

Streamflow and Groundwater Conditions in Massachusetts

Massachusetts Drought Task Force Meeting

June 8, 2023

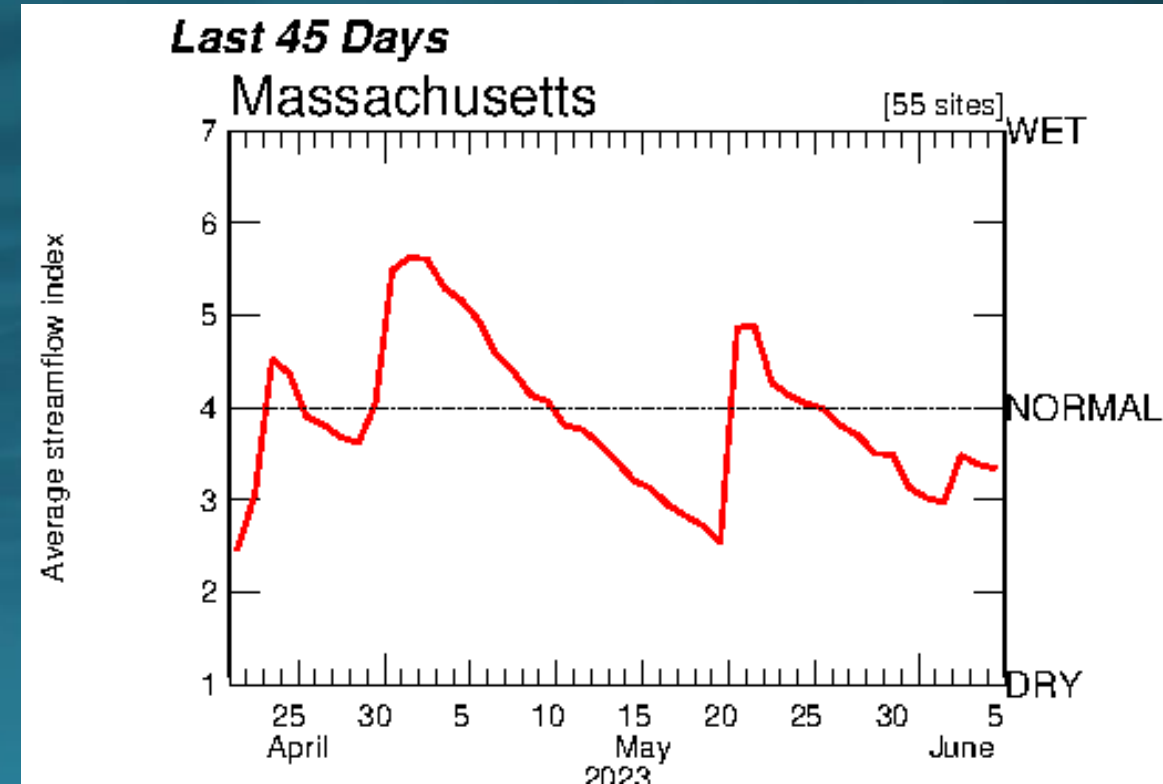
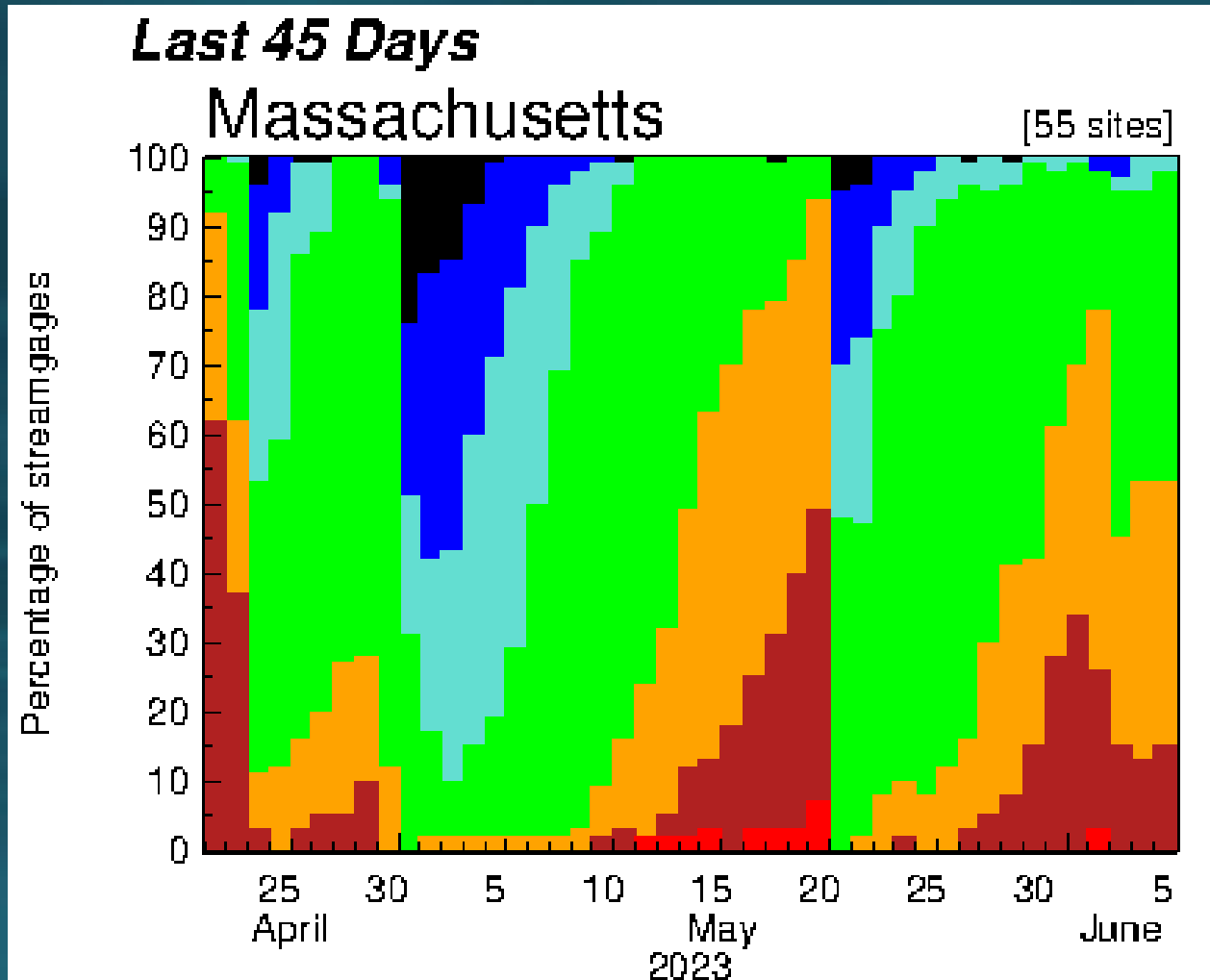
U.S. Geological Survey

New England Water Science Center

Gardner Bent, Jason Pollender, and Chris Bruet



Streamflow Conditions – last 45 days

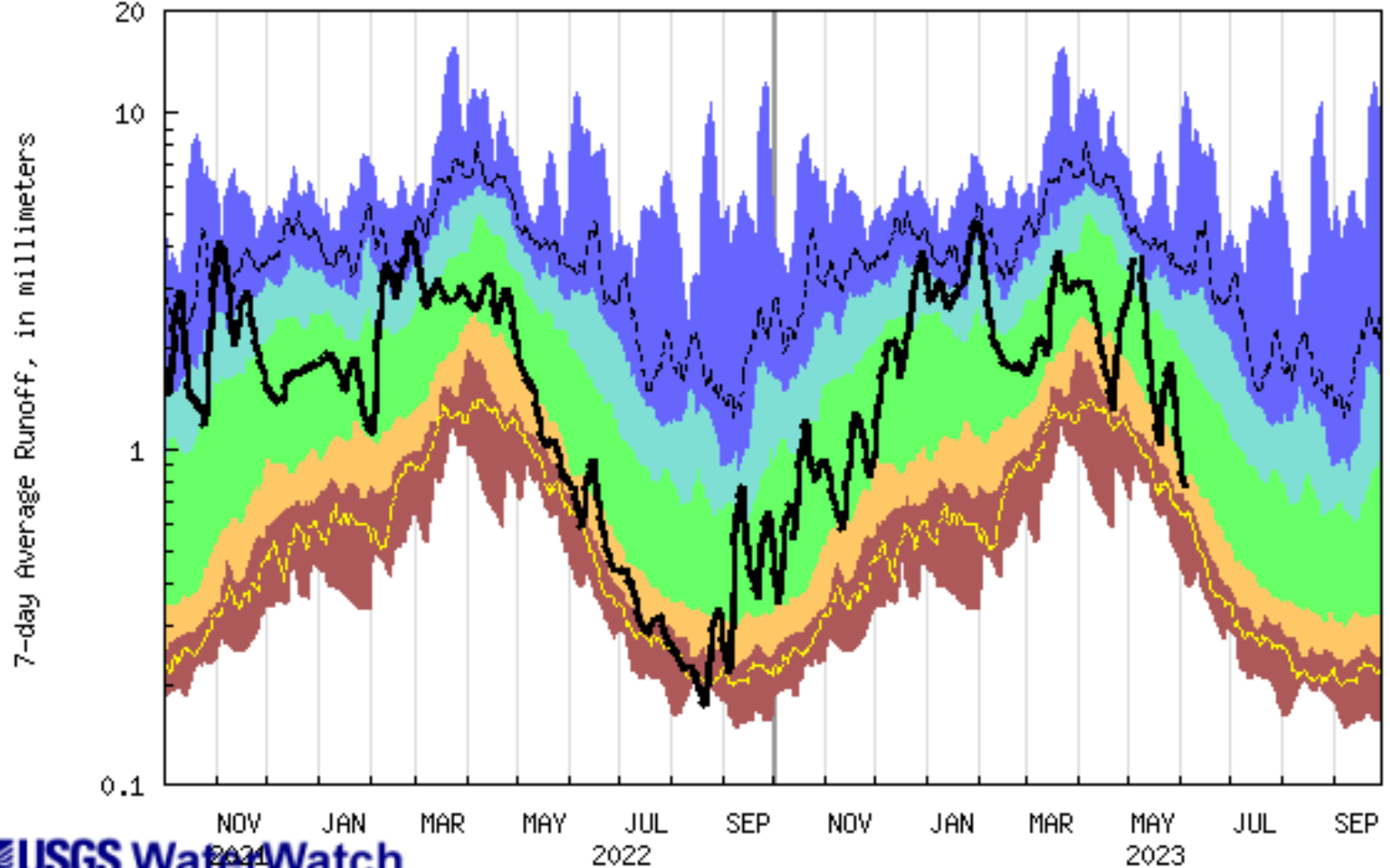


Explanation - Percentile classes

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

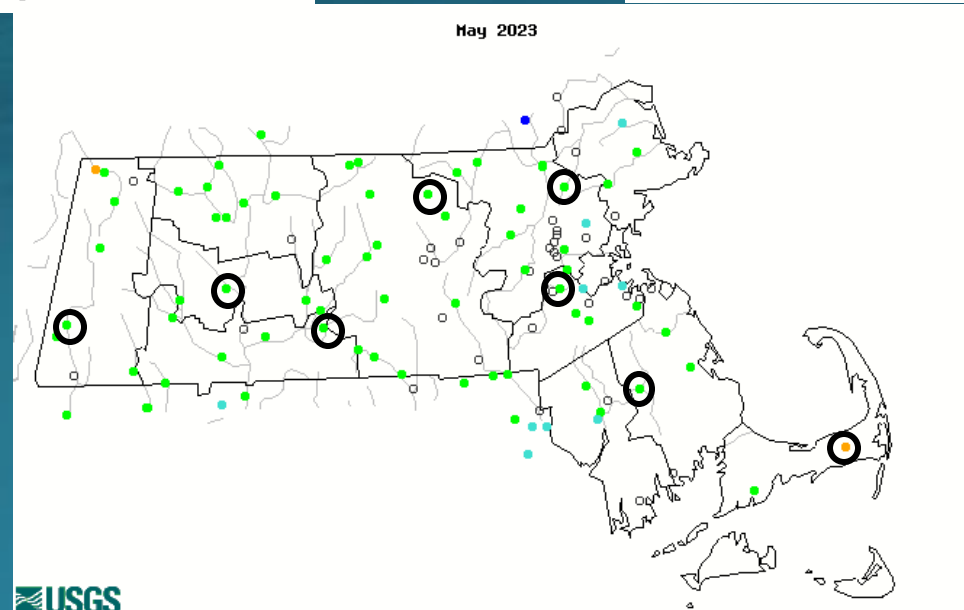
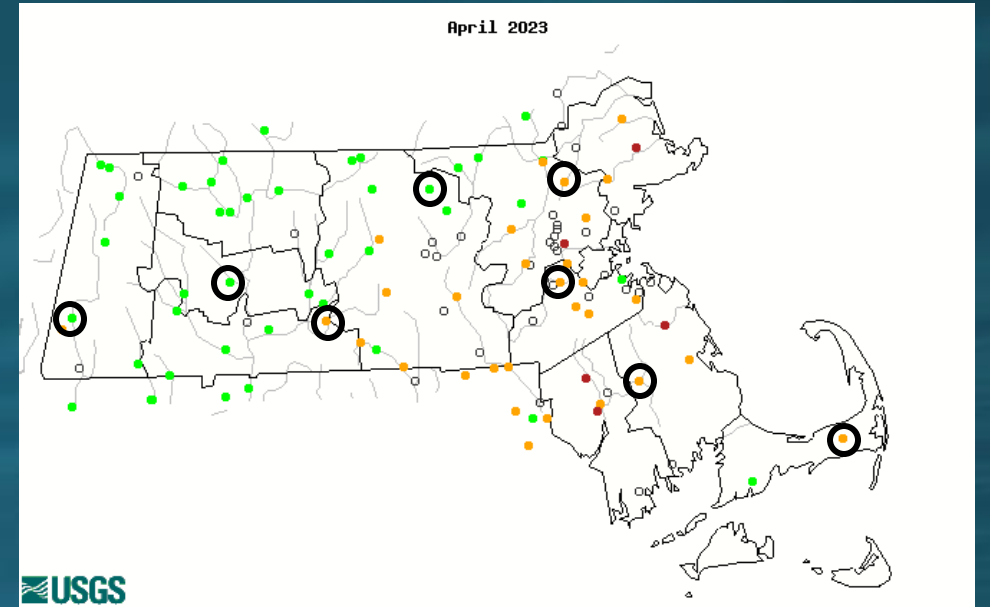
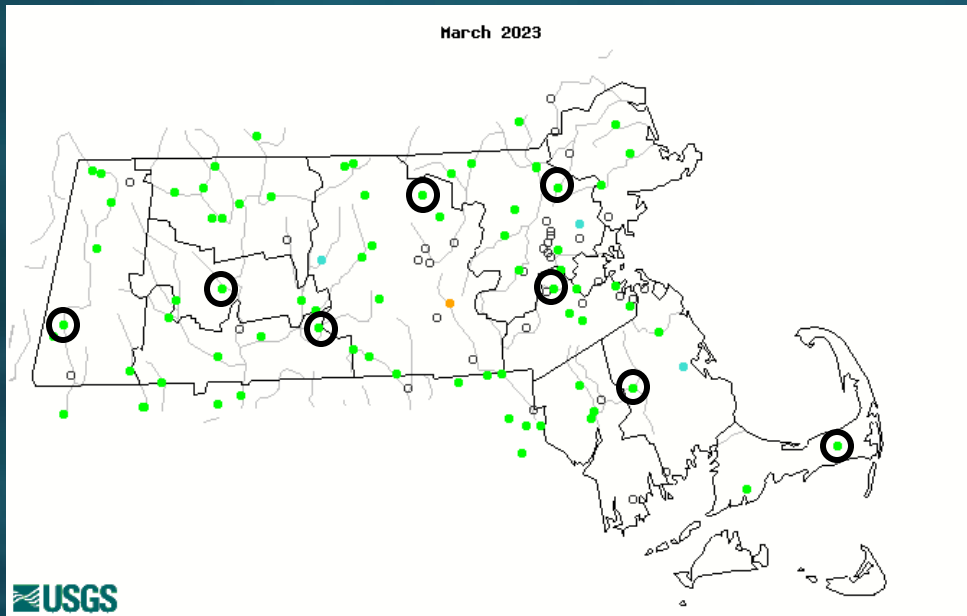
Streamflow Conditions 7-Day Moving Average

Duration hydrograph of 7-day average runoff for Massachusetts



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

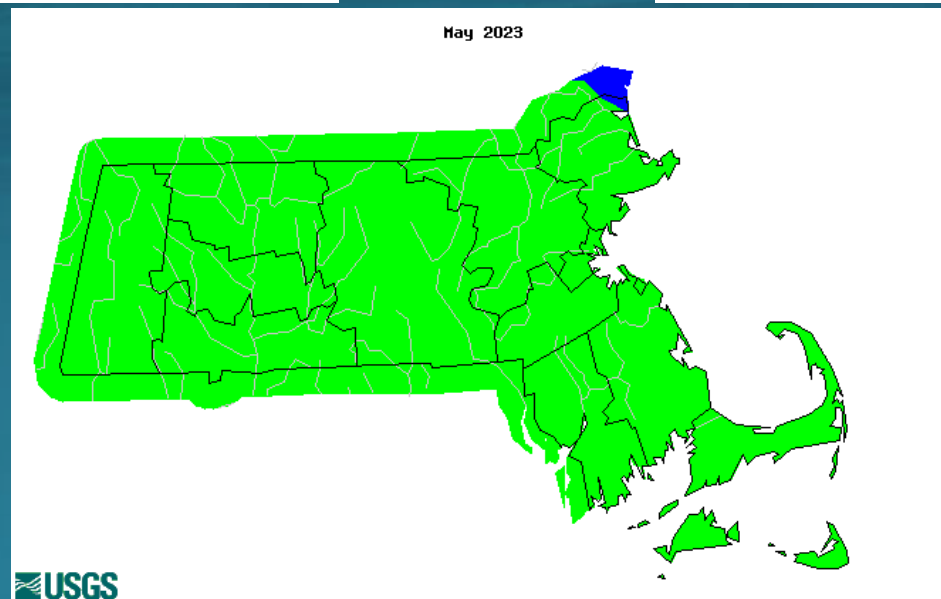
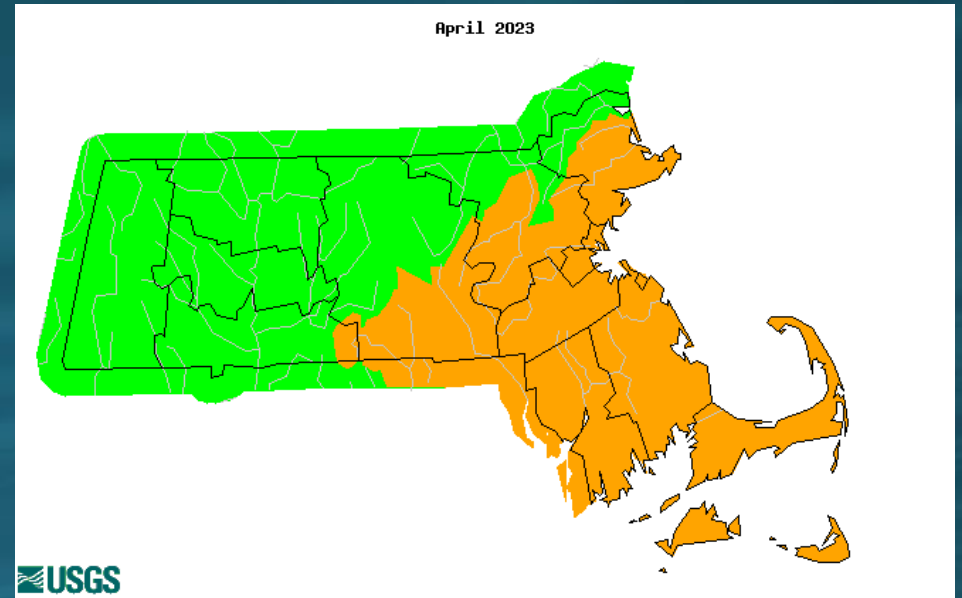
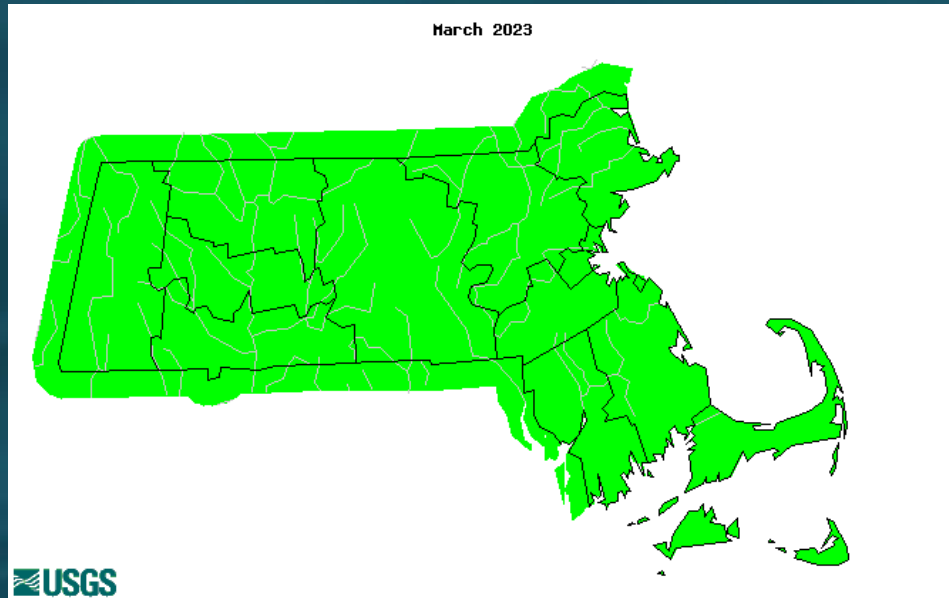
Streamflow Conditions – Monthly Average



Explanation - Percentile classes

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

Streamflow Conditions – Monthly Average

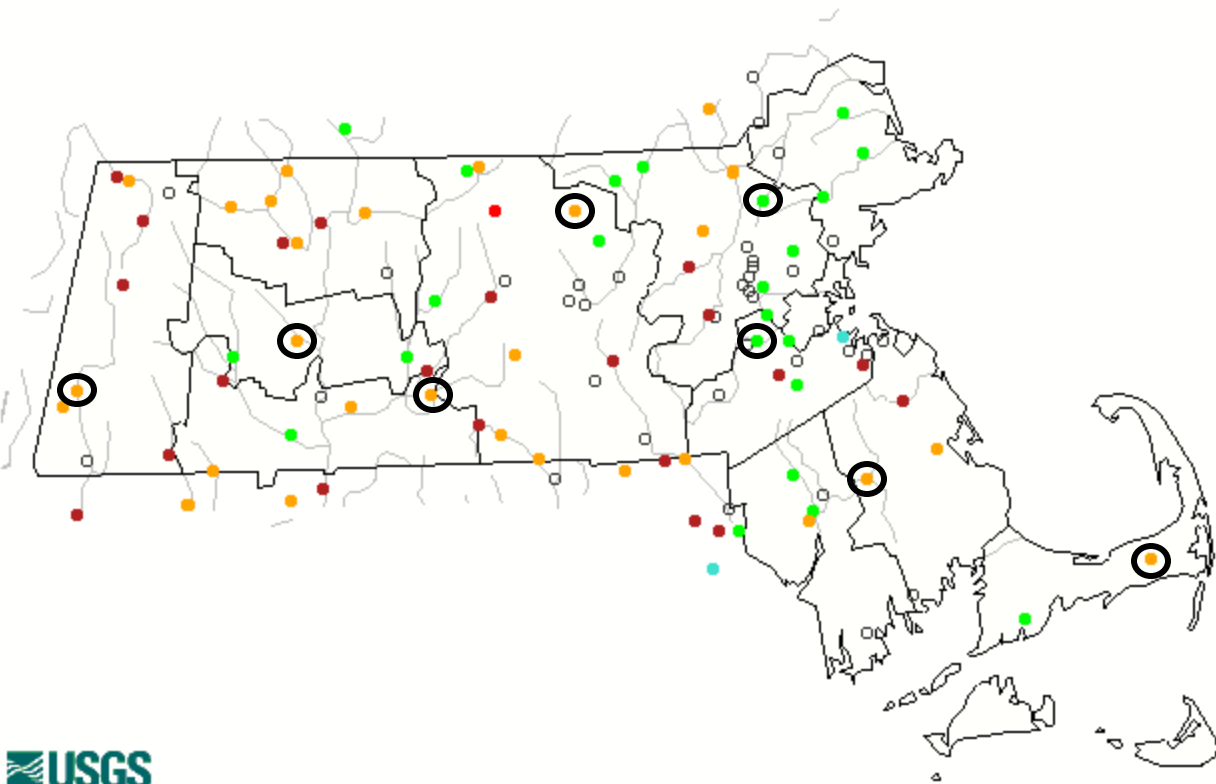


Explanation - Percentile classes

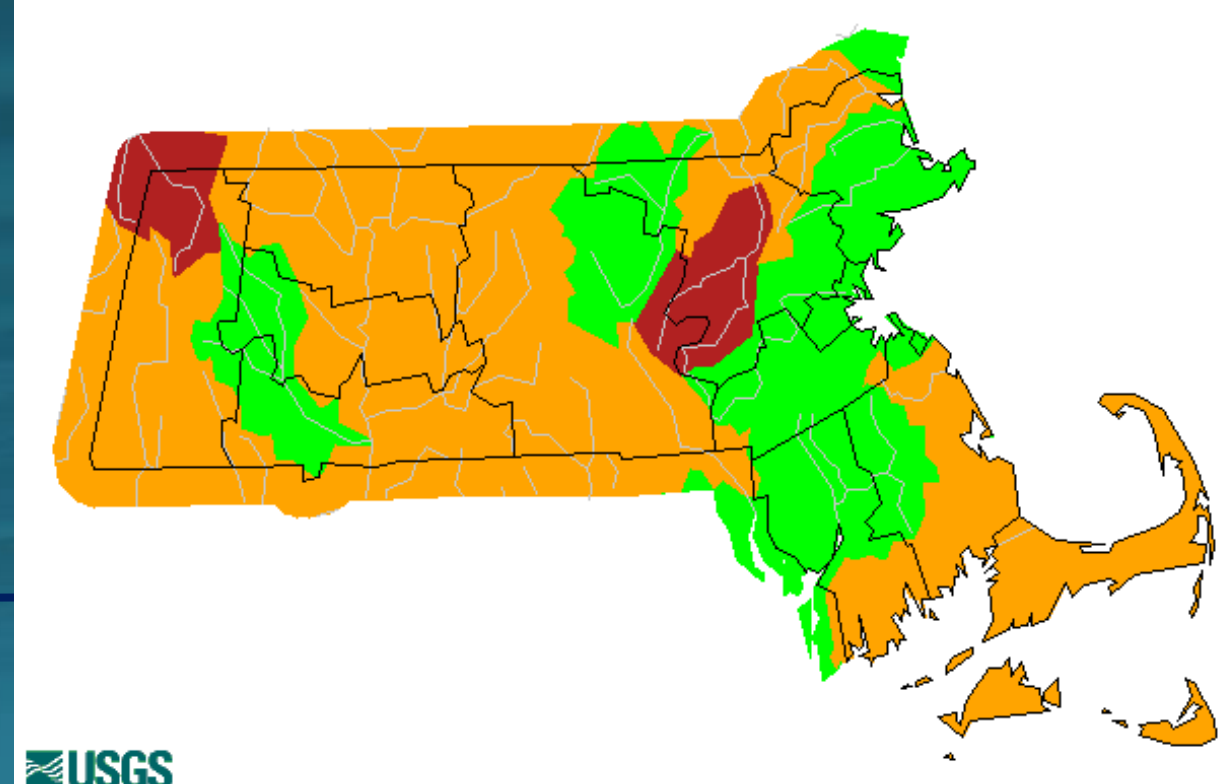
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

Streamflow Conditions 7-Day Average

Sunday, June 04, 2023



Sunday, June 04, 2023

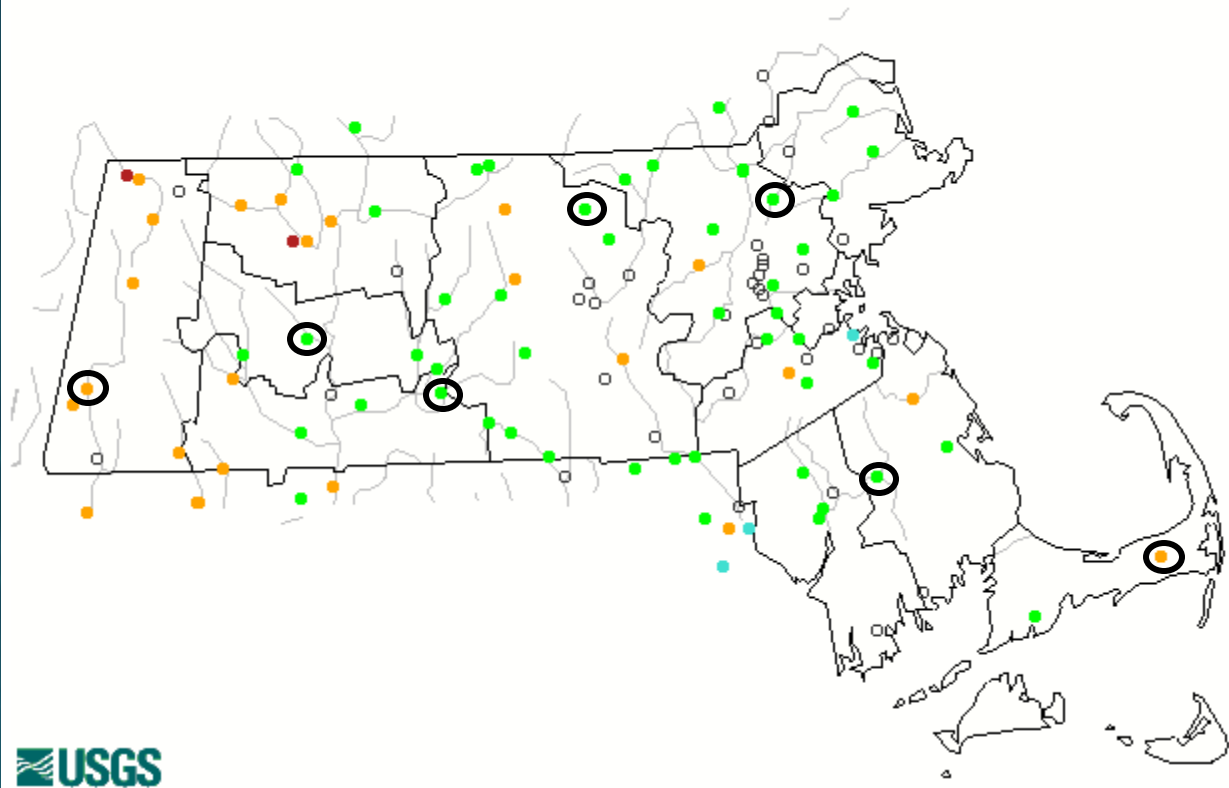


Explanation - Percentile classes

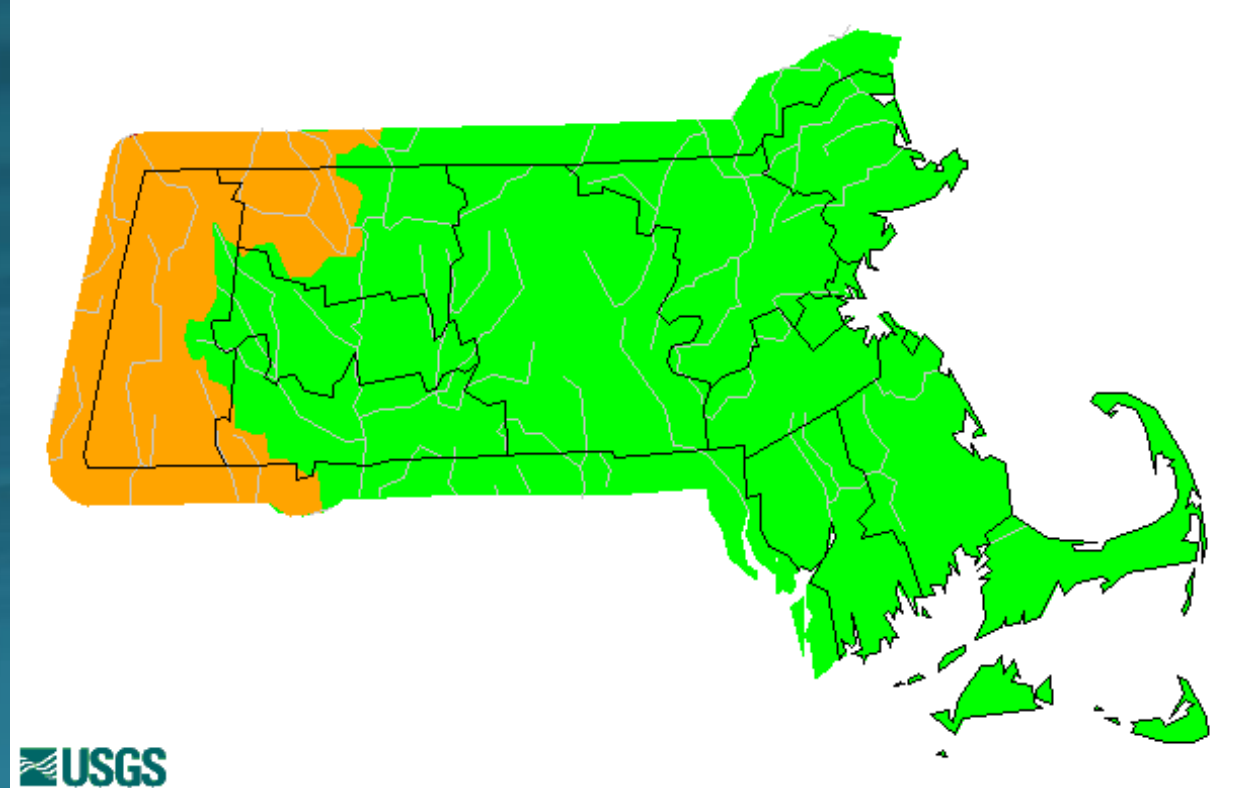
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		

Streamflow Conditions 14-Day Average

Sunday, June 04, 2023



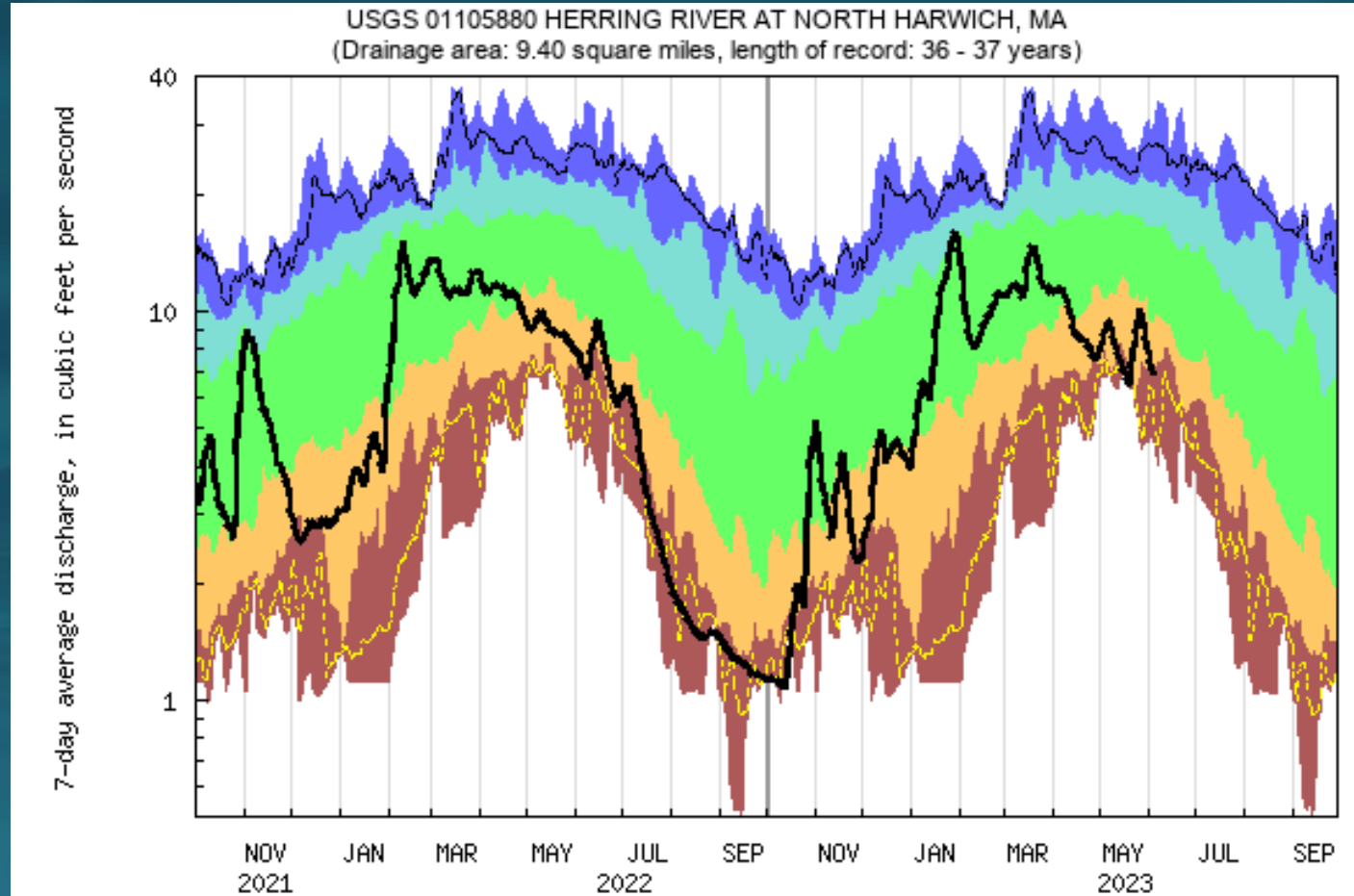
Sunday, June 04, 2023





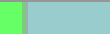




Explanation - Percentile classes

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

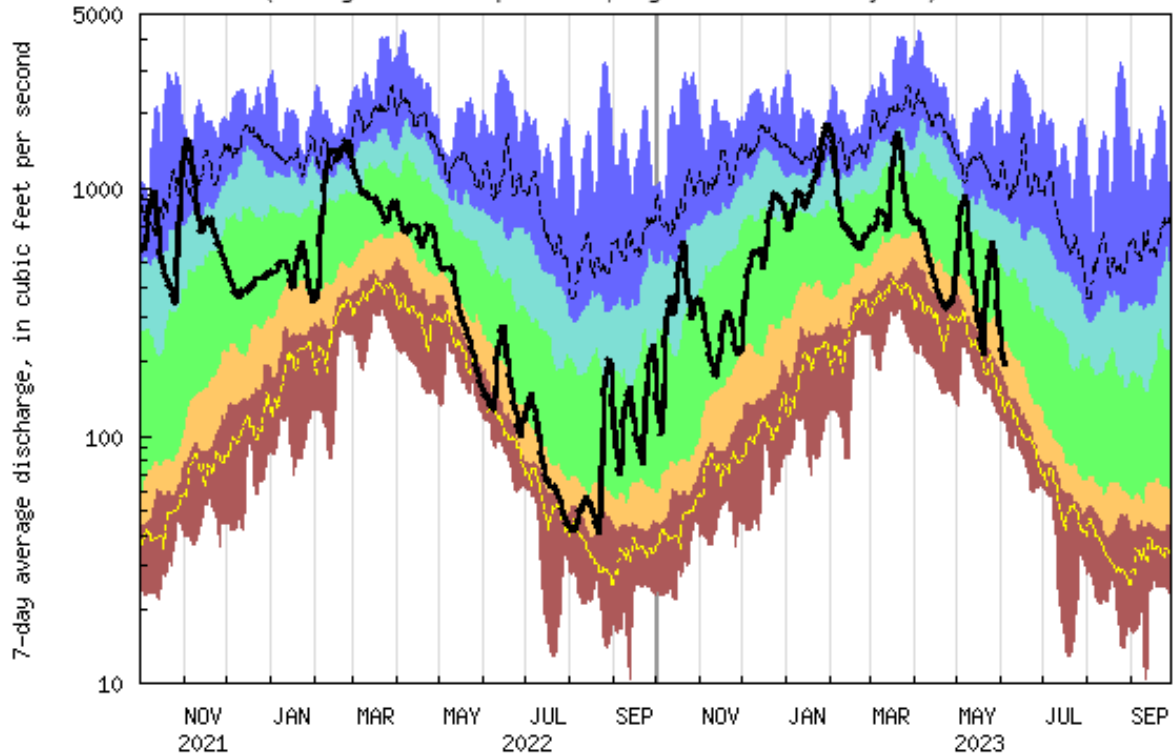
Cape Cod Region 7-Day Average



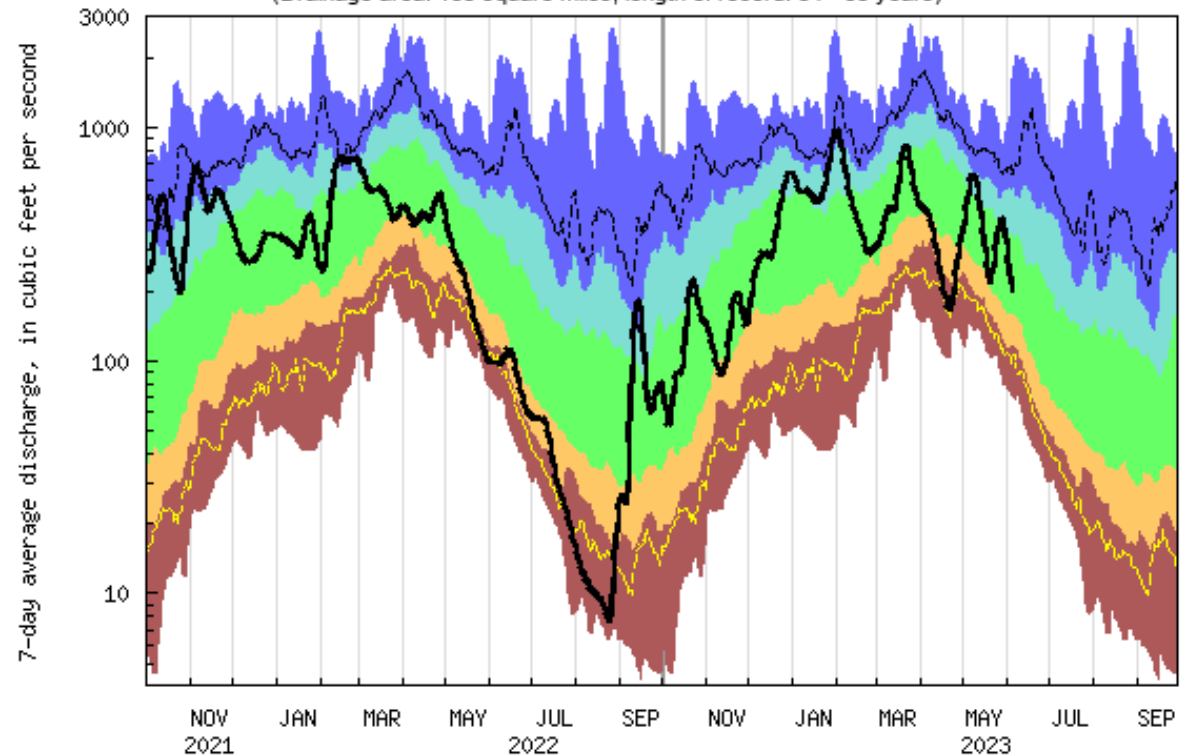
Explanation - Percentile classes						
						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Runoff

Southeastern Region 7-Day Average

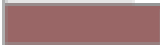







USGS 01108000 TAUNTON RIVER NEAR BRIDGEWATER, MA
(Drainage area: 261 square miles, length of record: 74 - 76 years)



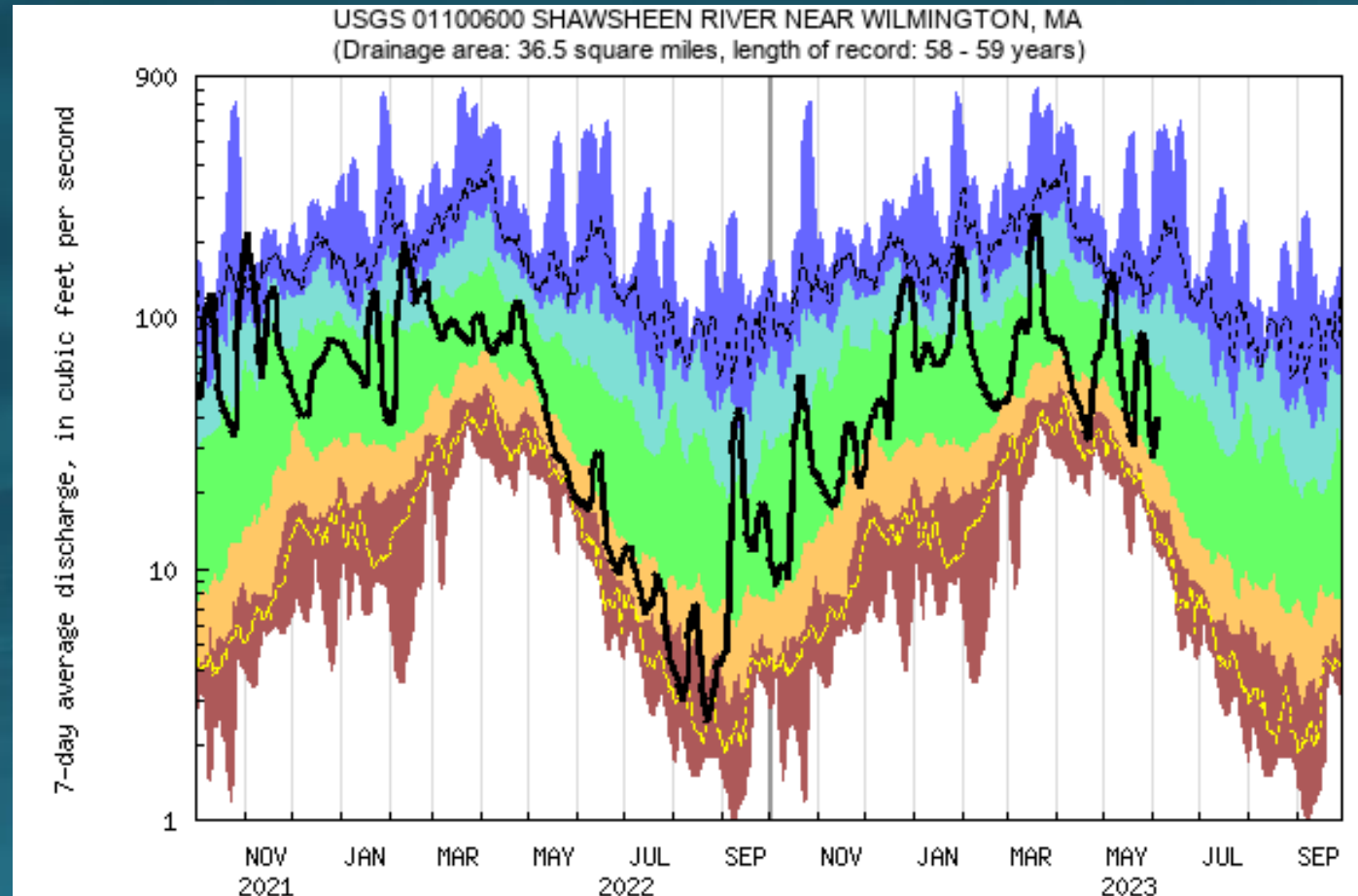
USGS 01103500 CHARLES RIVER AT DOVER, MA
(Drainage area: 183 square miles, length of record: 84 - 85 years)










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			

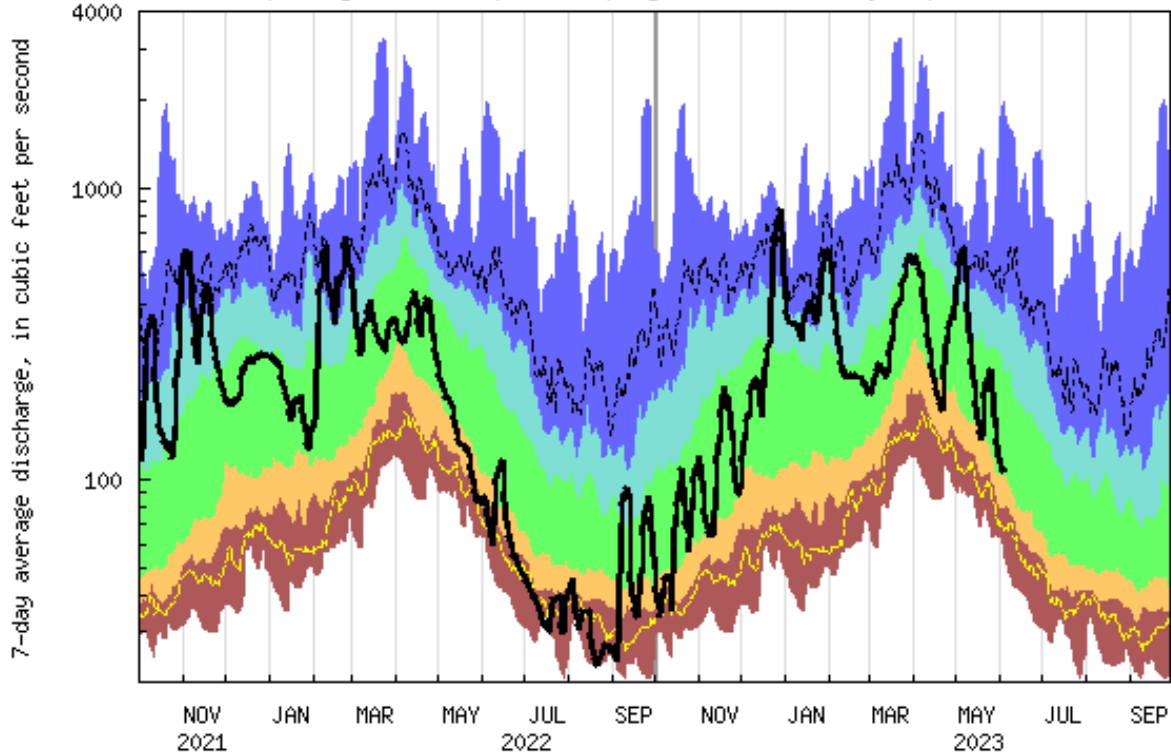
Northeast Region 7-Day Average



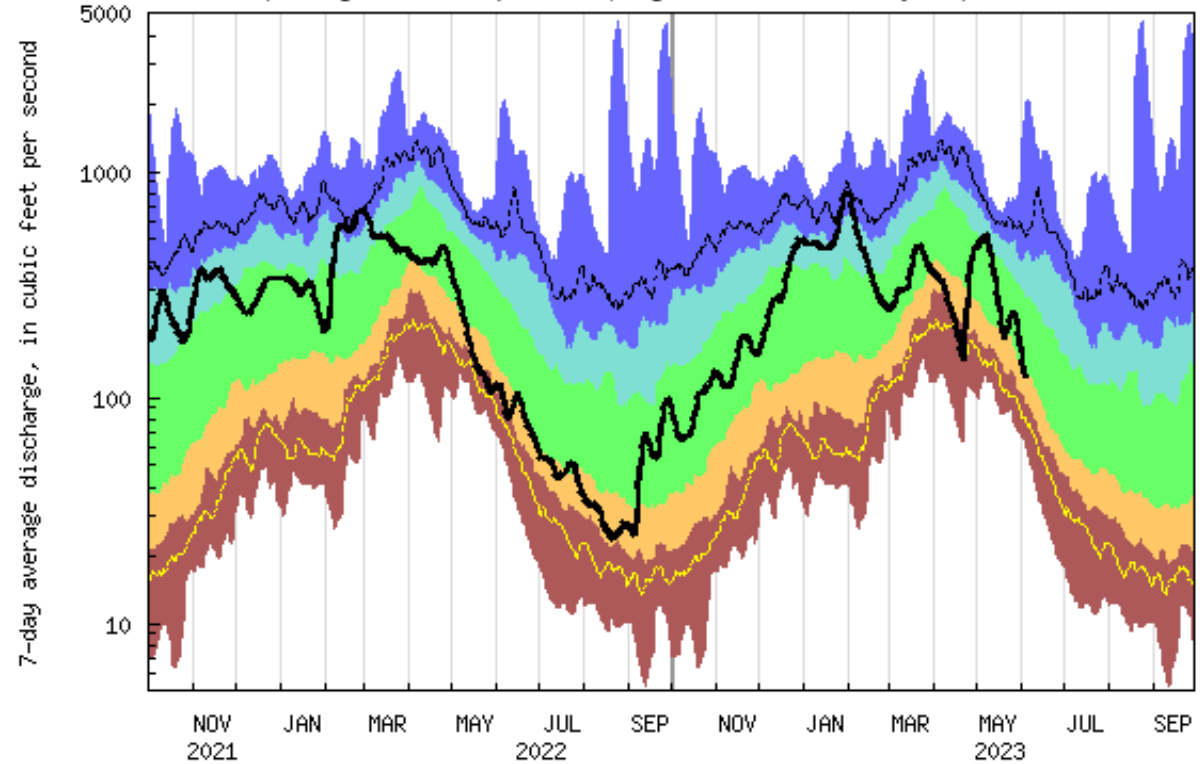
Explanation - Percentile classes						
						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile-highest
Much below Normal		Below normal	Normal	Above normal	Much above normal	
						Runoff

Central Region 7-Day Average









USGS 01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MA
(Drainage area: 110 square miles, length of record: 86 - 87 years)



USGS 01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA
(Drainage area: 150 square miles, length of record: 109 - 110 years)

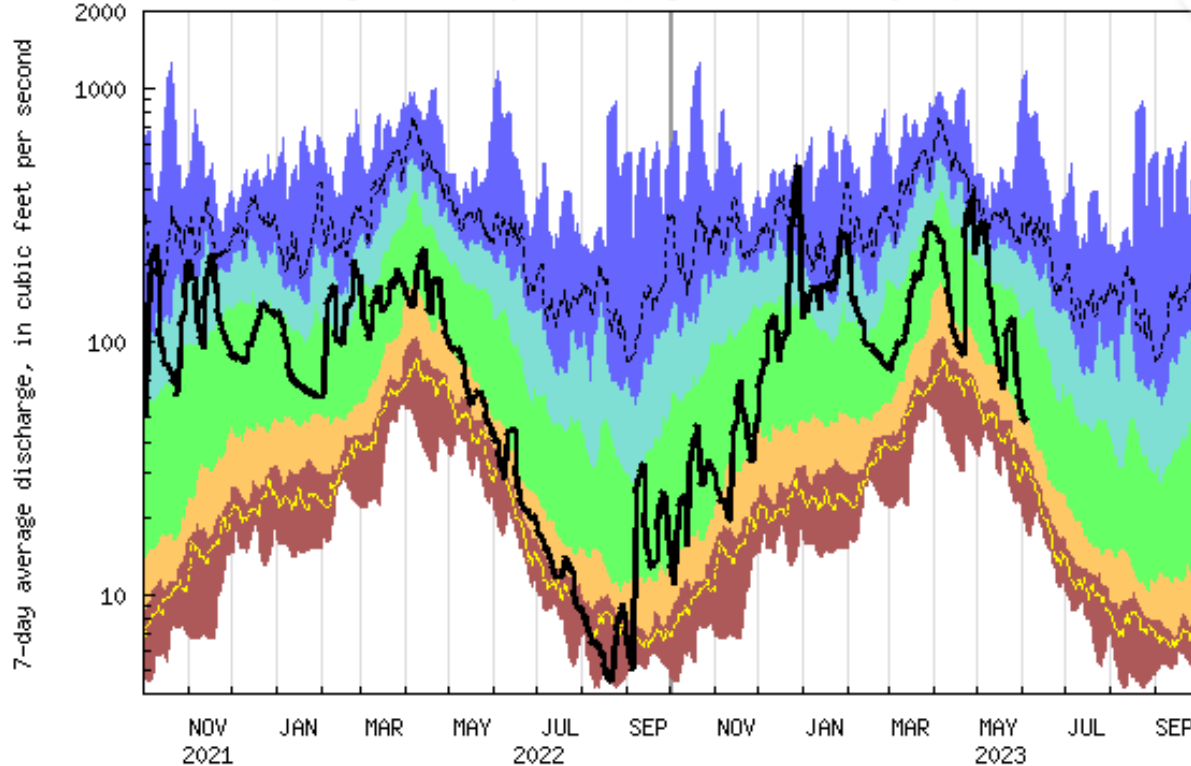


Explanation - Percentile classes

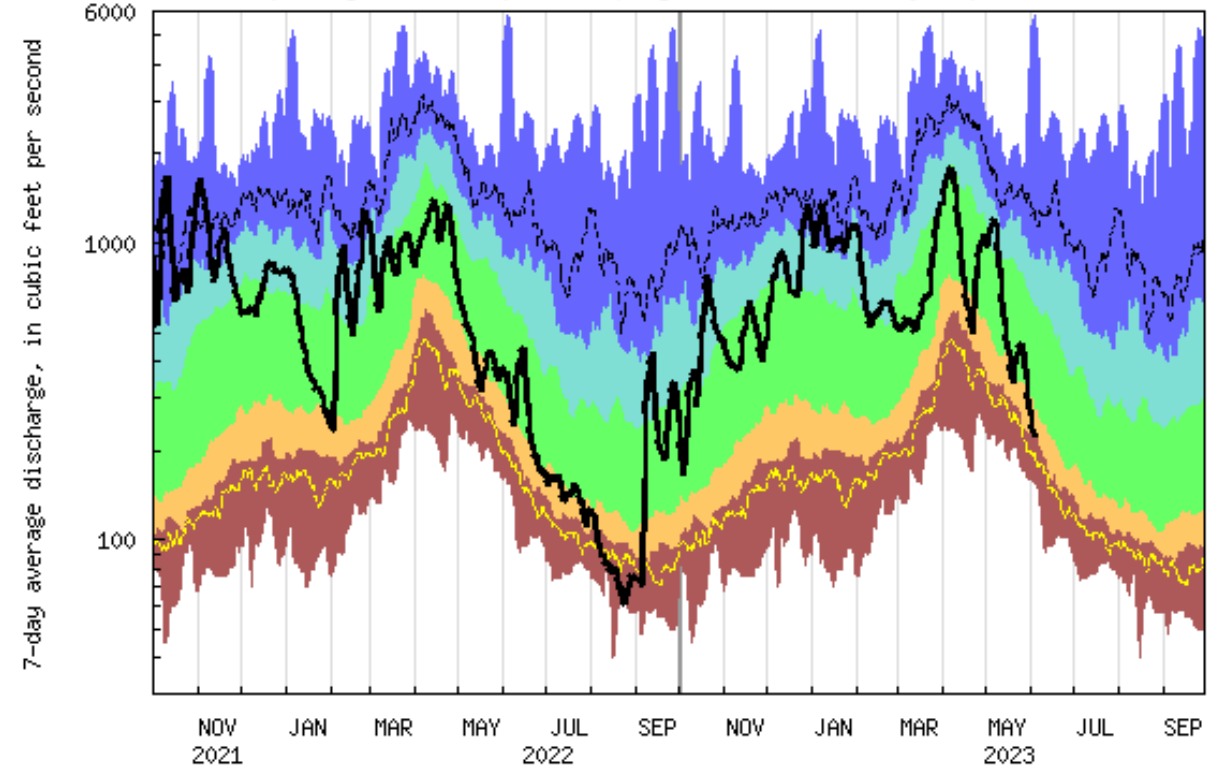
							
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest	Runoff
Much below Normal		Below normal	Normal	Above normal		Much above normal	

Connecticut Valley and Western Regions

USGS 01171500 MILL RIVER AT NORTHAMPTON, MA
(Drainage area: 52.6 square miles, length of record: 83 - 84 years)



USGS 01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA
(Drainage area: 282 square miles, length of record: 108 - 109 years)



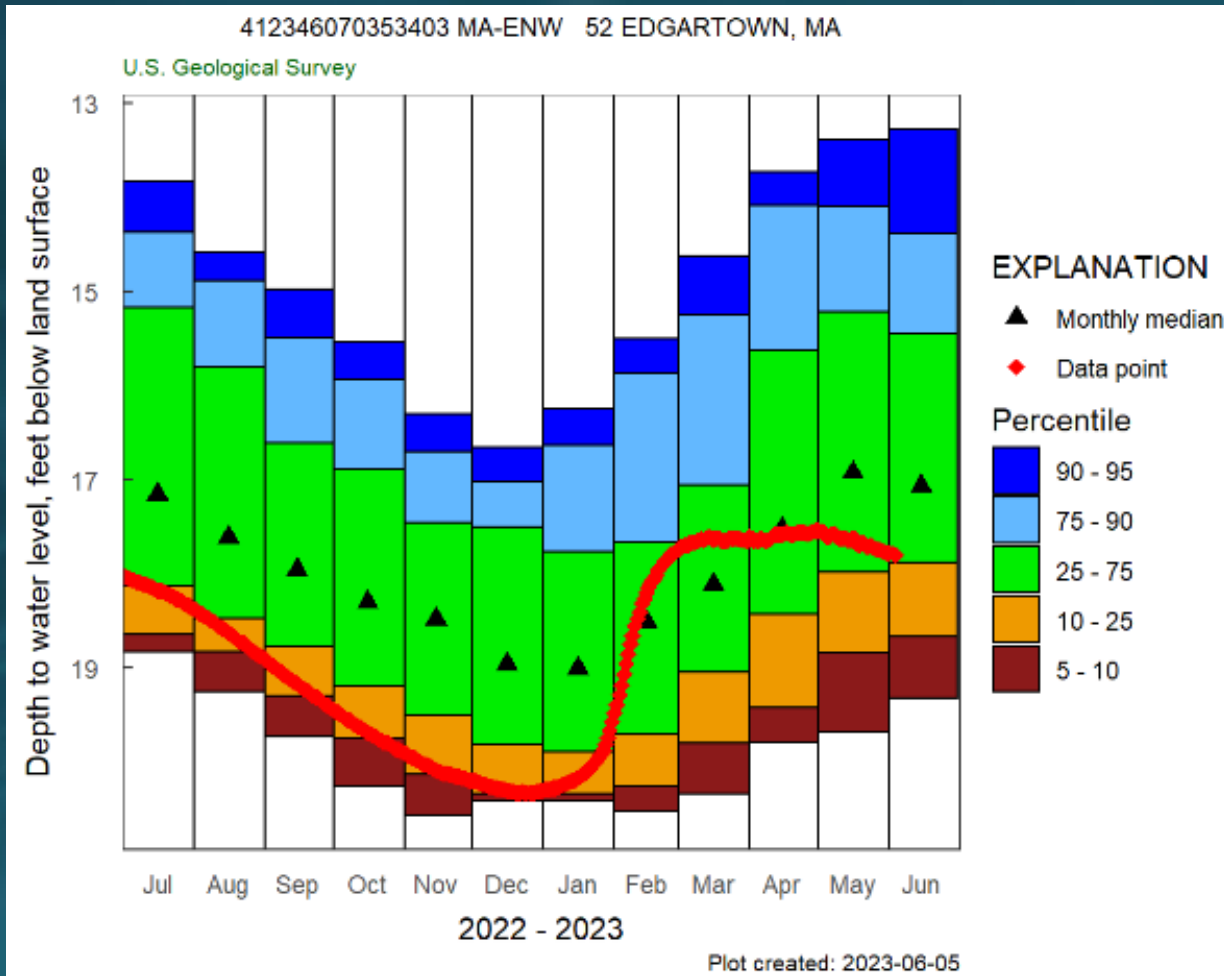
Explanation - Percentile classes

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		

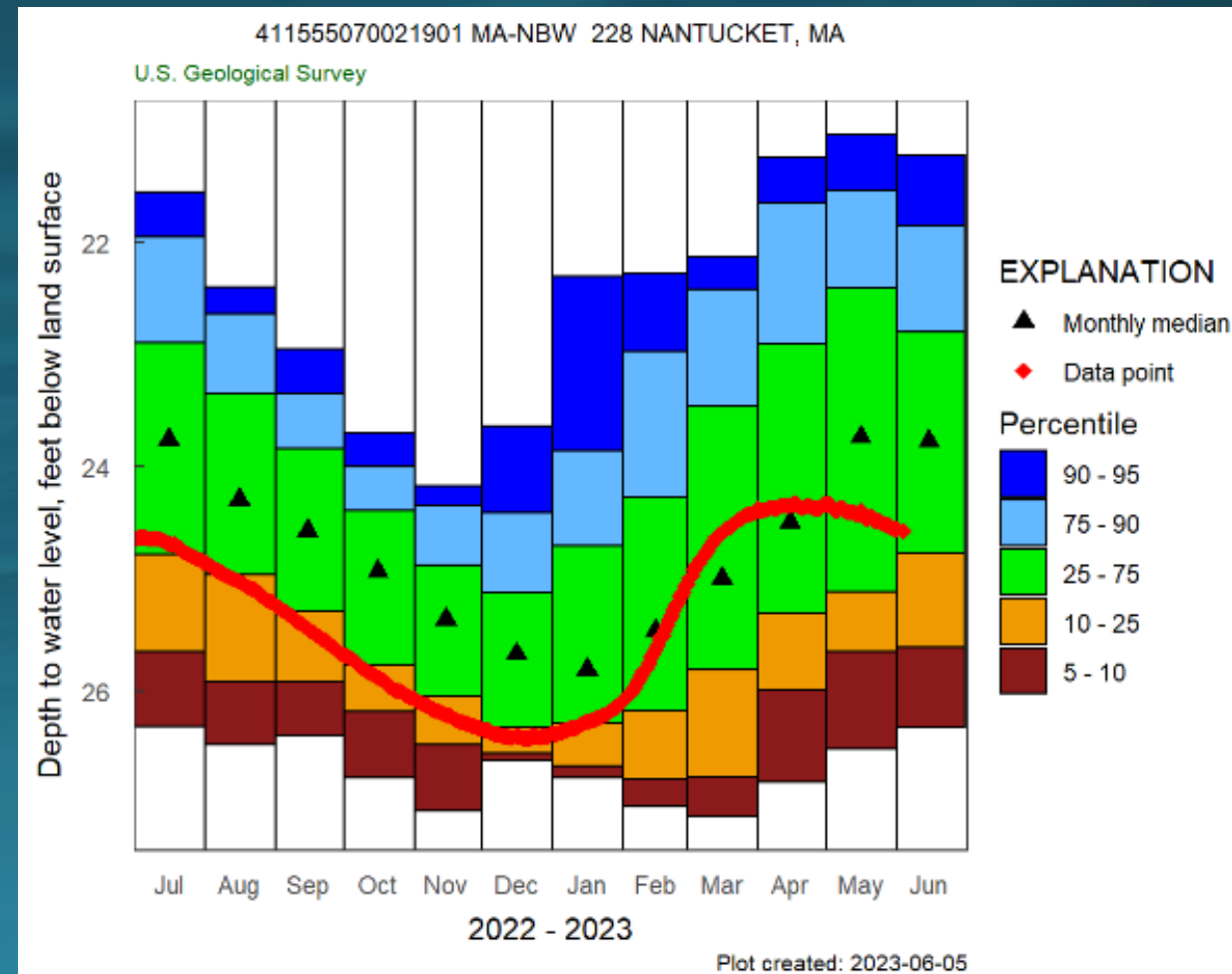
Groundwater Conditions



Islands Region

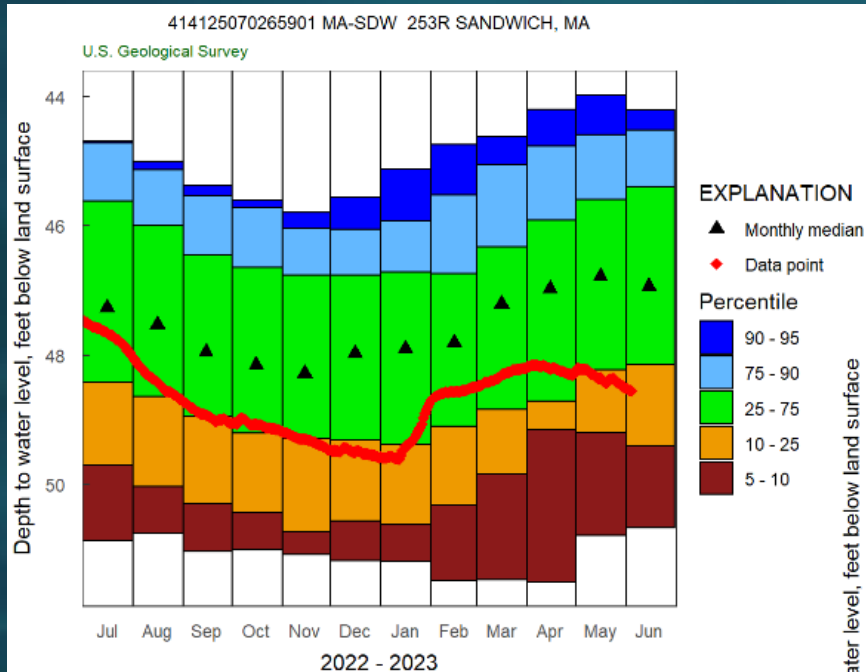


Period of Record: 47 yrs; continuous 4 yrs

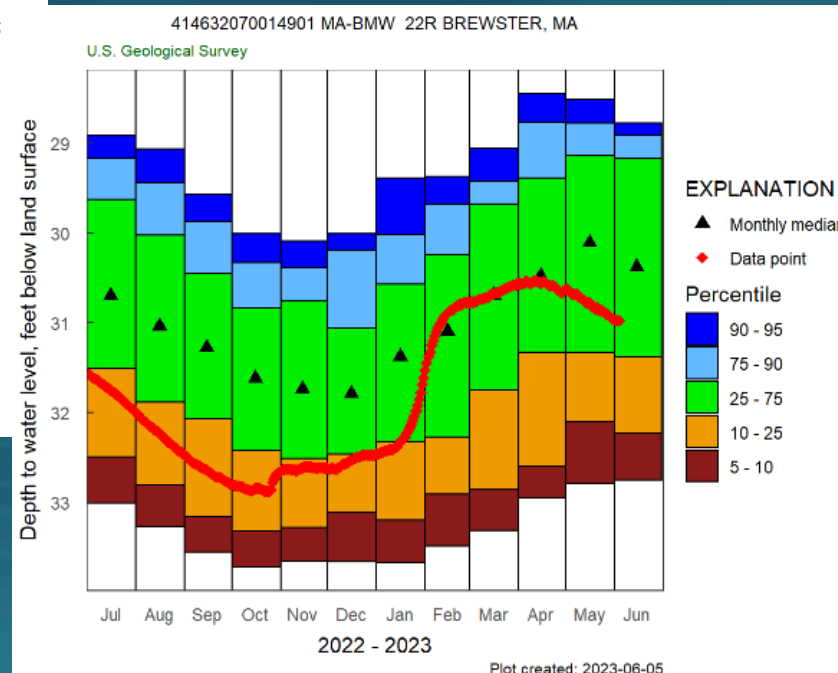


Period of Record: 47 yrs; continuous 1 yr

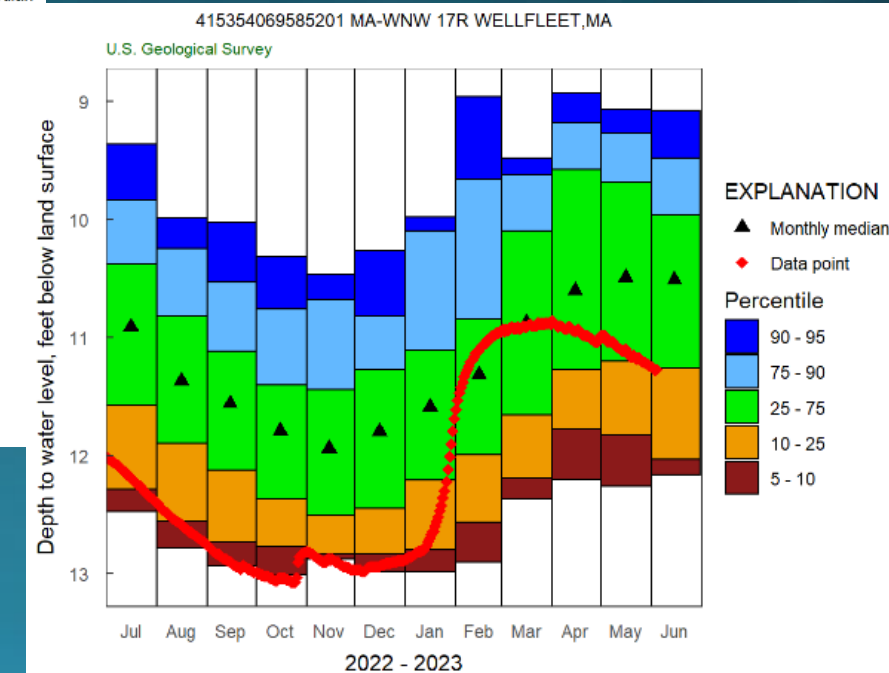
Cape Cod Region



Period of Record: 61 yrs;
continuous 11 yrs

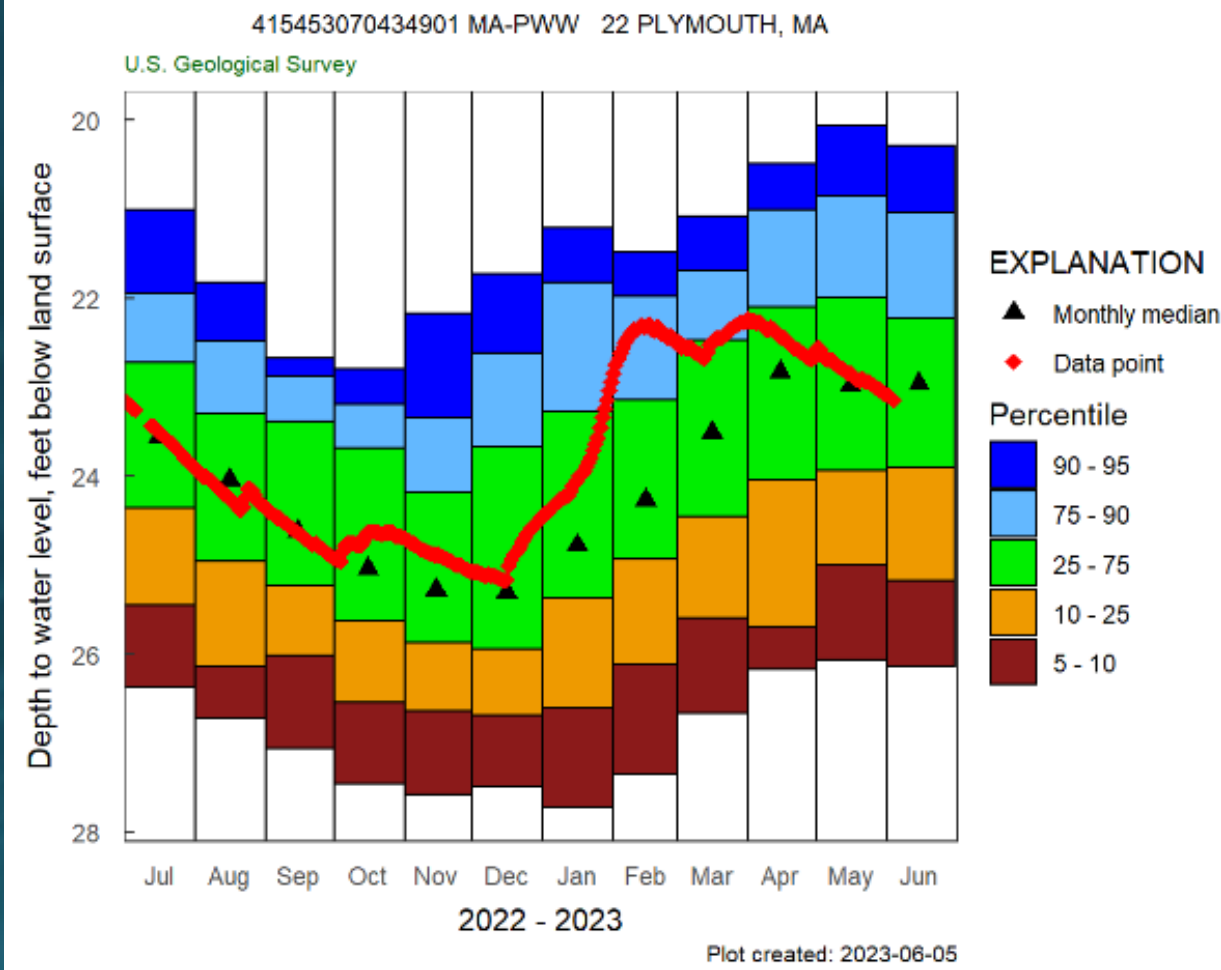


Period of Record: 61 yrs;
continuous 22 yrs

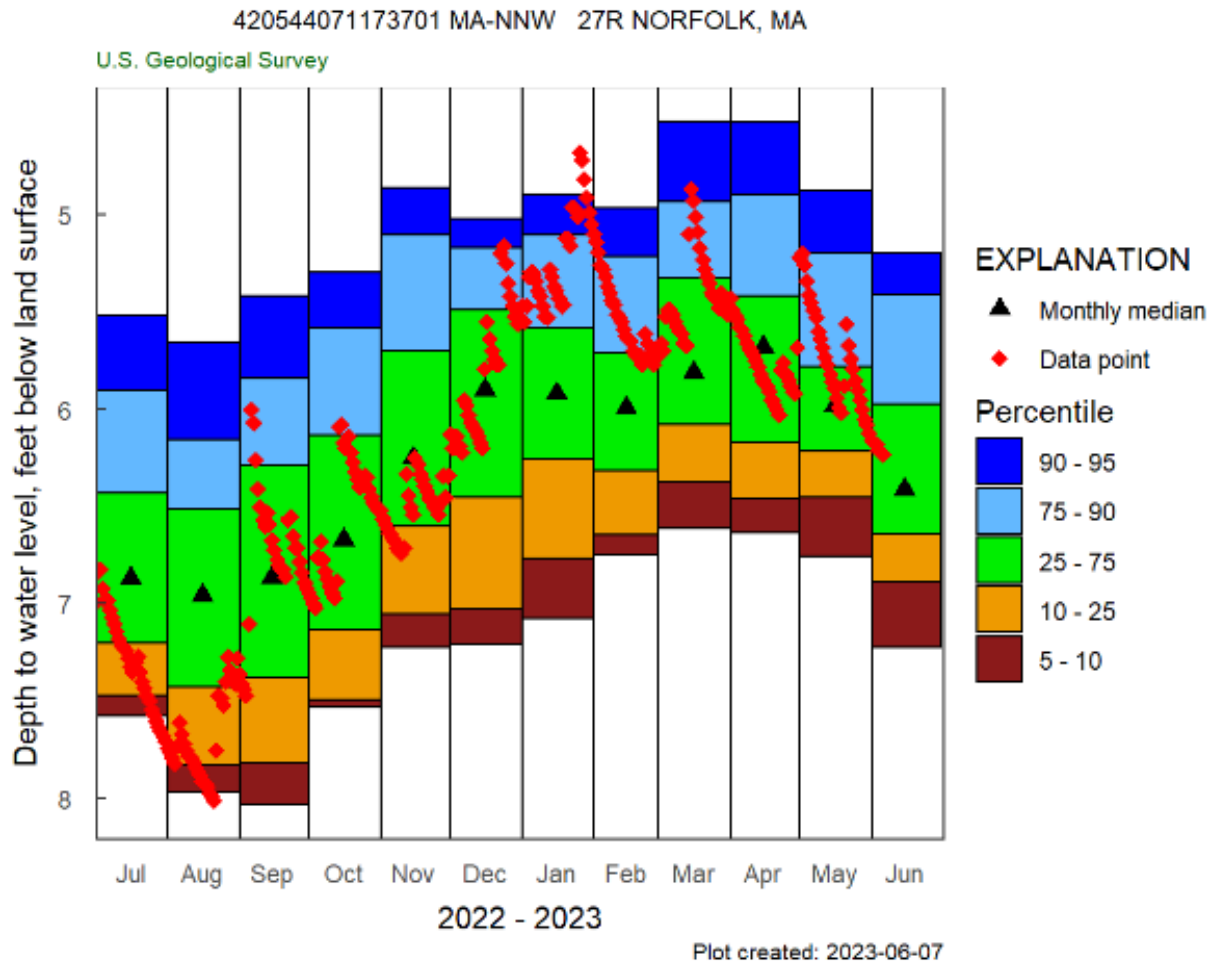


Period of Record: 61 yrs; cont. 11 yrs

Southeast Region



Period of Record: 67 yrs; continuous 9 yrs

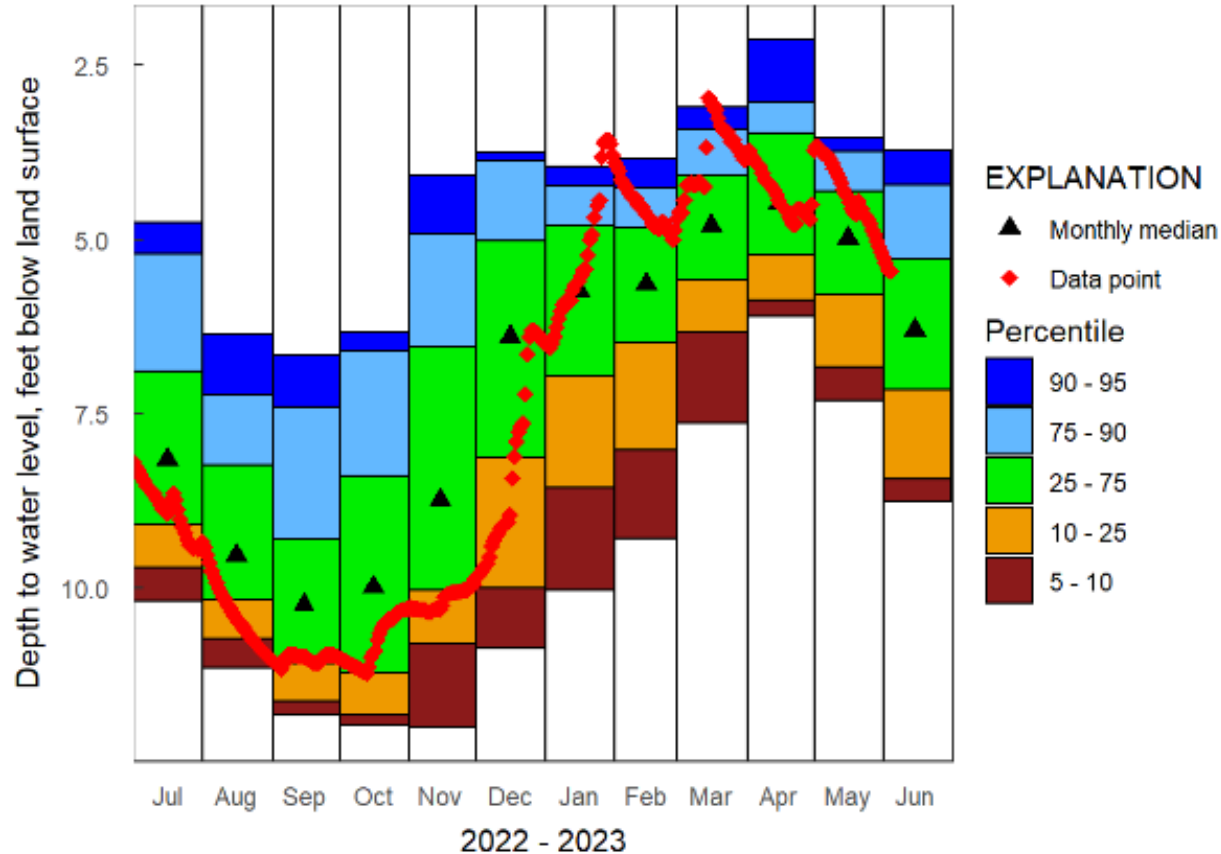


Period of Record: 59 yrs; continuous 22 yrs

Northeast Region

424520070562401 MA-NIW 27 NEWBURY, MA

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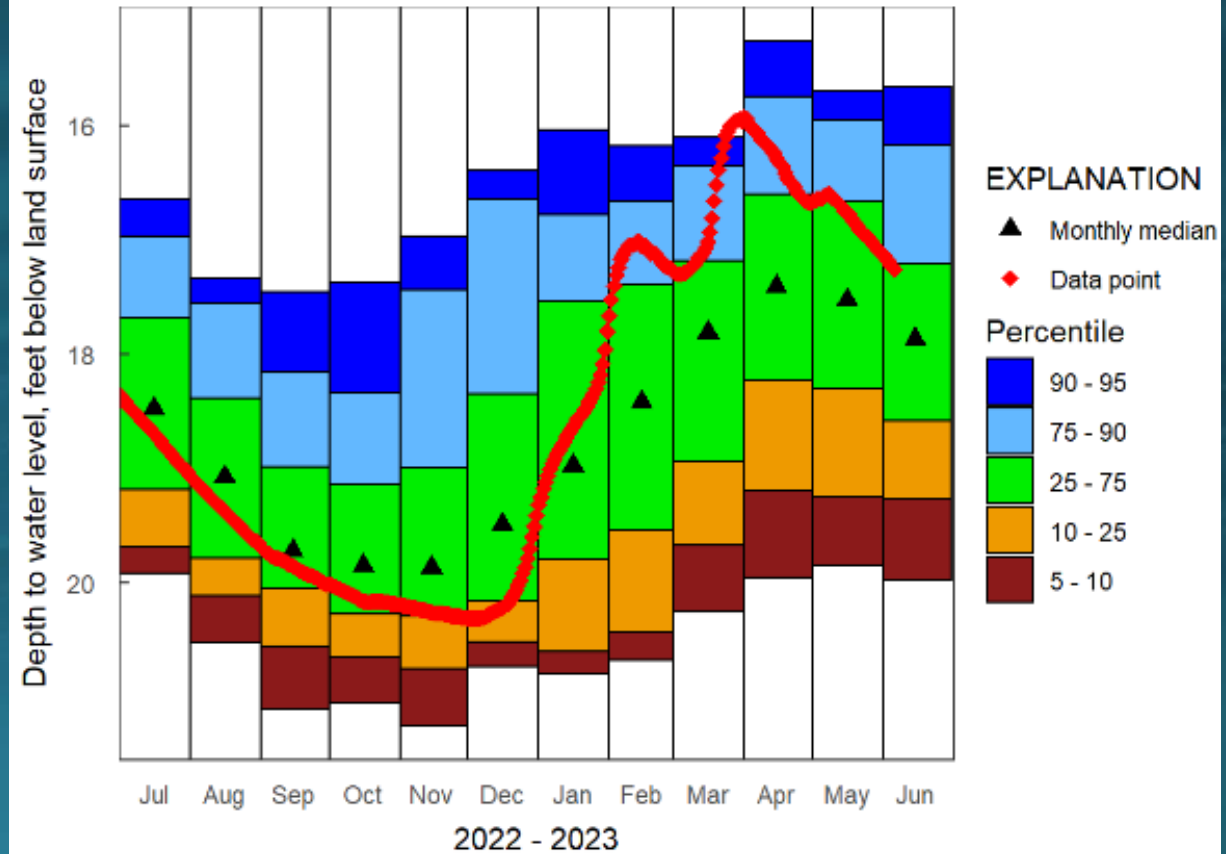


Plot created: 2023-06-05

Period of Record: 58 yrs; continuous 39 yrs

422812071244401 MA-ACW 158 ACTON, MA

U.S. Geological Survey



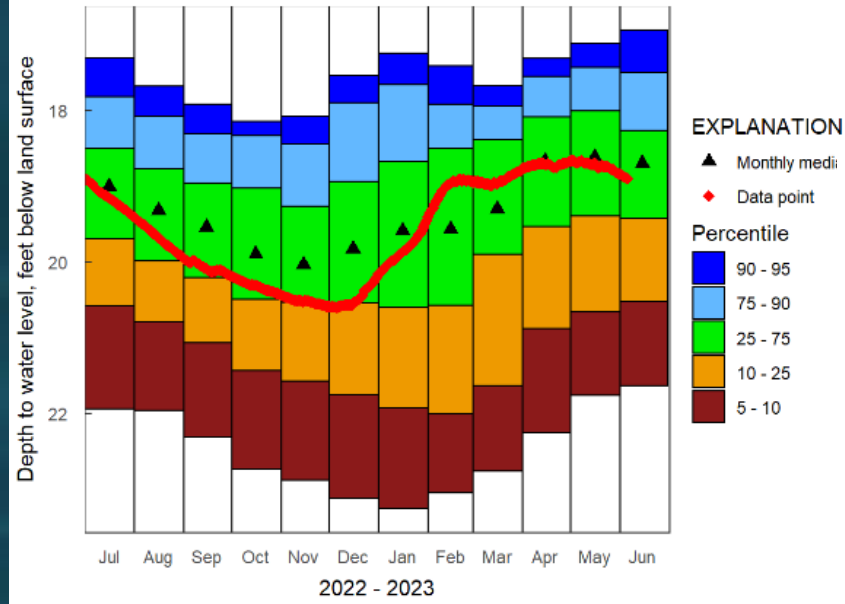
Plot created: 2023-06-07

Period of Record: 59 yrs; continuous 23 yrs

Central, CT Valley, and Western Regions

421410072081101 MA-WUW 2R WEST BROOKFIELD, MA

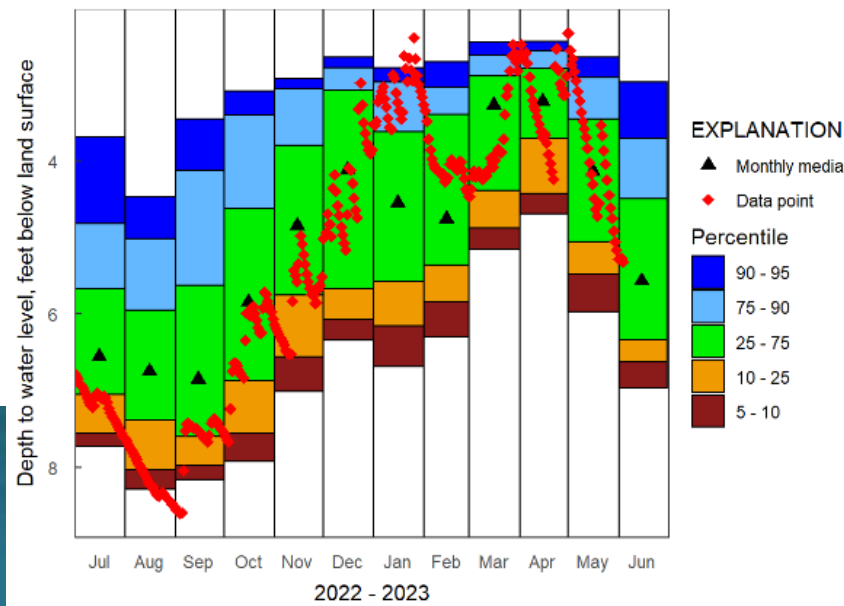
U.S. Geological Survey



Period of Record: 64 yrs;
continuous 6 yrs

420305072581401 MA-GLW 6R GRANVILLE, MA

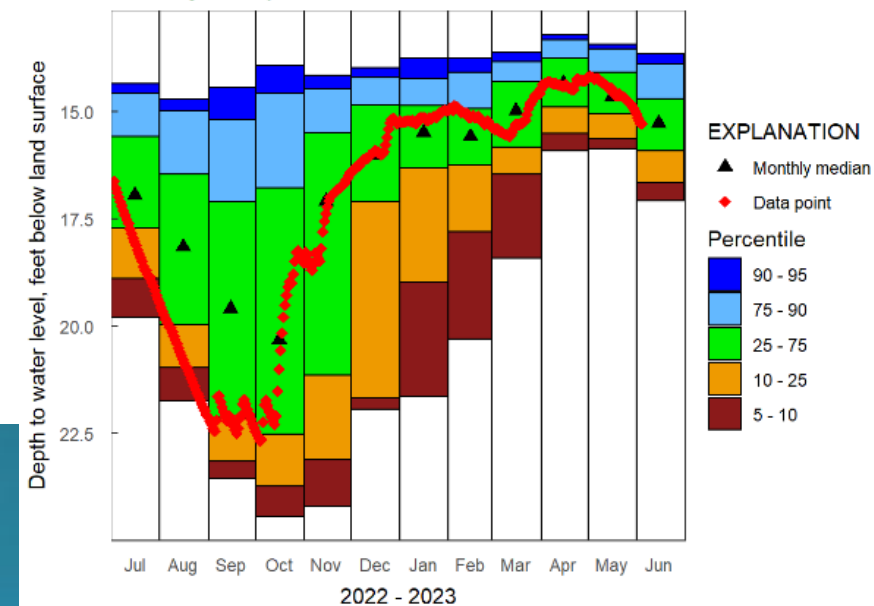
U.S. Geological Survey



Period of Record: 59 yrs;
continuous 9 yrs

422745073112001 MA-PTW 51 PITTSFIELD, MA

U.S. Geological Survey



Period of Record: 60 yrs; Cont. 39 yrs