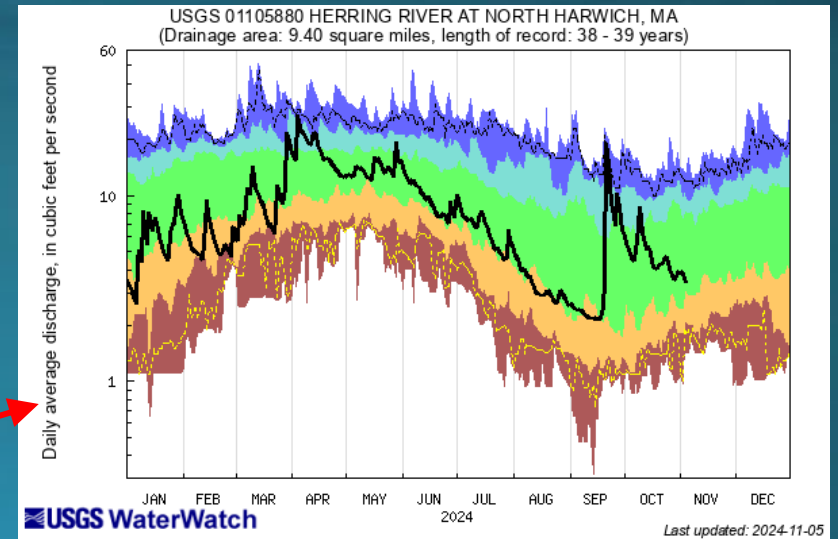
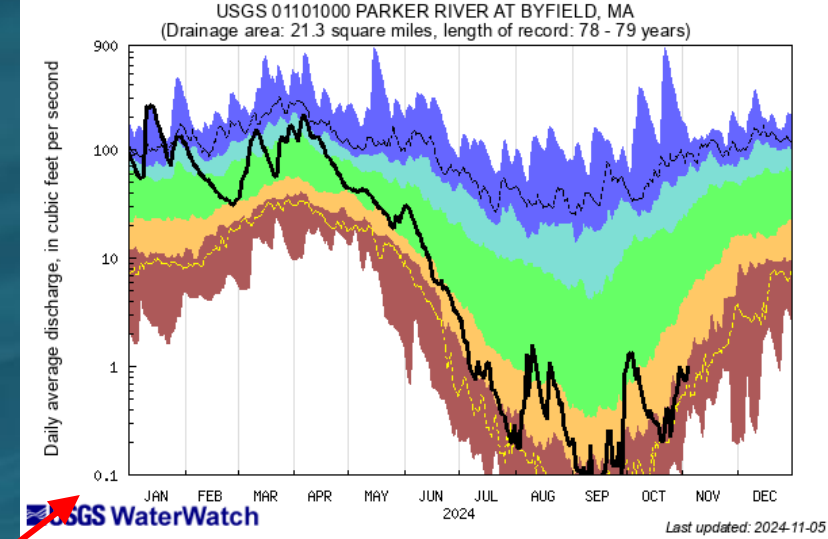
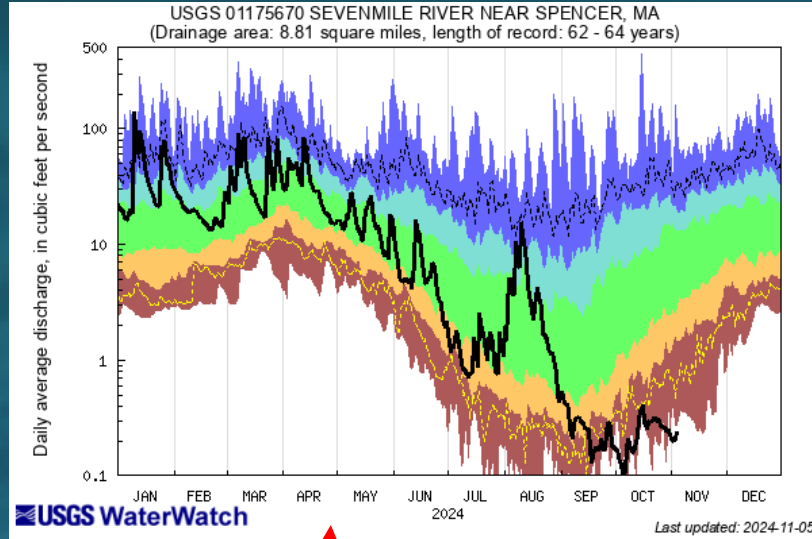
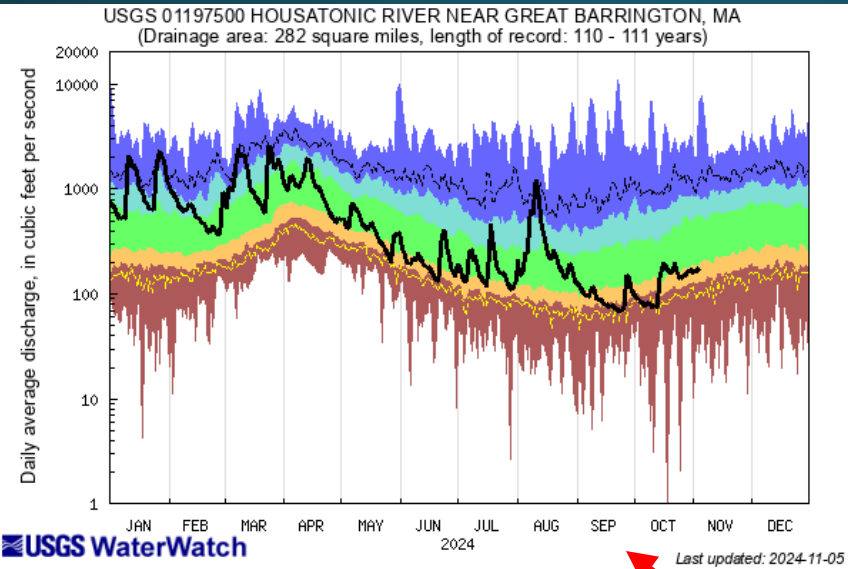
Streamflow Conditions – Monthly Average



Explanation - Percentile classes

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

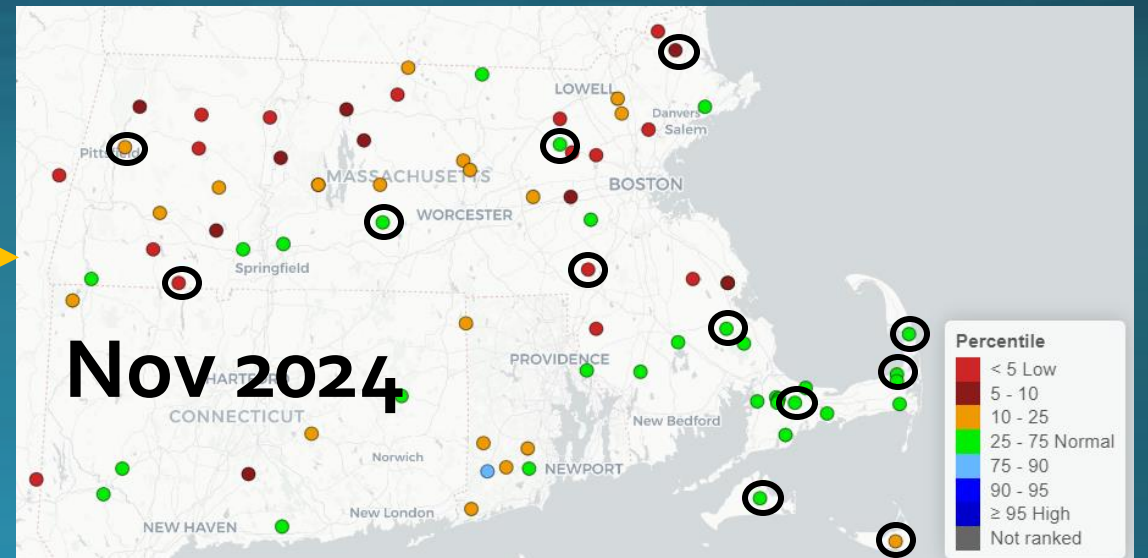
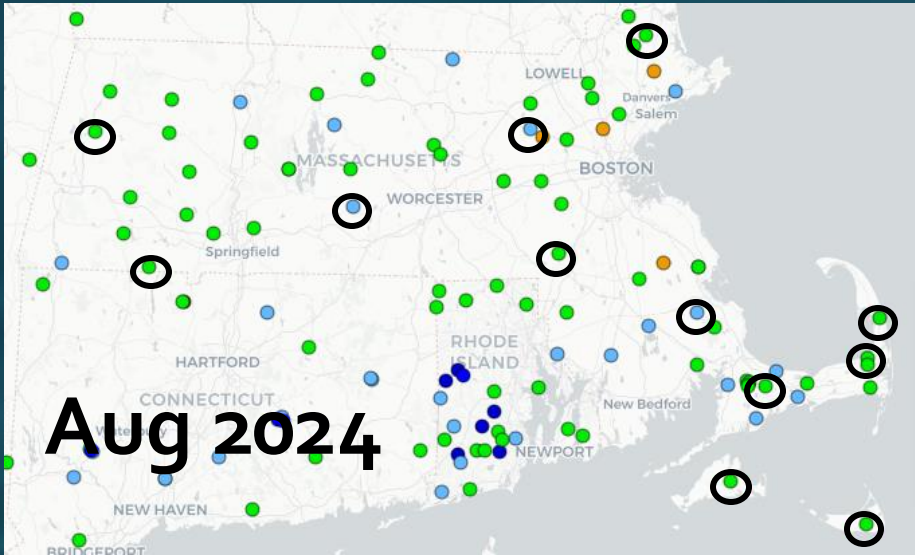
SW Conditions 7-Day Average



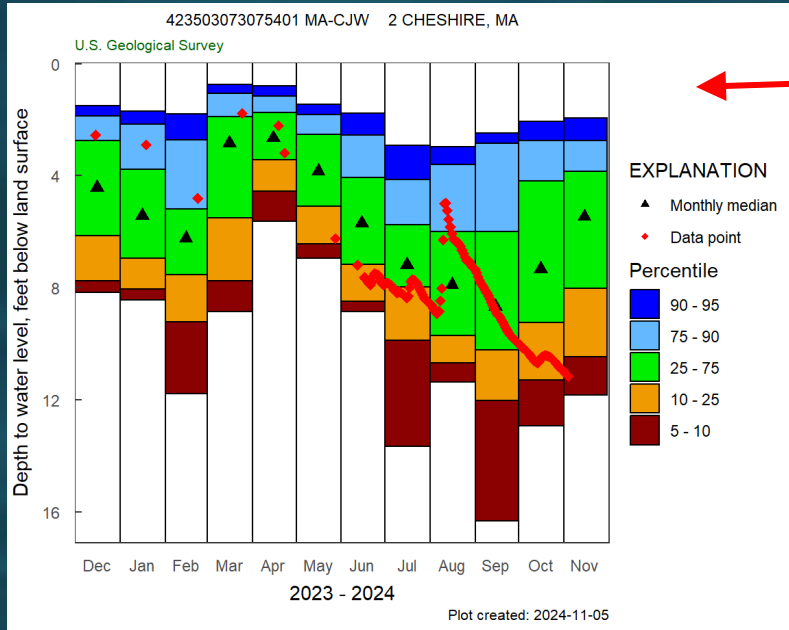
Explanation - Percentile classes

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

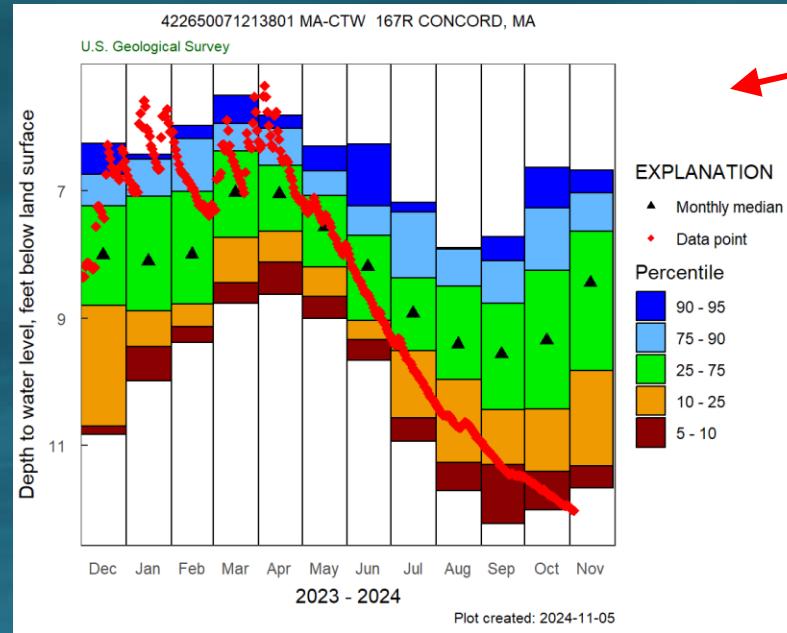
Groundwater Conditions – Beg of Month



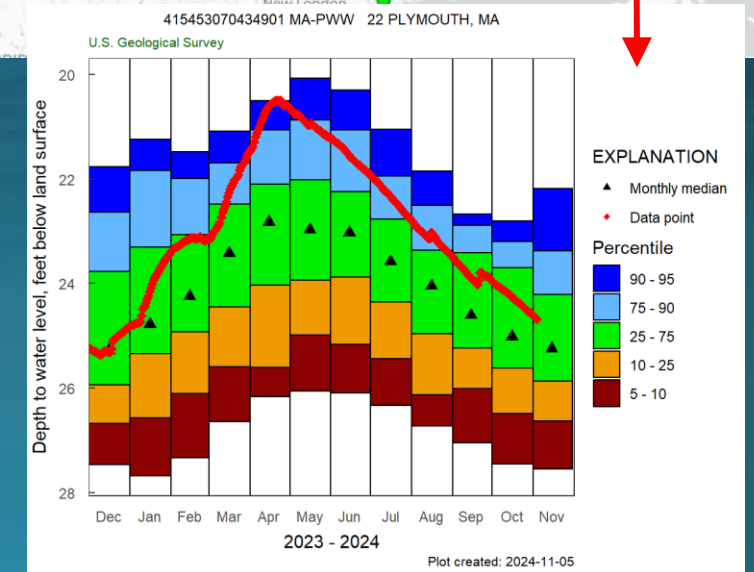
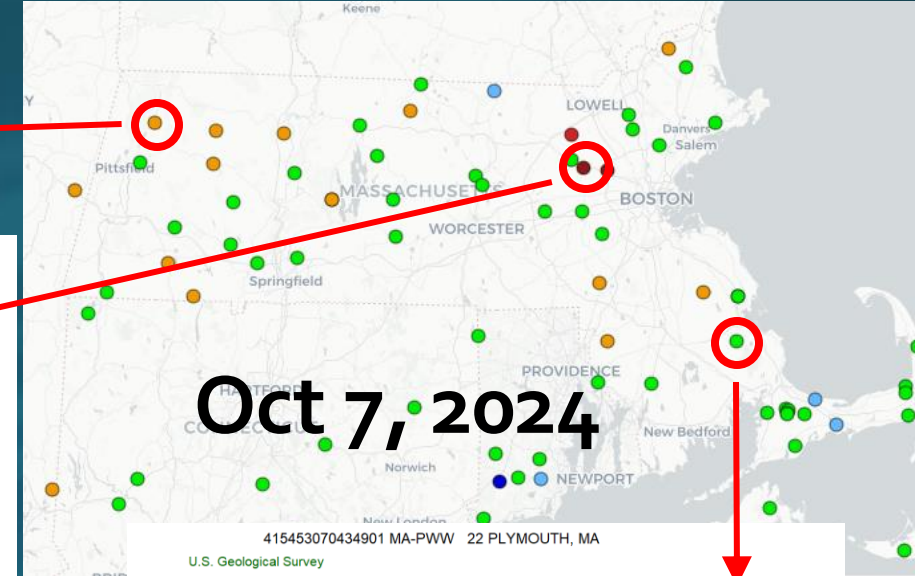
Groundwater Conditions – Specific Wells



Period of Record: 69 yrs; Cont. 0.3 yrs



Period of Record: 58 yrs; Cont. 2 yrs
On pace for lowest November on record



Period of Record: 64 yrs; Cont. 10 yrs

Summary of Conditions

- Streamflow conditions relative to monthly normals have been steadily declining across Massachusetts since late September, except for a brief rise related to an October 14 precipitation event. At present, about 20% of USGS streamgages in Massachusetts are at record low flows for the day of year.
- Groundwater levels are also trending down relative to seasonal norms across the Commonwealth, with wells not showing the water level increases in areas that normally experience recharge in the fall. Many wells outside of the Cape and Islands Drought Regions are at or near record low levels for November.