

Streamflow and Groundwater Conditions in Massachusetts

February 08, 2023

Chris Bruet

U.S. Geological Survey

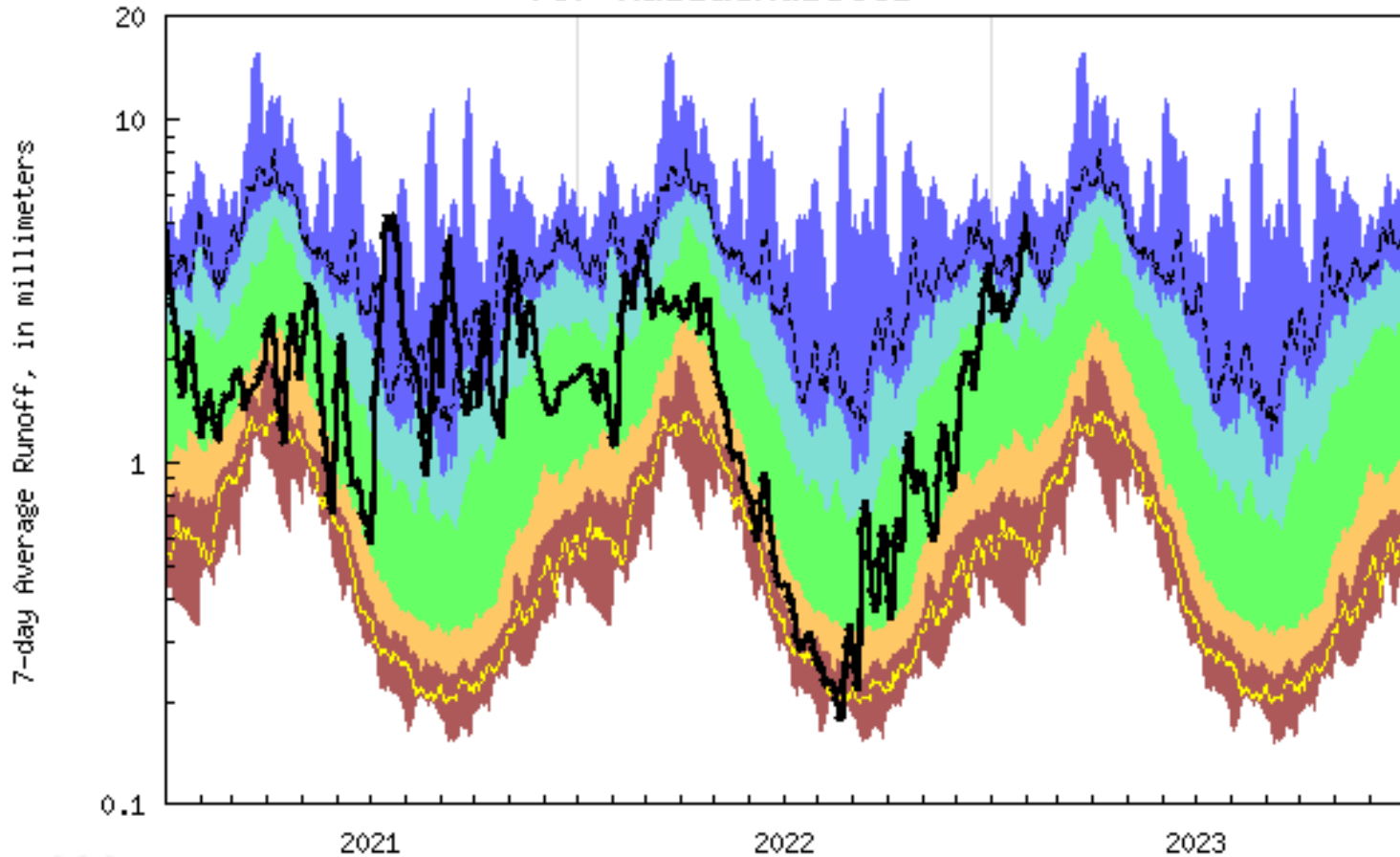
New England Water Science Center



7-Day Average Runoff

Jan. 01, 2021 - Dec. 31, 2023

Duration hydrograph of 7-day average runoff for Massachusetts

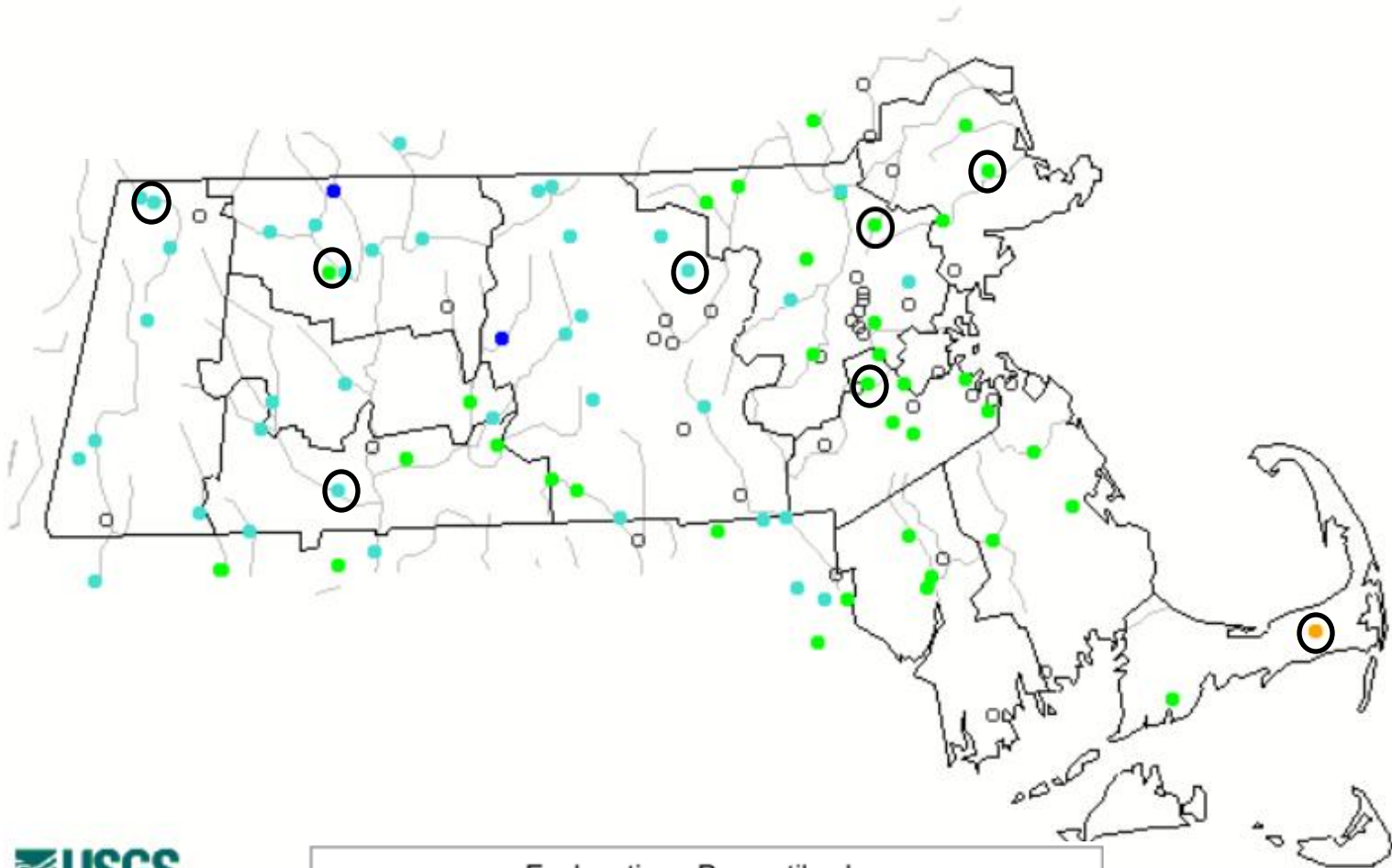


USGS WaterWatch

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

Monthly Average Streamflow - December

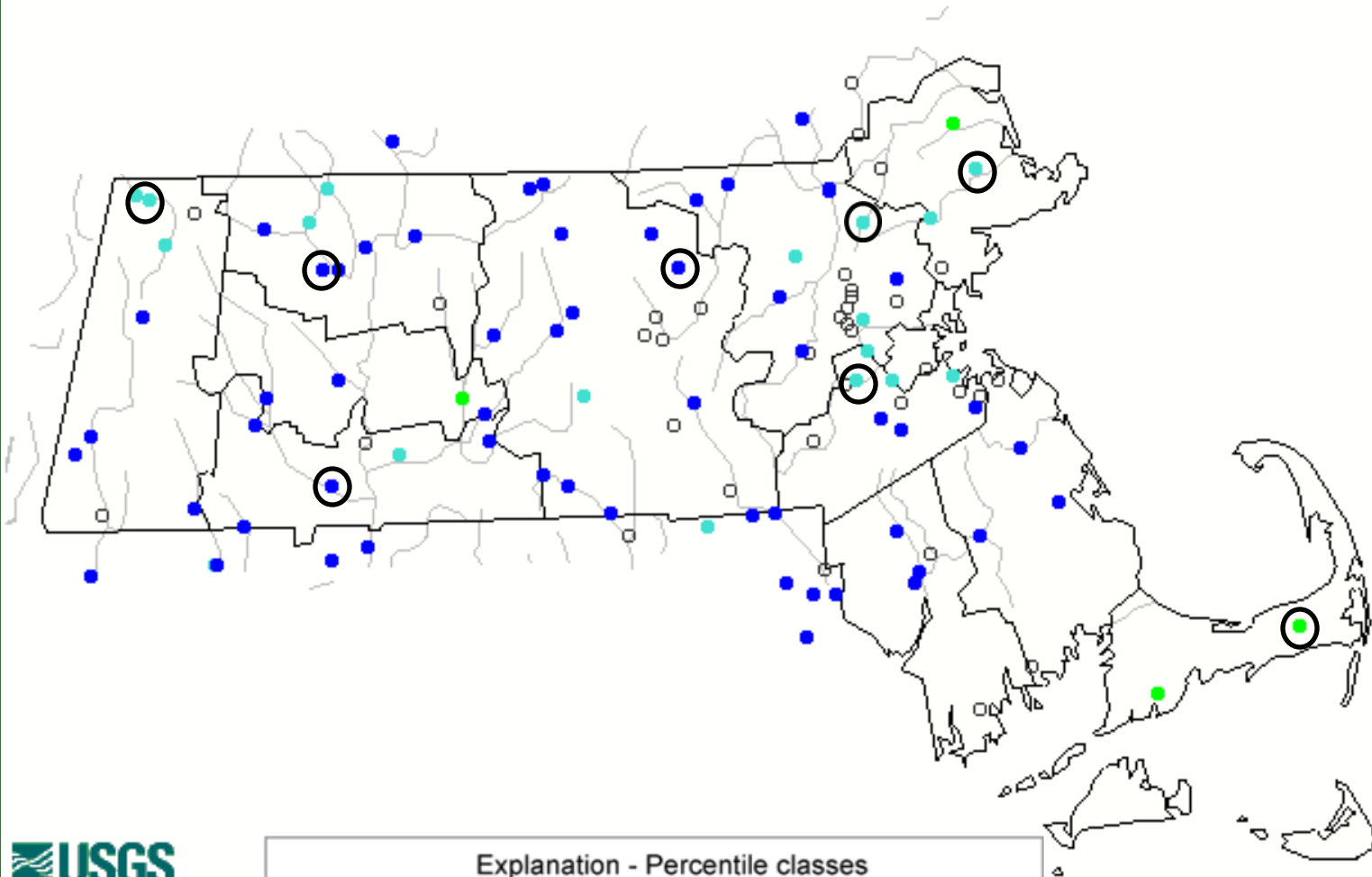
December 2022



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		

Monthly Average Streamflow - November

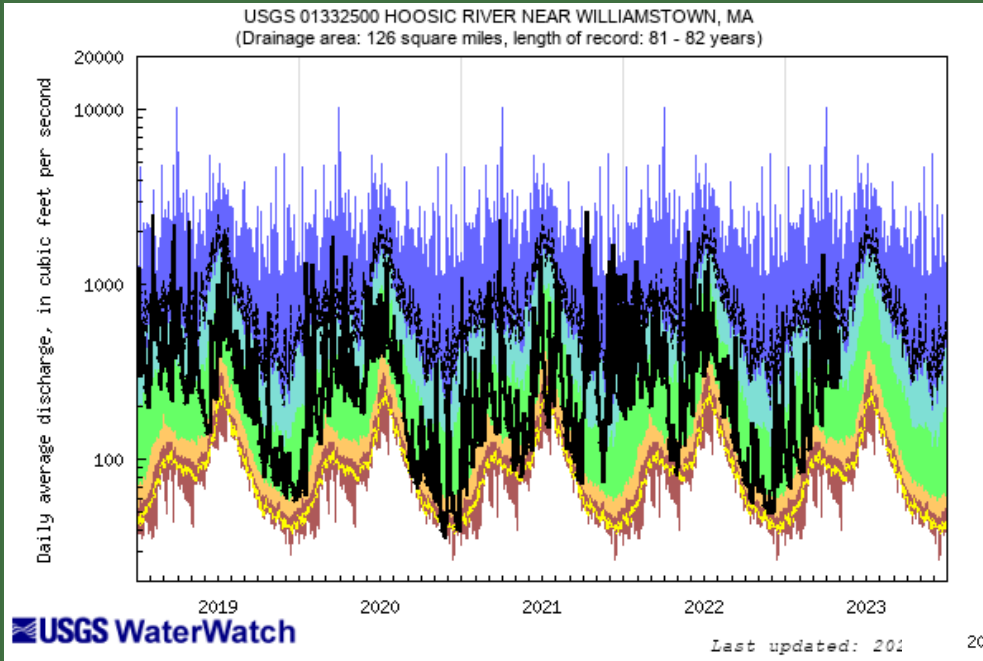
January 2023



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

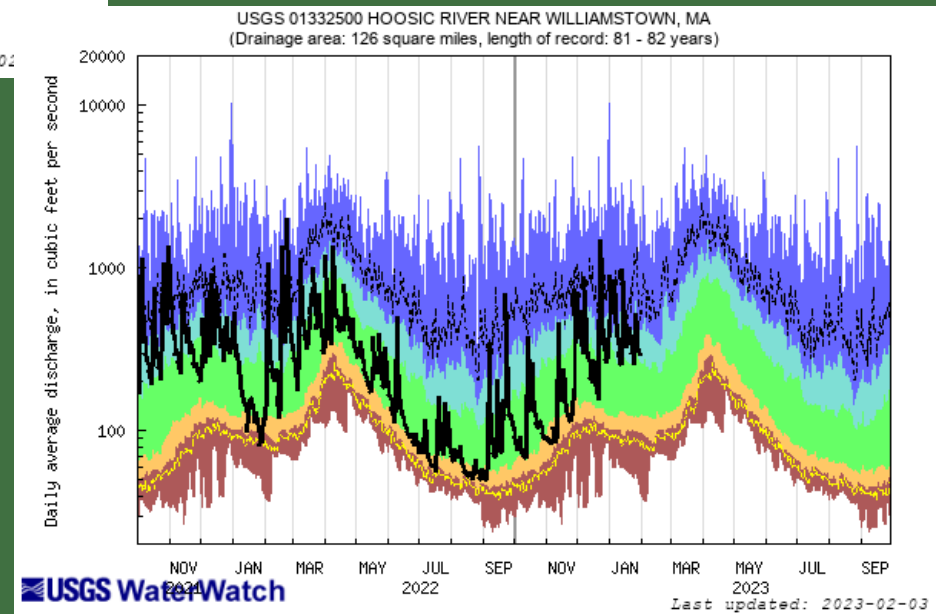
Daily Avg. –Hoosic River– Western MA

(NWS River Forecast Station)

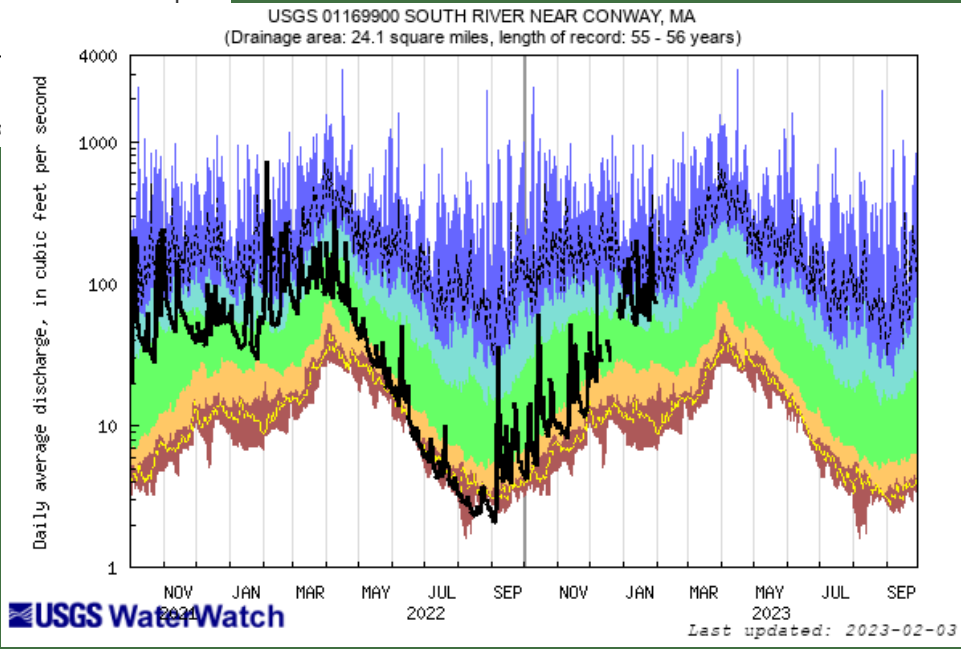
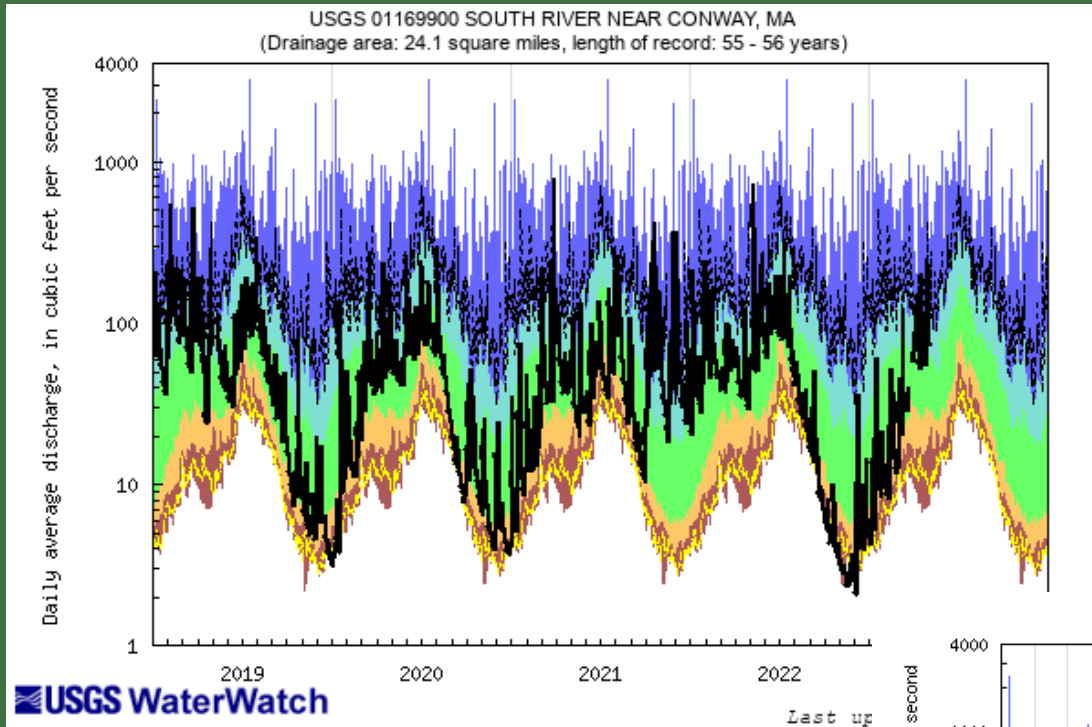


Explanation - Percentile classes

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



Daily Avg. – South River– Western MA

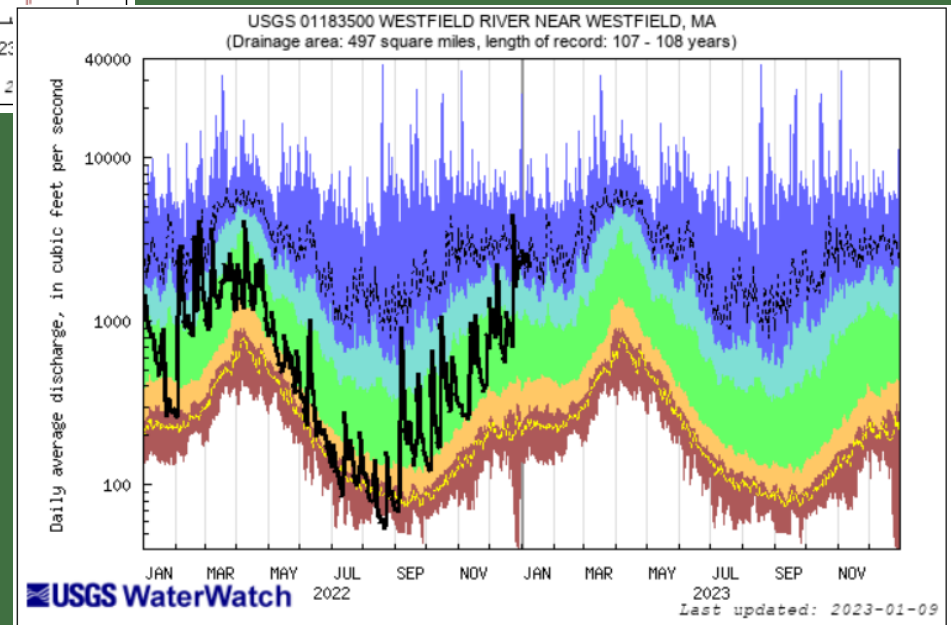
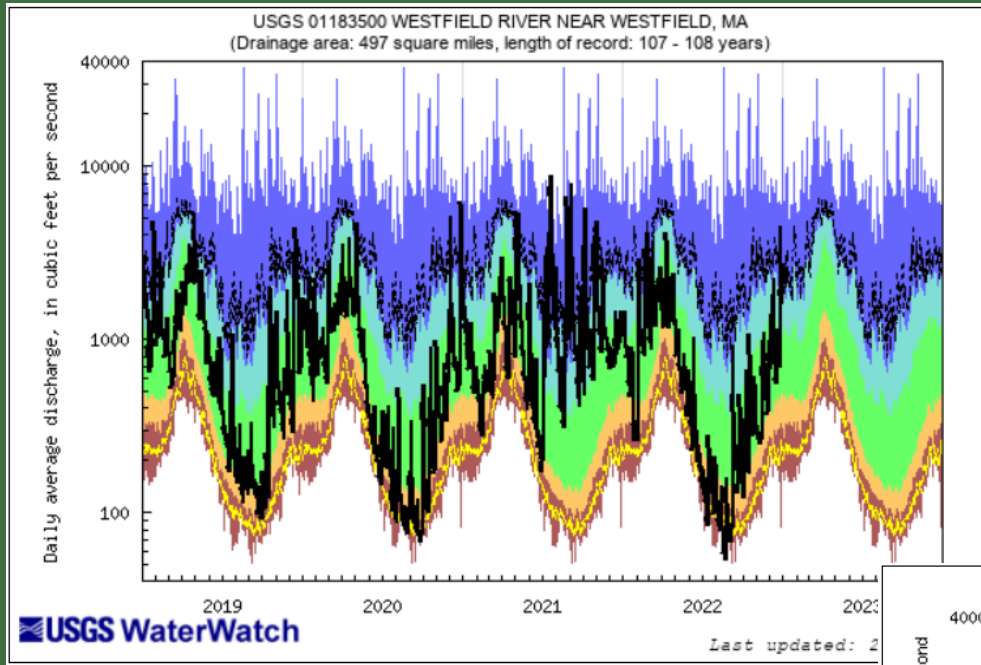


Explanation - Percentile classes

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

Daily Avg. –Westfield River– Western MA

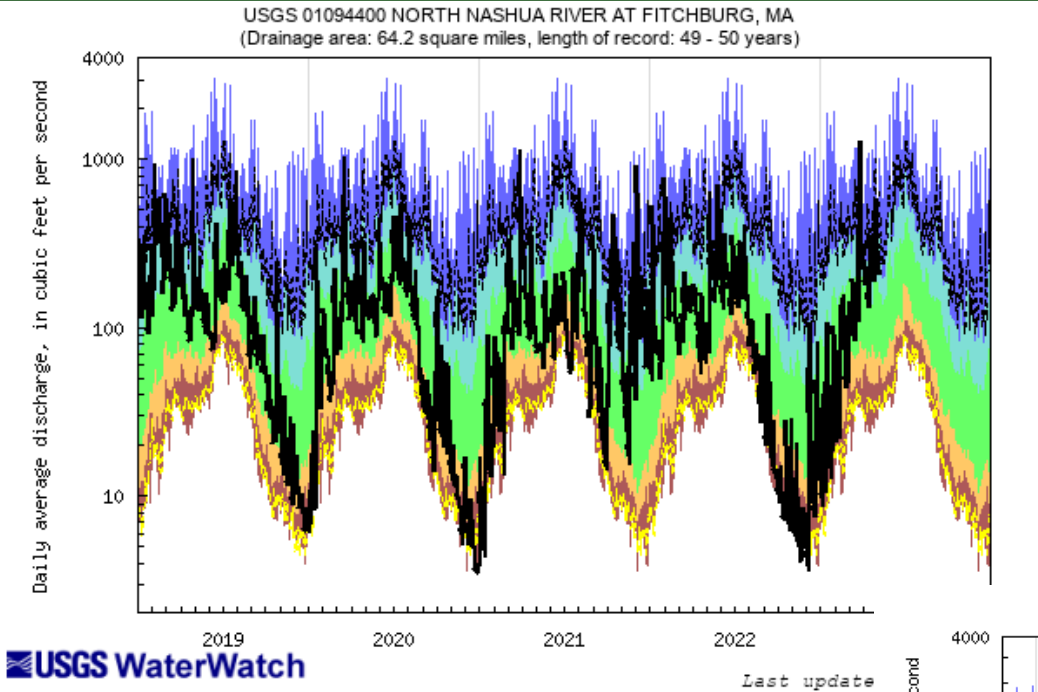
(NWS River Forecast Station)



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		Flow

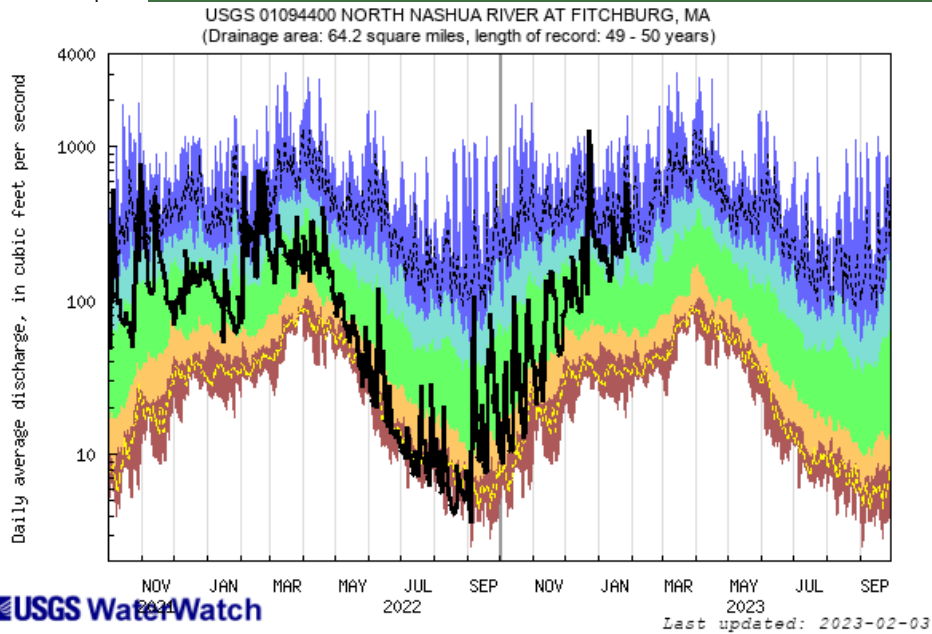
Daily Avg. – N. Nashua River – Northeastern/Central MA

(NWS River Forecast Station)



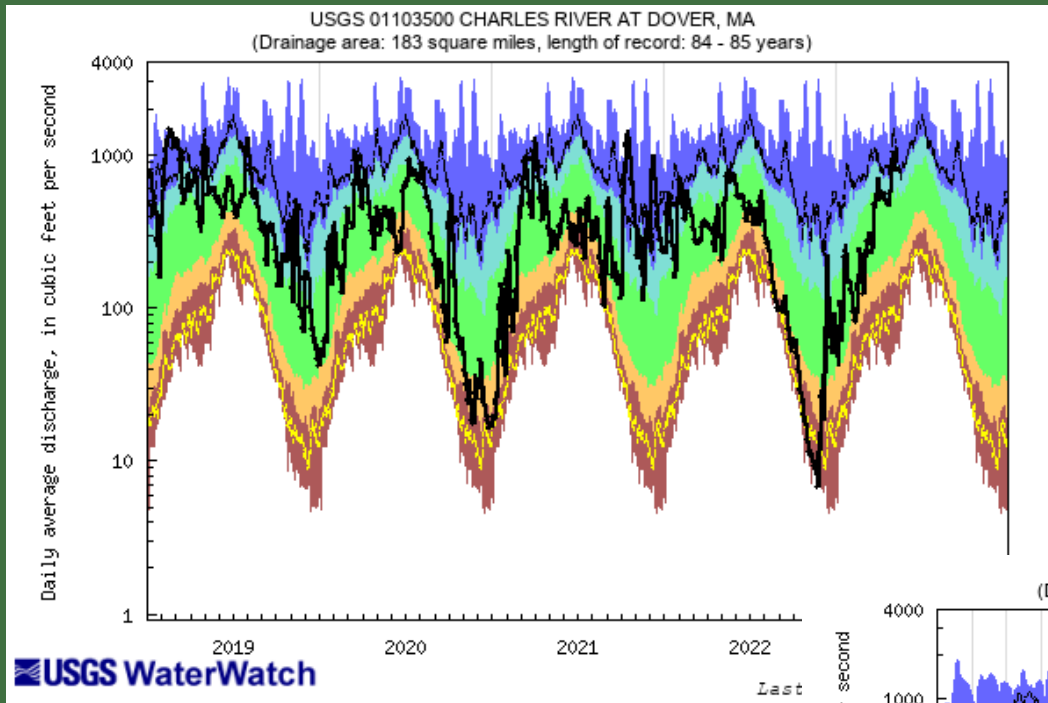
Explanation - Percentile classes

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

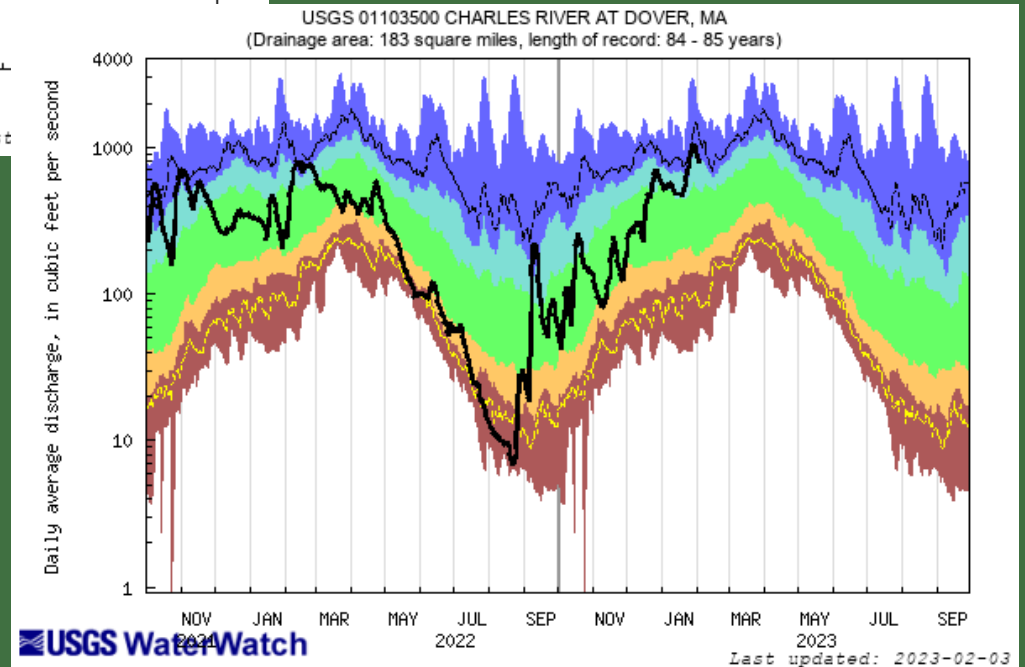


Daily Avg. – Charles River – Eastern MA

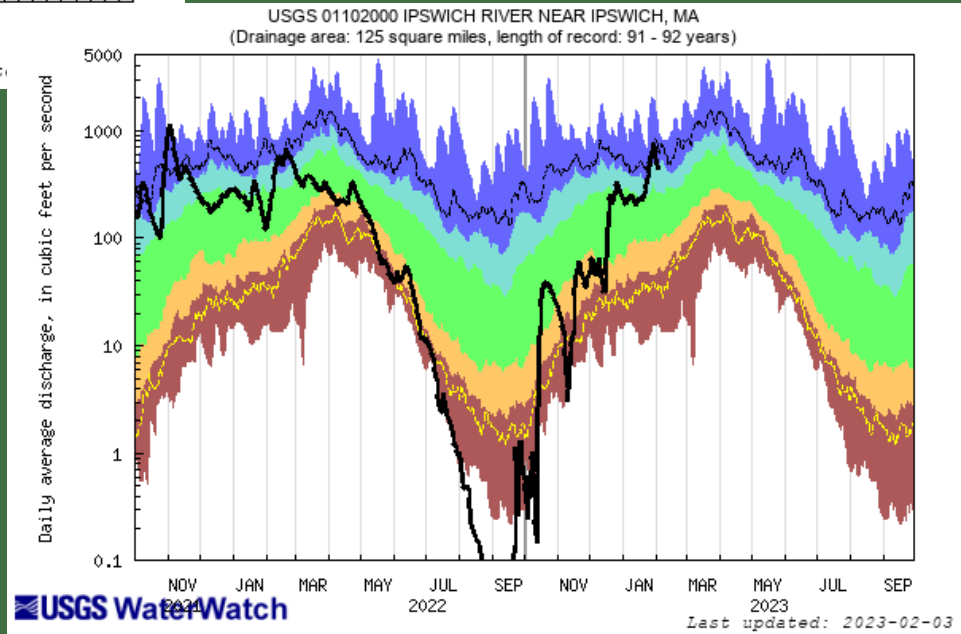
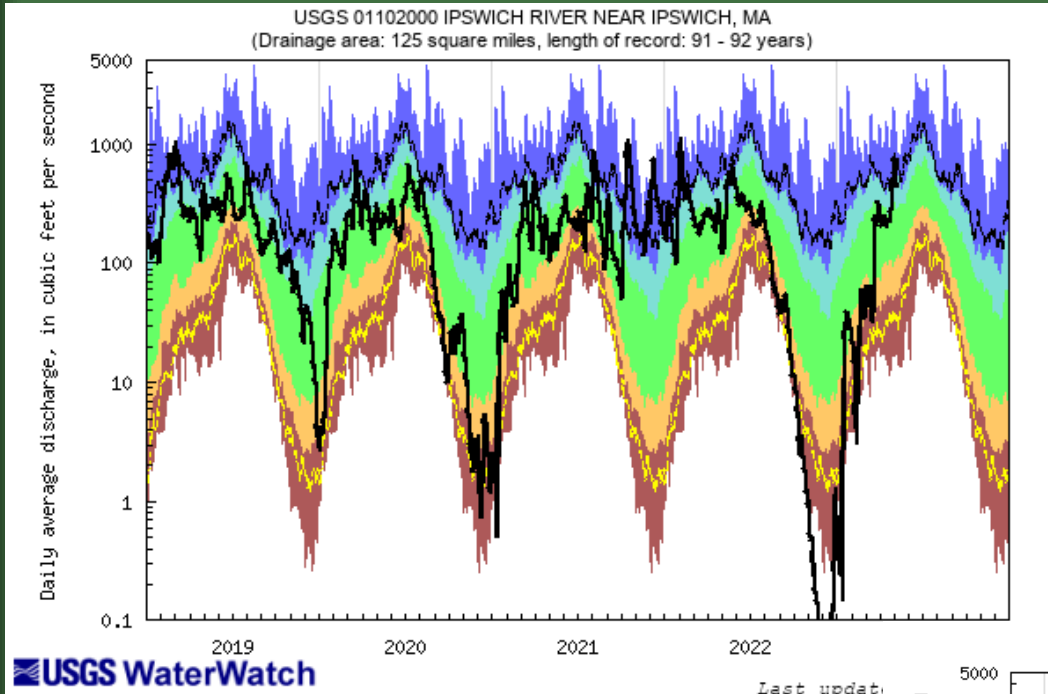
(NWS River Forecast Station)



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		Flow

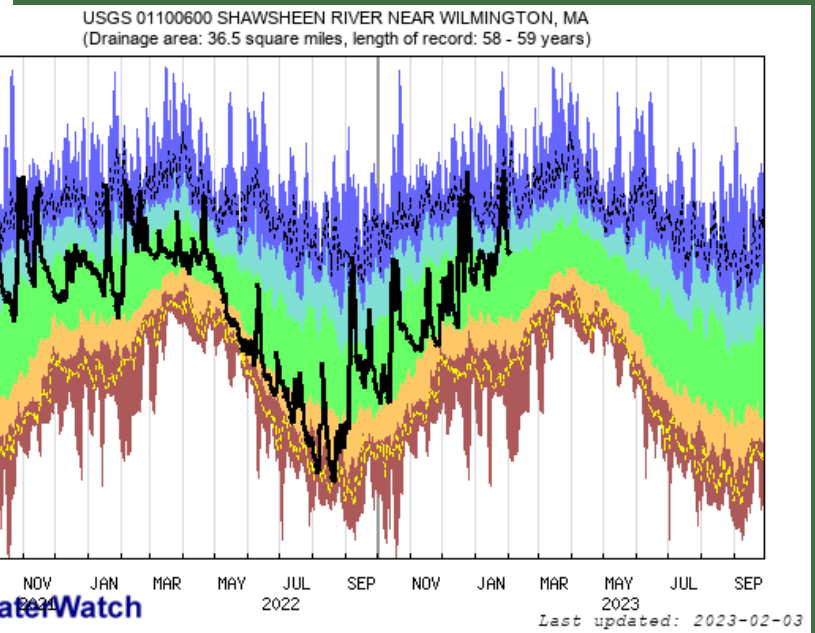
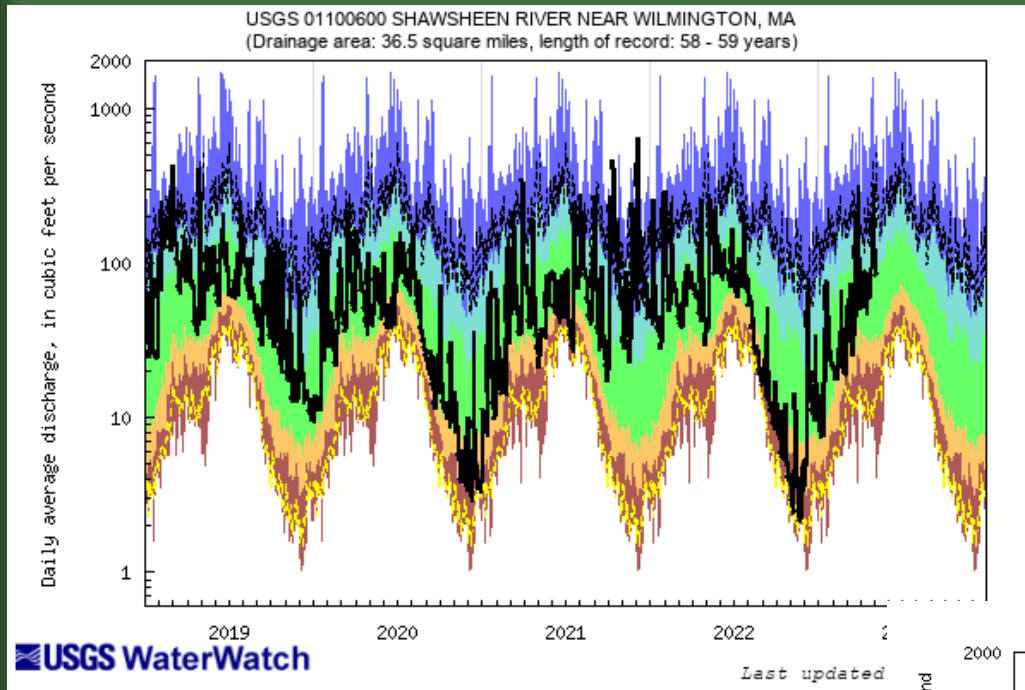


Daily Avg. Ipswich River– Northeastern MA



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		Flow

Daily Avg. Shawsheen River– Northeastern MA

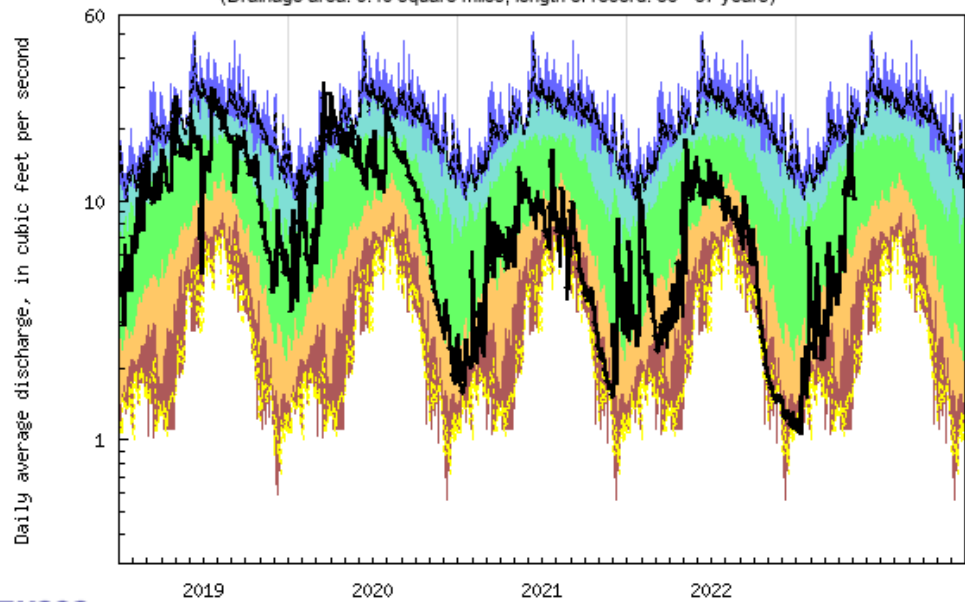


Explanation - Percentile classes

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

Daily Avg. Herring River – Cape Cod

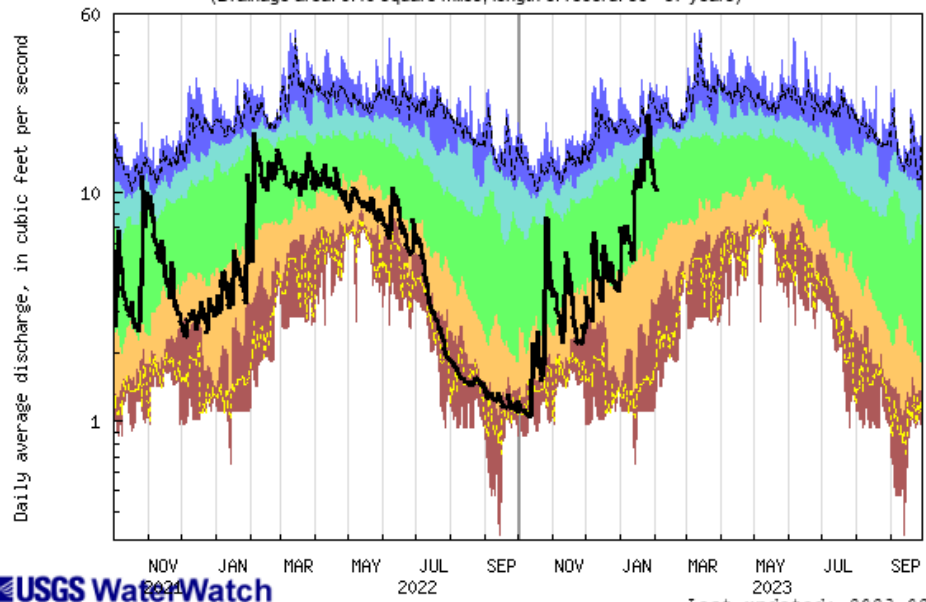
USGS 01105880 HERRING RIVER AT NORTH HARWICH, MA
(Drainage area: 9.40 square miles, length of record: 36 - 37 years)



USGS WaterWatch

Last update

USGS 01105880 HERRING RIVER AT NORTH HARWICH, MA
(Drainage area: 9.40 square miles, length of record: 36 - 37 years)



USGS WaterWatch

Last updated: 2023-02-03

Explanation - Percentile classes

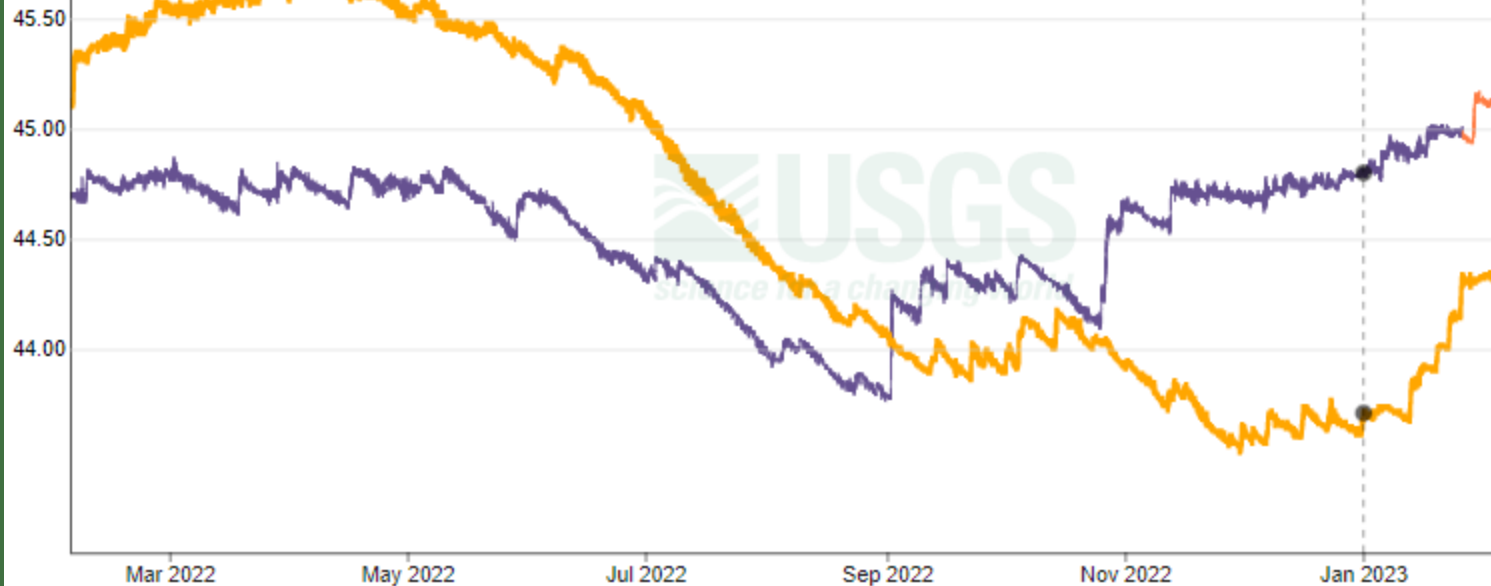
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest	Flow
Much below Normal	Below normal	Normal	Above normal	Much above normal			

Ashumet Pond, Falmouth – Cape Cod

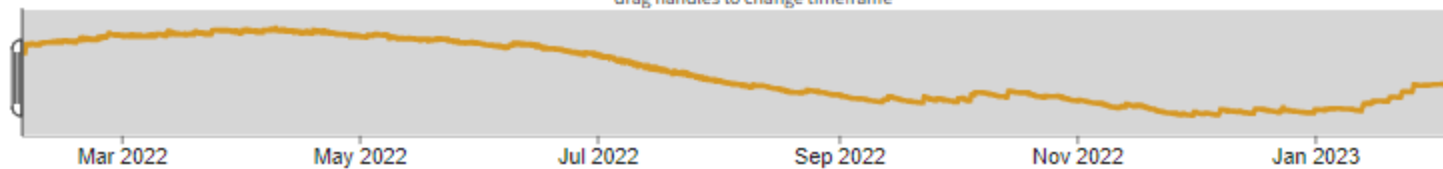
Lake or reservoir water surface elevation above NGVD 1929, ft ⓘ

43.71 ft - Jan 01, 2023 03:15:00 AM EST

44.8 ft - Jan 01, 2022 03:15:00 AM EST



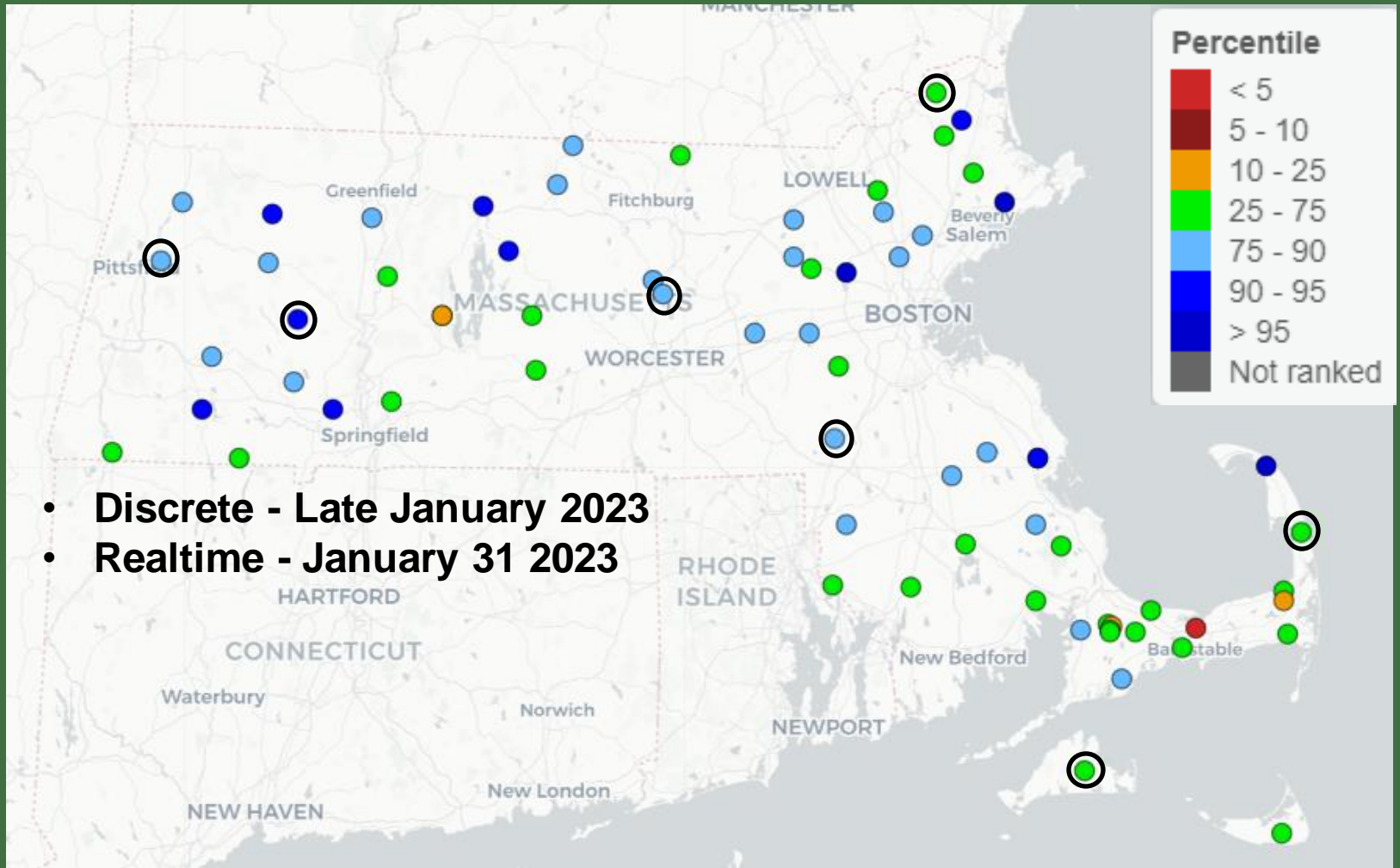
drag handles to change timeframe



Current: — Provisional
Last year: — Approved — Provisional

Compare to last year

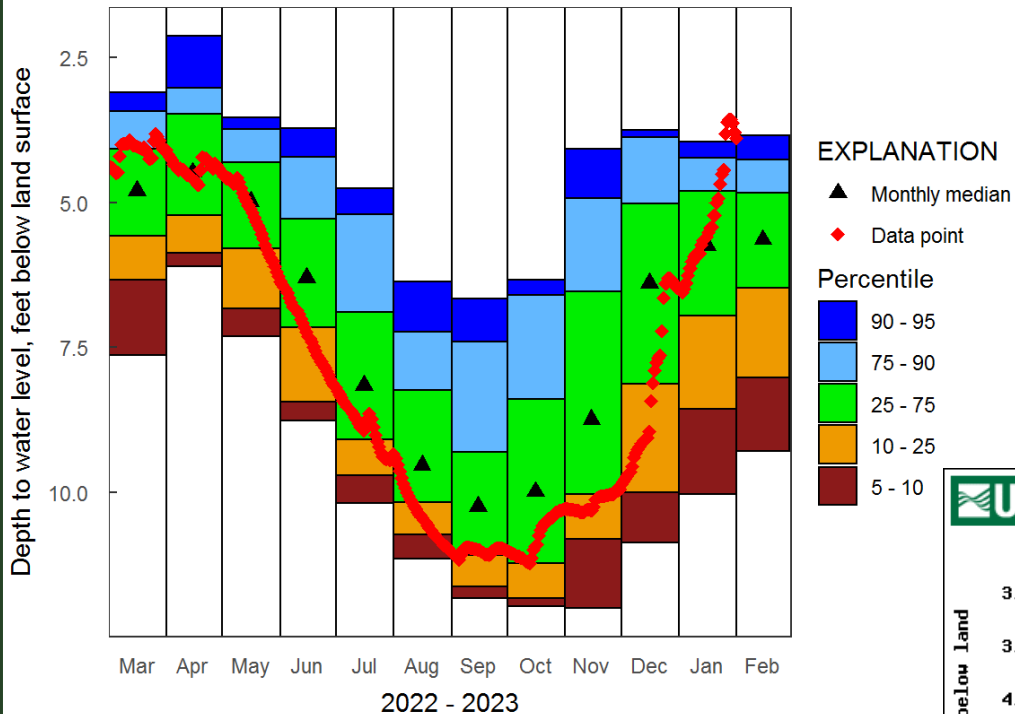
Climate Response Network (CRN) Groundwater Conditions



NIW 27 Newbury, MA Northeast Region

424520070562401 MA-NIW 27 NEWBURY, MA

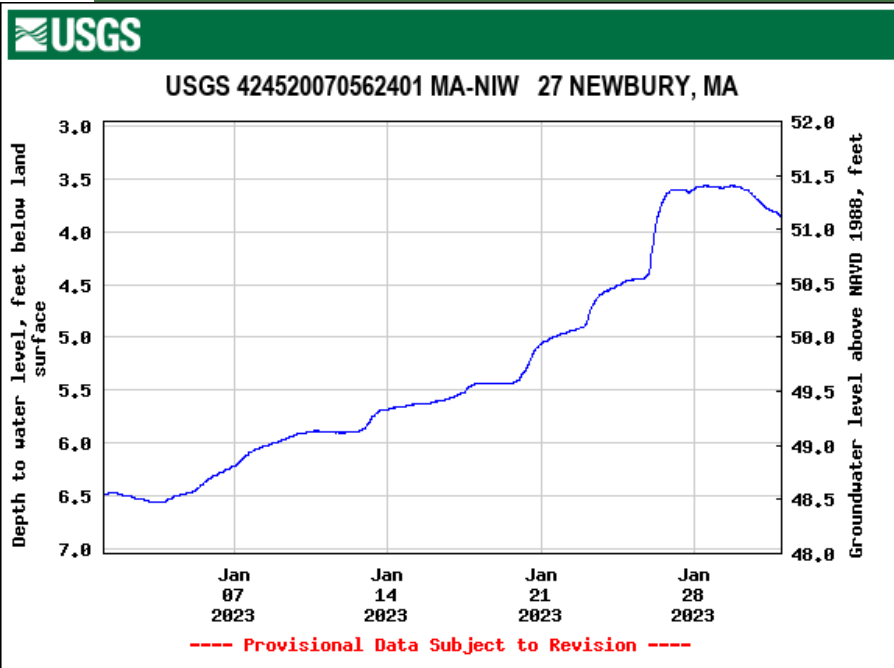
U.S. Geological Survey



Plot created: 2023-02-03

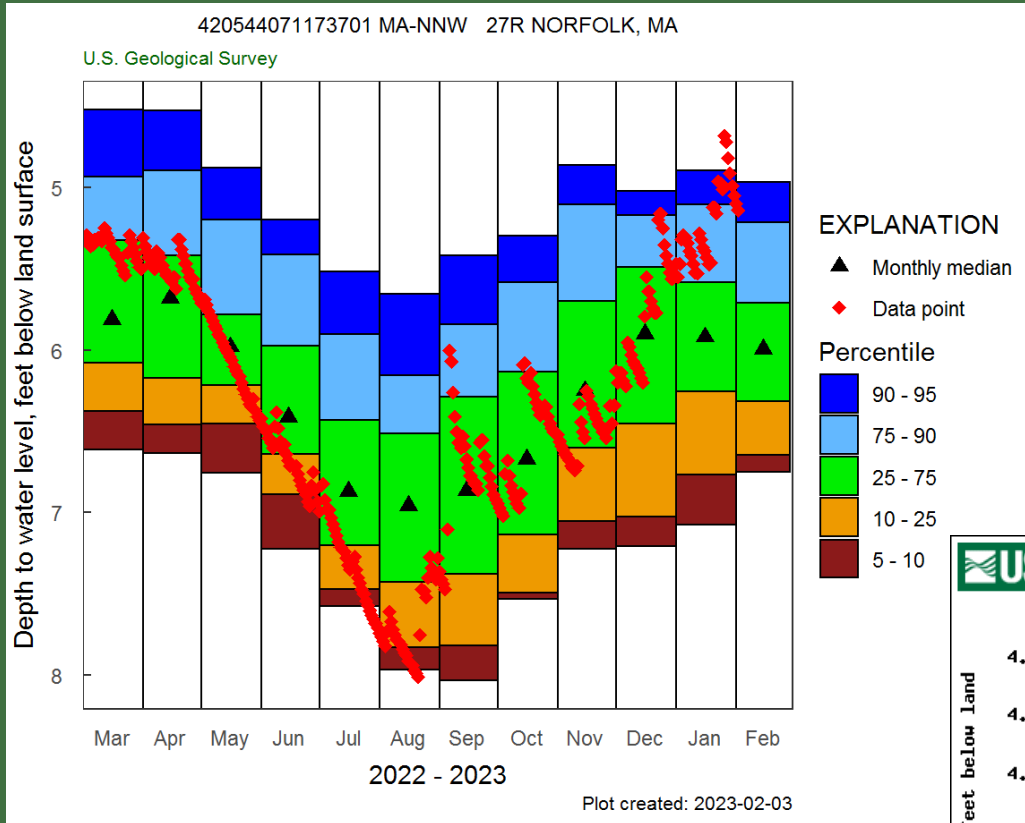
Period of Record

- Realtime 2007 – Present
- Discrete 1959 – 2007
- Total Record 63 years



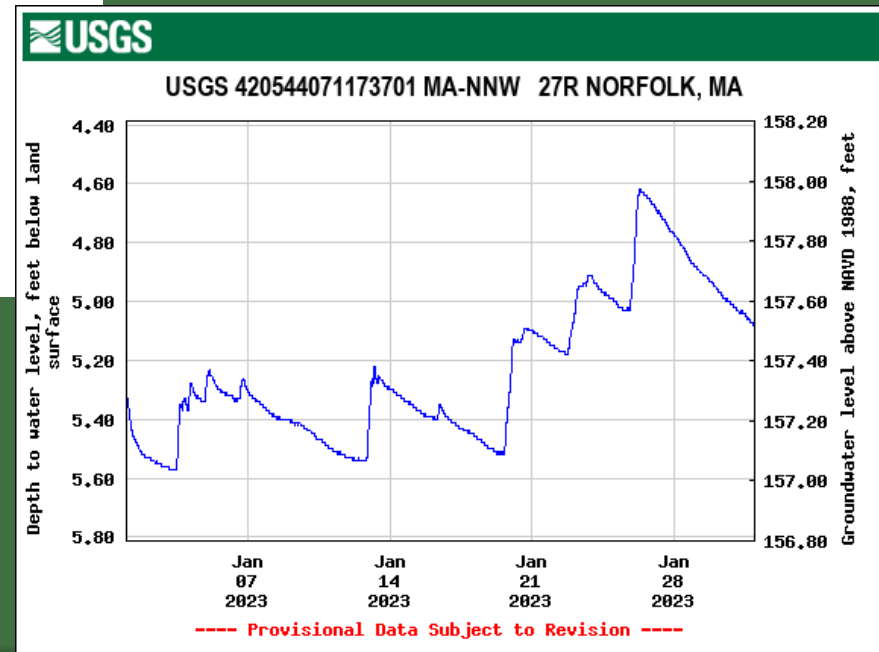
NNW 27R Norfolk, MA

Southeast Region



Period of Record

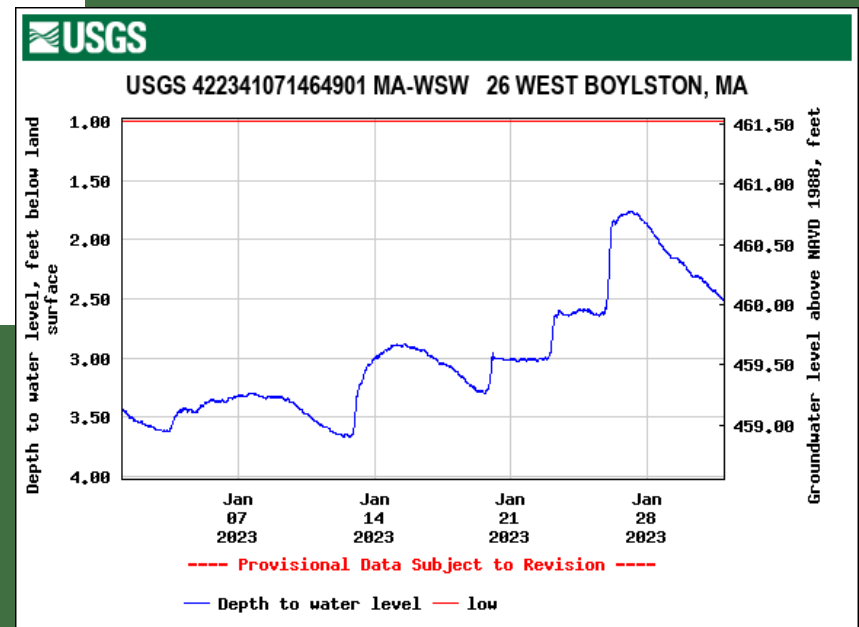
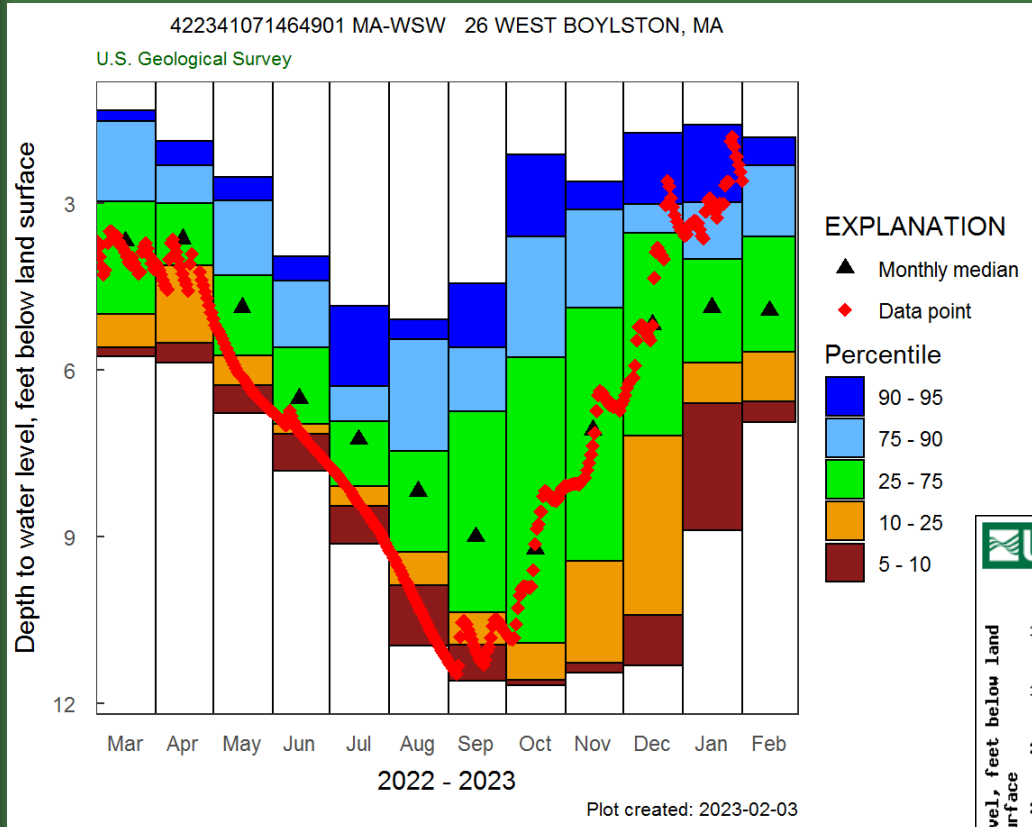
- Realtime 2018 – Present
- Discrete 1964 – 2018
- Total Record 58 years



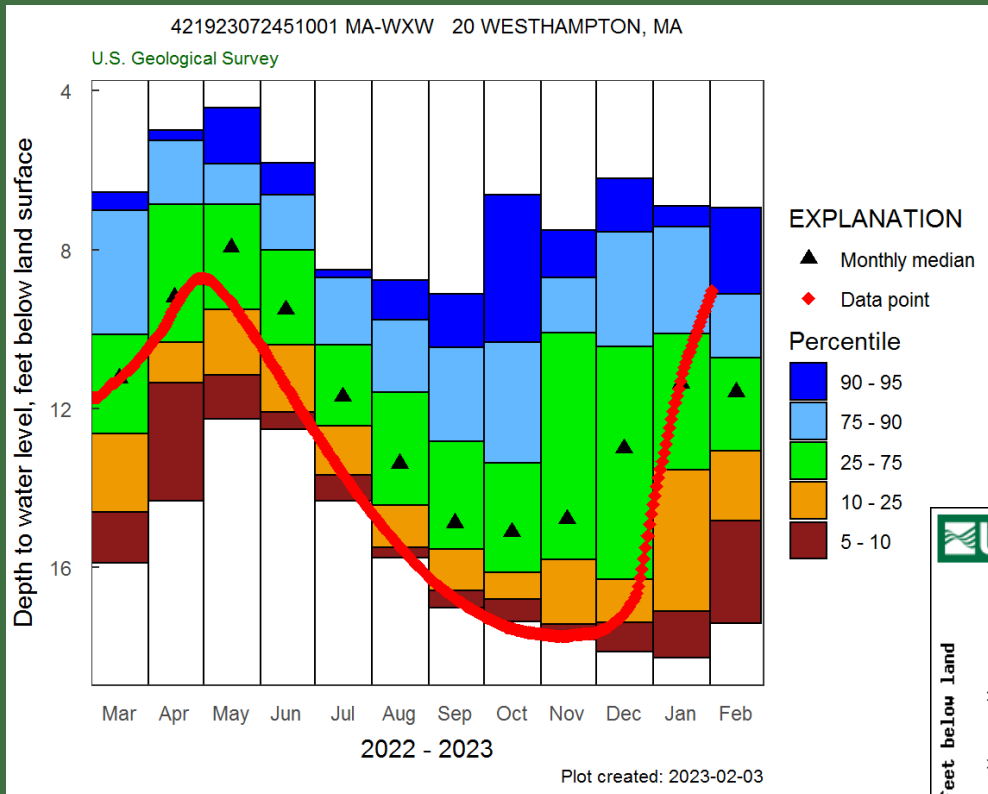
BMW 26 West Boylston, MA Central Region

Period of Record

- Realtime 2012 – Present
- Discrete 1995 – 2012
- Total Record 27 years

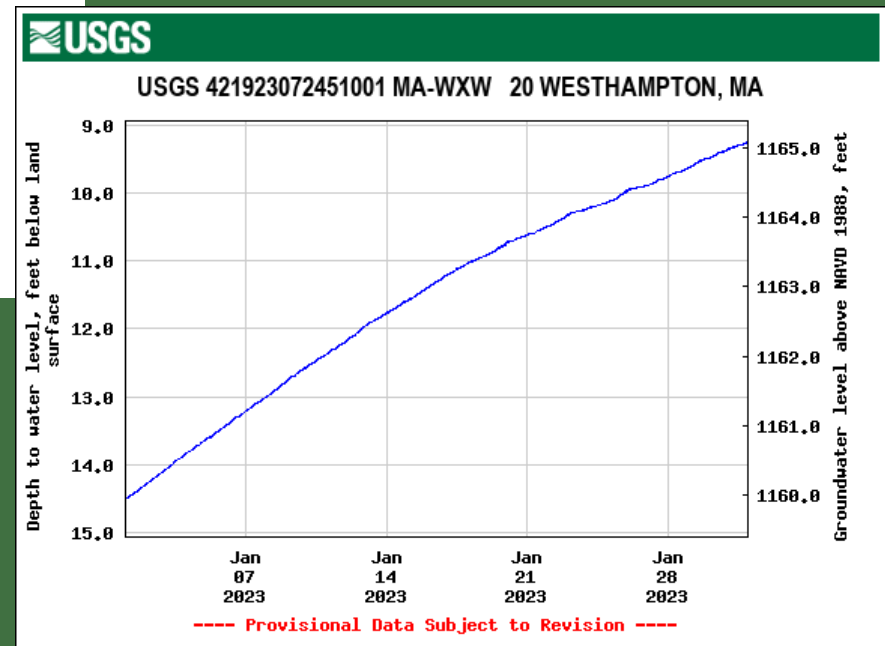


WXW 20 Westhampton, MA Connecticut River Valley Region



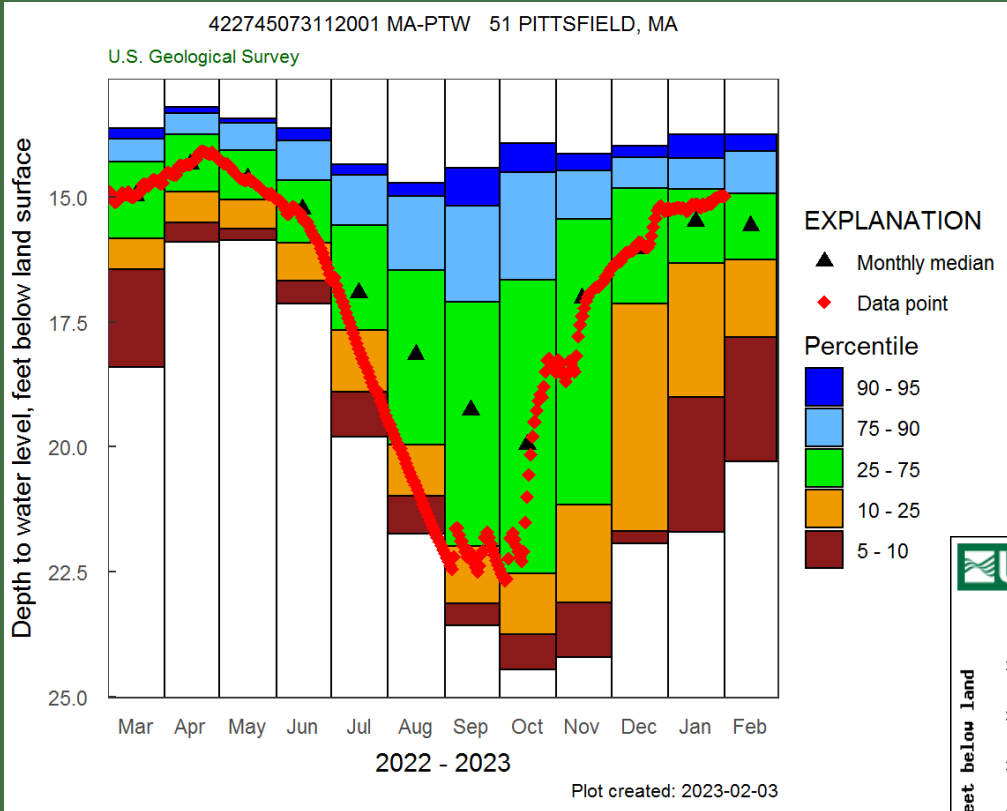
Period of Record

- Realtime 2017 – Present
- Discrete 1987 – 2007
- Total Record 35 years



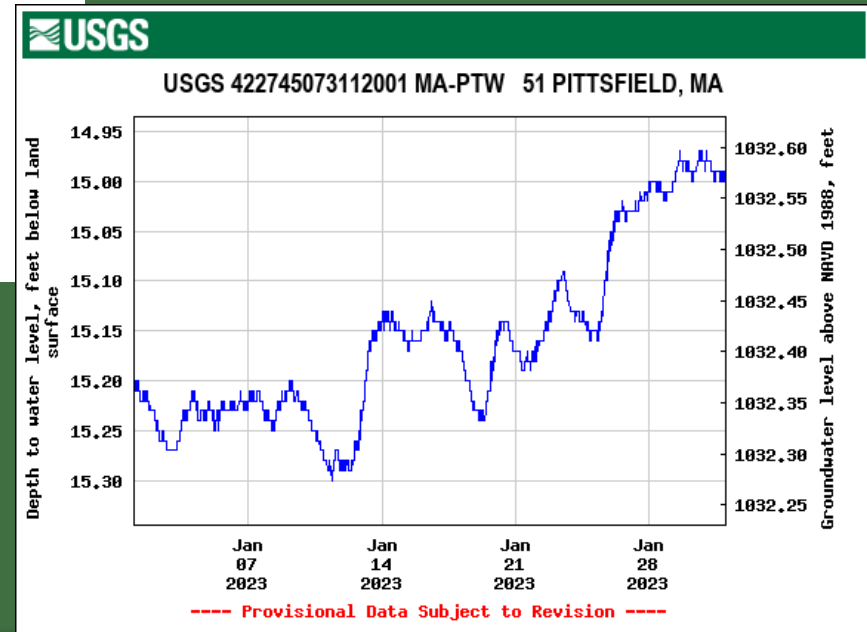
PTW 51 Pittsfield, MA

Western Region

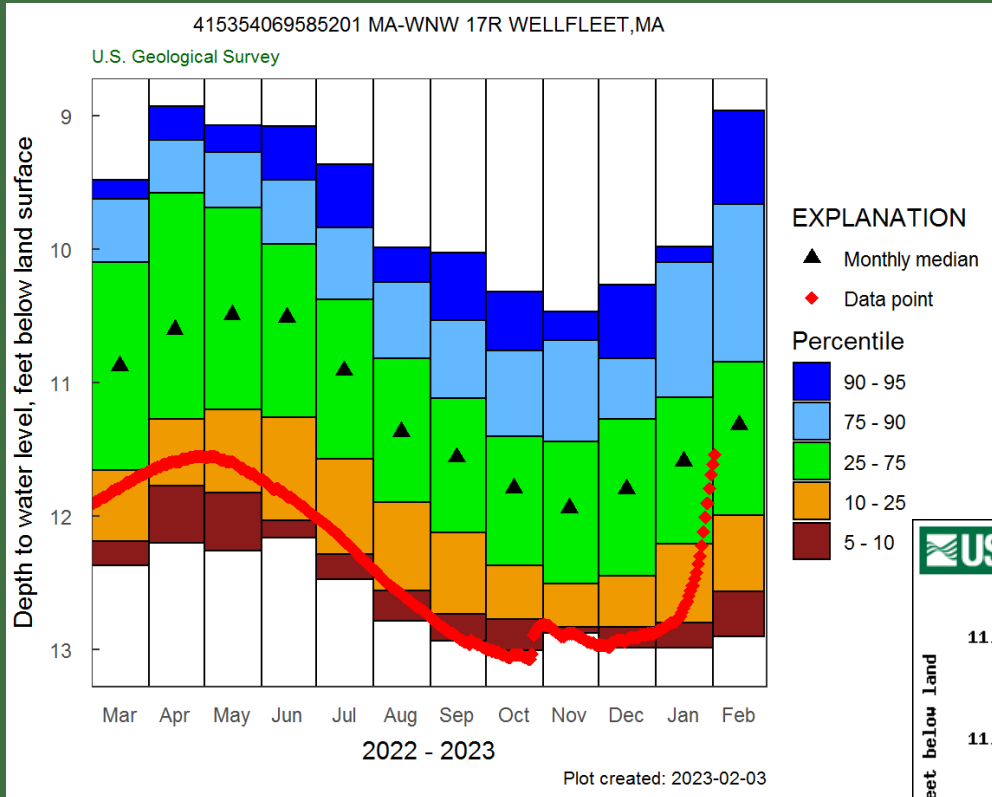


Period of Record

- Realtime 2007 – Present
- Discrete 1963 – 2007
- Total Record 59 years

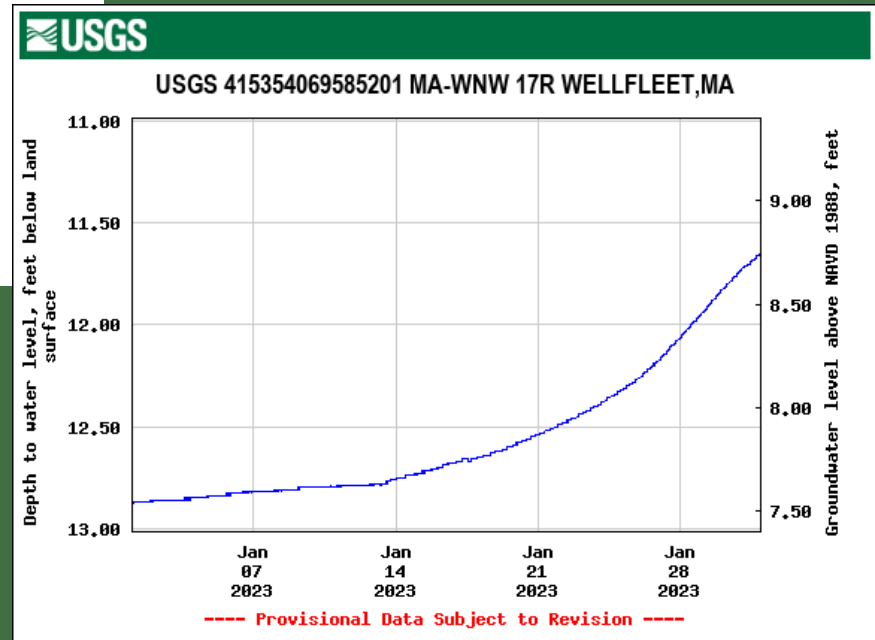


WNW 17R Wellfleet, MA Cape Cod Region

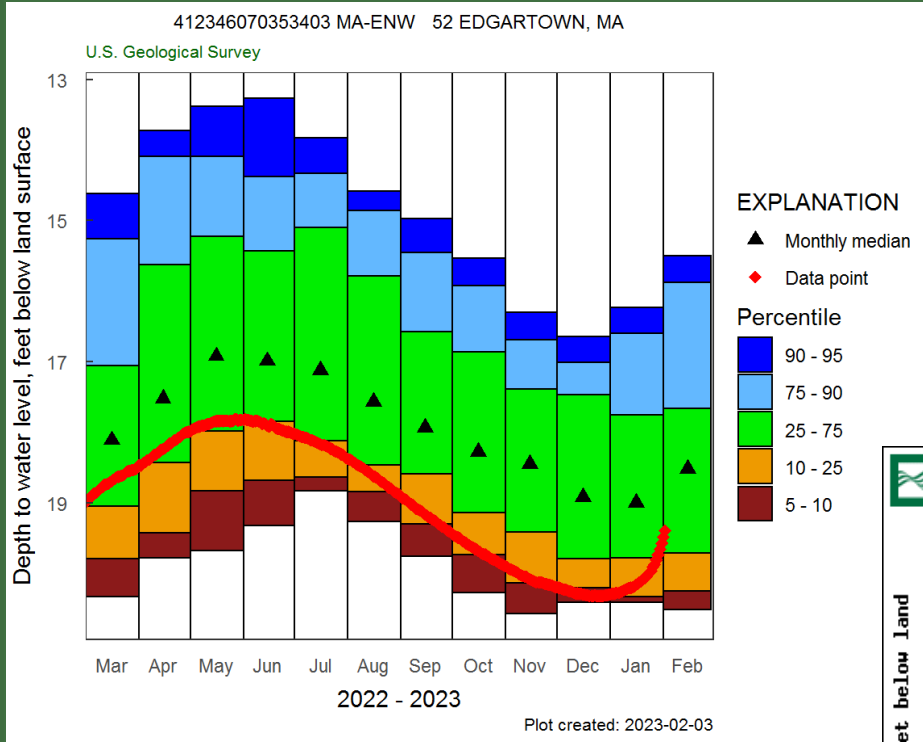


Period of Record

- Realtime 2018 – Present
- Discrete 1962 – 2018
- Total Record 60 years

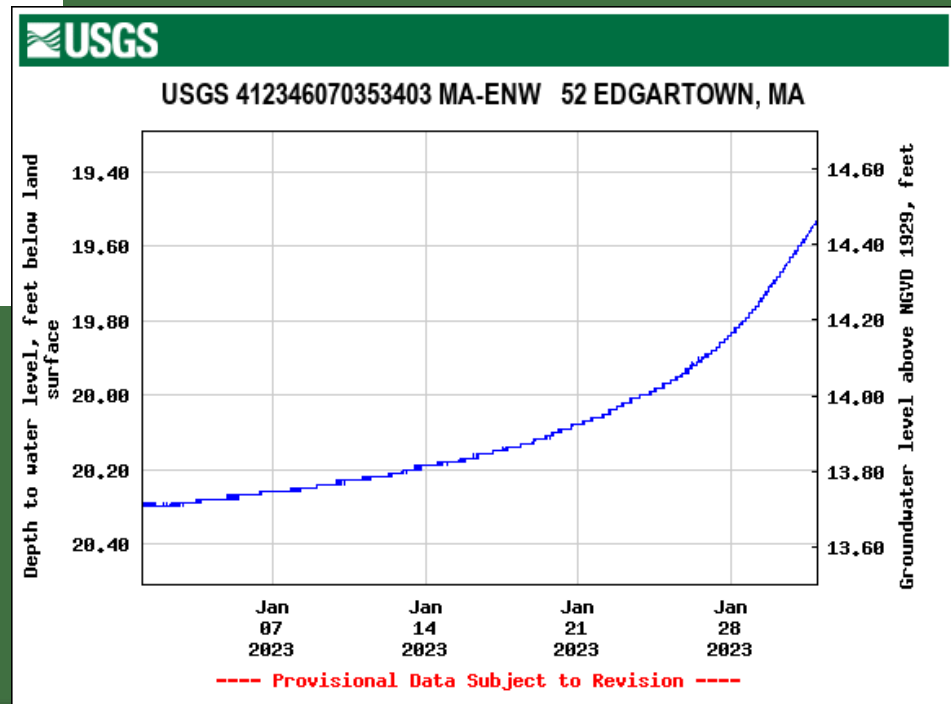


ENW 52, Edgartown, MA Islands Region



Period of Record

- Realtime 2019 – Present
- Discrete 1976 – 2019
- Total Record 46 years



Questions?



August 2022



January 2023

01109070 SEGREGANSET RIVER NEAR DIGHTON, MA