

Streamflow and Groundwater Conditions in Massachusetts

August 08, 2022

Jason Pollender

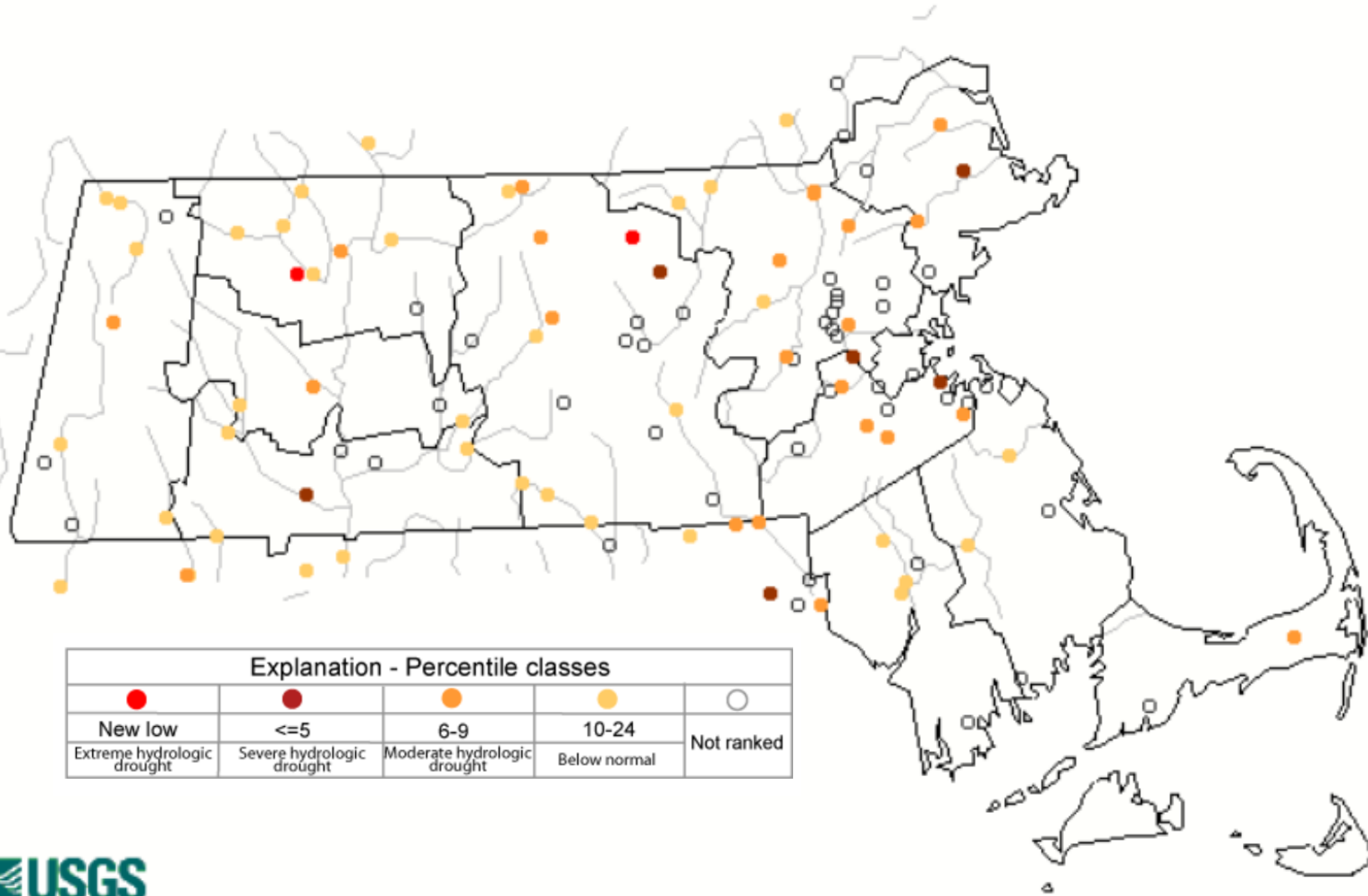
U.S. Geological Survey

New England Water Science Center



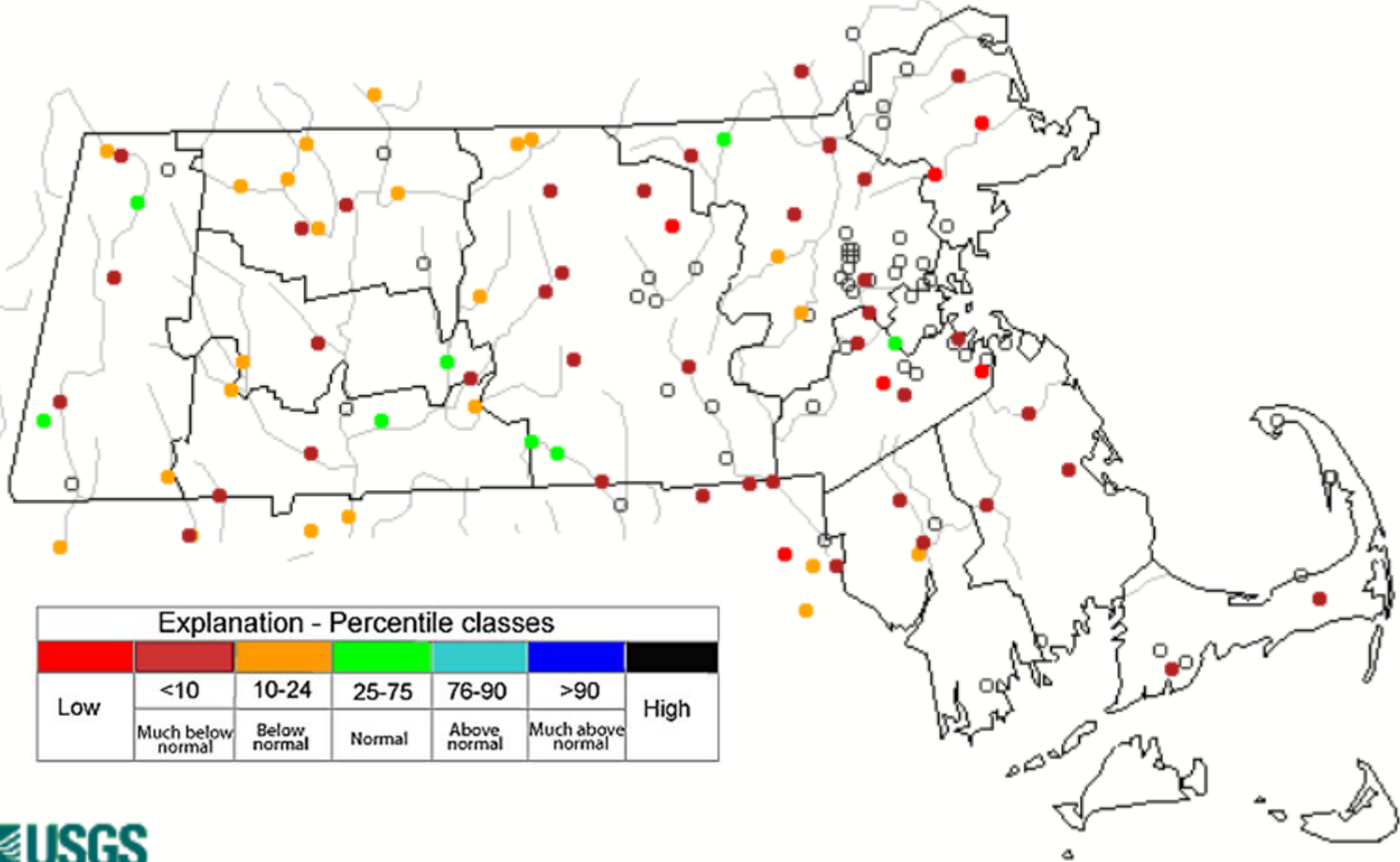
Below Normal Monthly Avg– July, 2022

July 2022



Real-Time Streamflow Conditions – Aug 4, 2022

Thursday, August 04, 2022 14:30ET



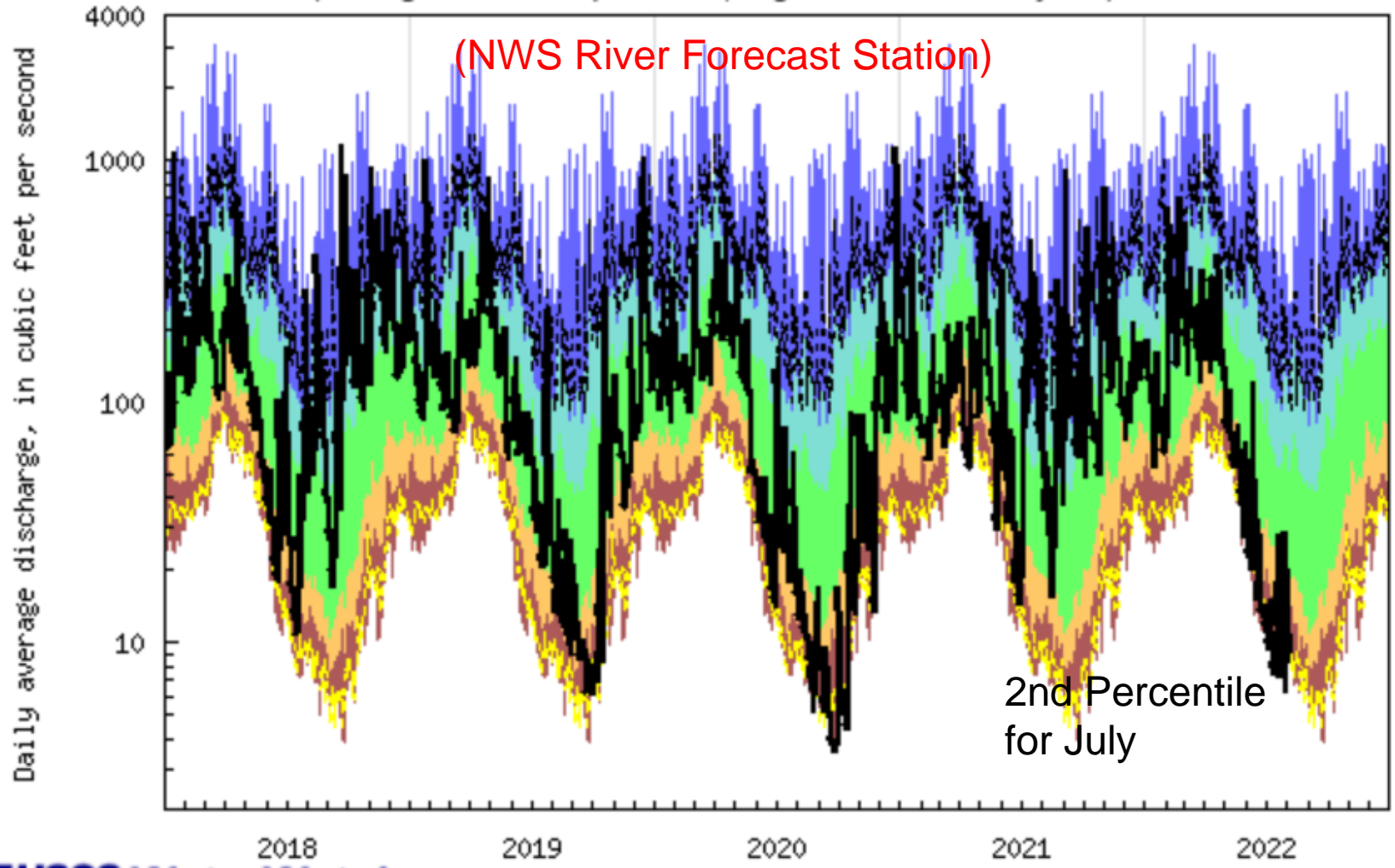
Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	



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

USGS 01094400 NORTH NASHUA RIVER AT FITCHBURG, MA
 (Drainage area: 64.2 square miles, length of record: 49 - 50 years)

(NWS River Forecast Station)

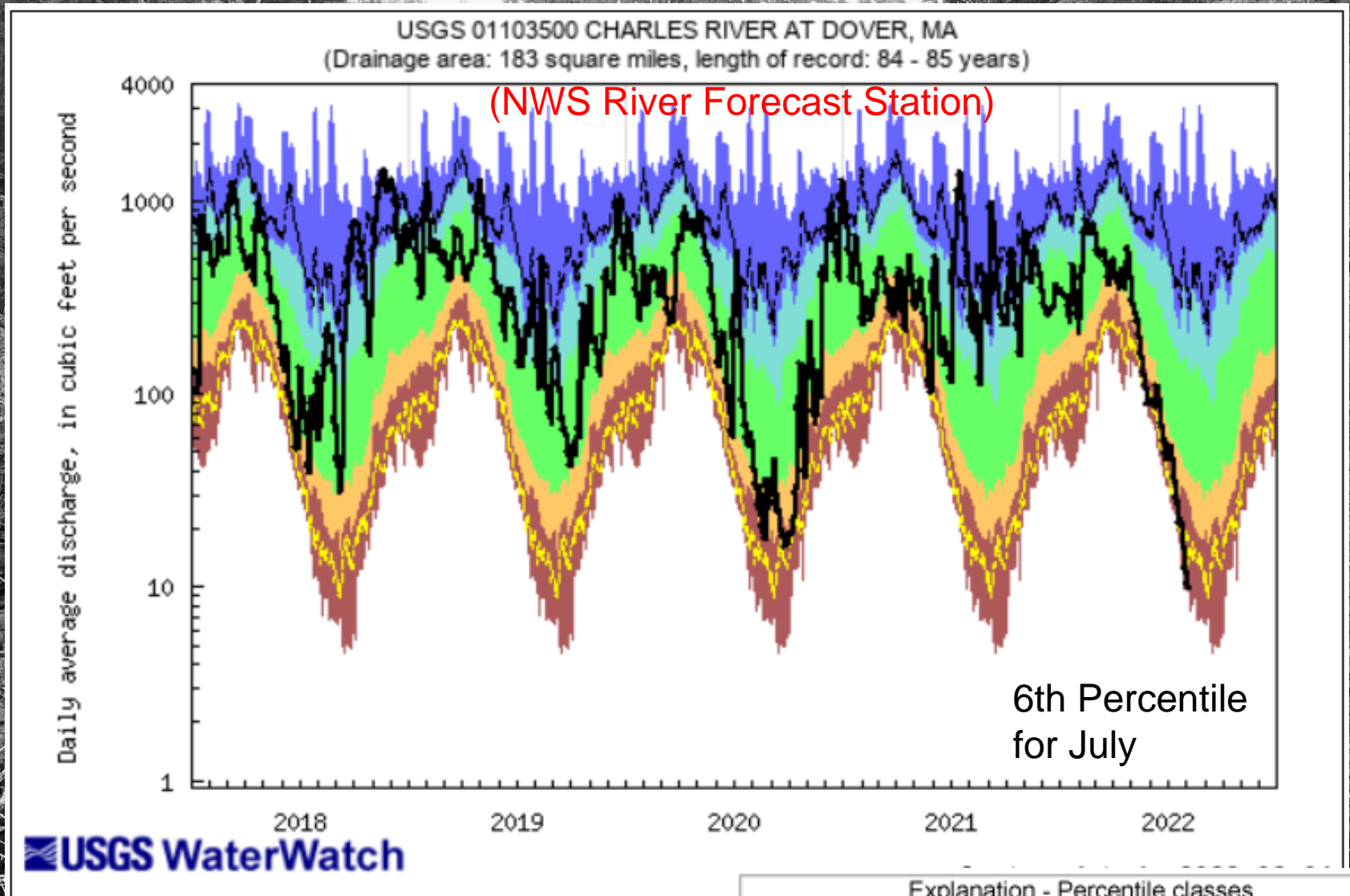


2nd Percentile
for July

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		Flow

Daily Avg. – Charles River – Eastern MA

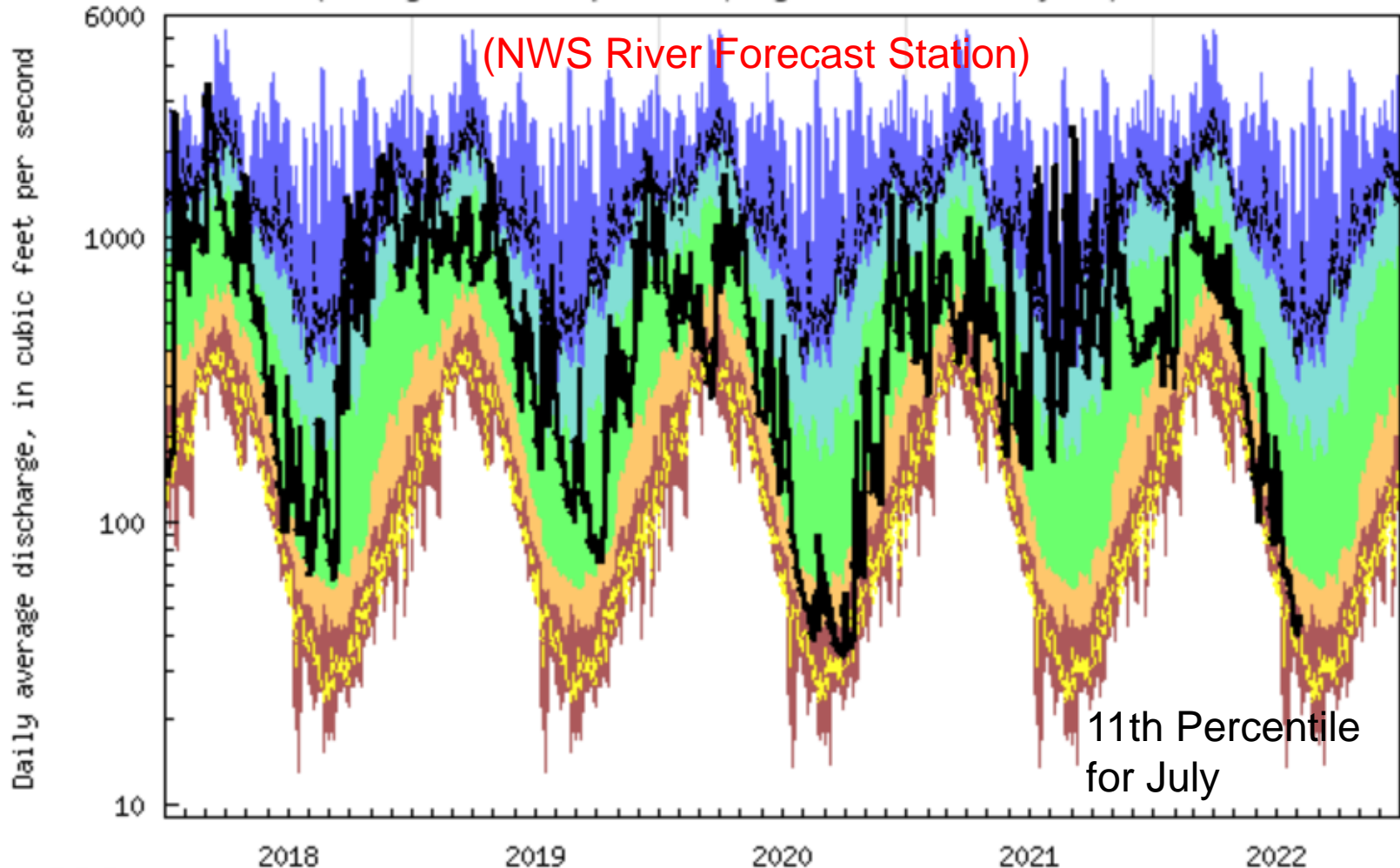


Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow

Daily Avg. – Taunton River – Southeastern MA

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

(NWS River Forecast Station)



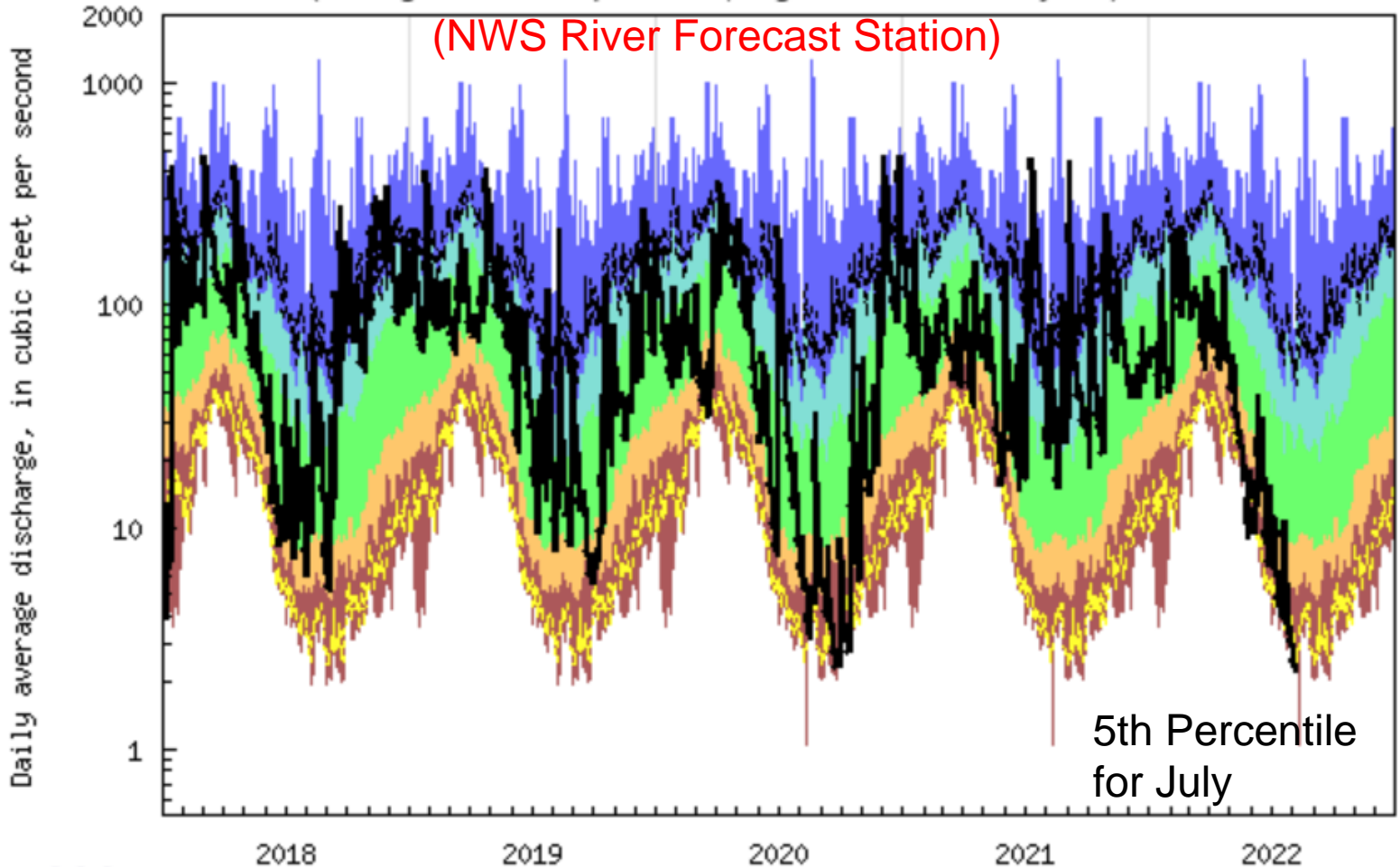
USGS WaterWatch

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		Flow

Daily Avg. – Neponset– Eastern MA

USGS 01105000 NEPONSET RIVER AT NORWOOD, MA
 (Drainage area: 34.7 square miles, length of record: 82 - 83 years)

(NWS River Forecast Station)



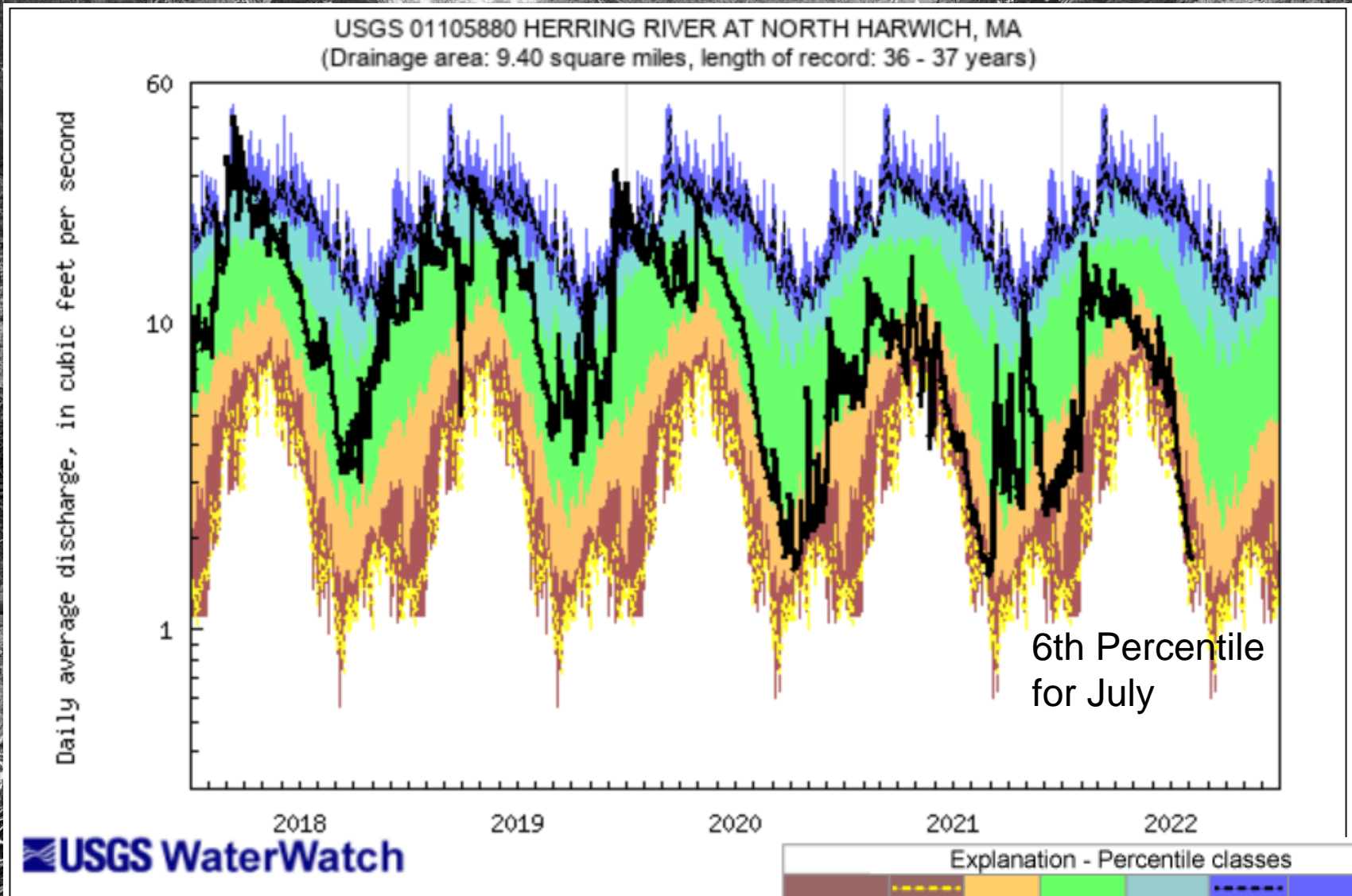
USGS WaterWatch

Last updated: 2022-08-05

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

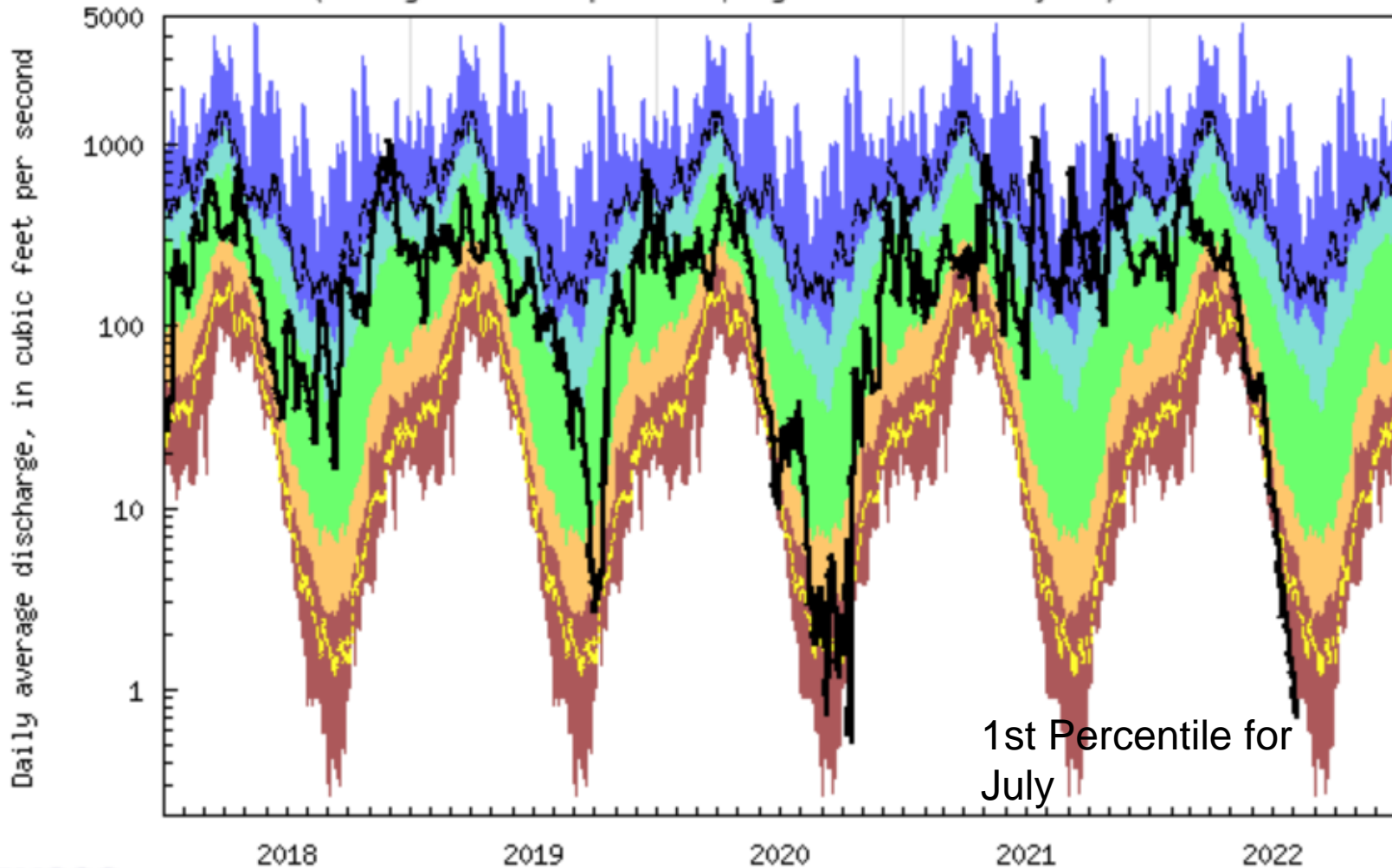


Explanation - Percentile classes

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. Ipswich River— Northeastern MA

USGS 01102000 IPSWICH RIVER NEAR IPSWICH, MA
 (Drainage area: 125 square miles, length of record: 91 - 92 years)

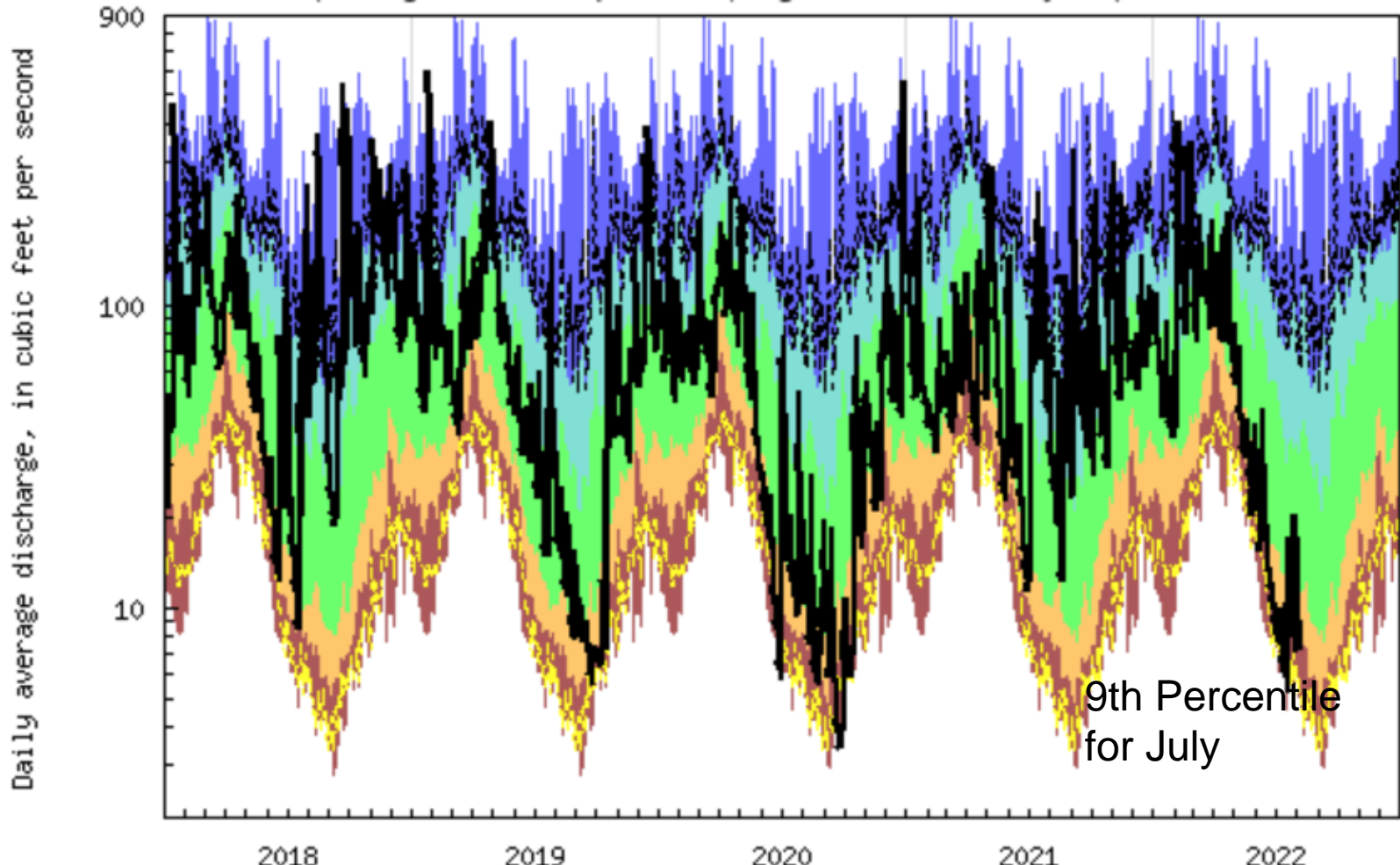


USGS WaterWatch

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		Flow

Daily Avg. –Otter River–Central MA

USGS 01163200 OTTER RIVER AT OTTER RIVER, MA
 (Drainage area: 34.1 square miles, length of record: 57 - 58 years)

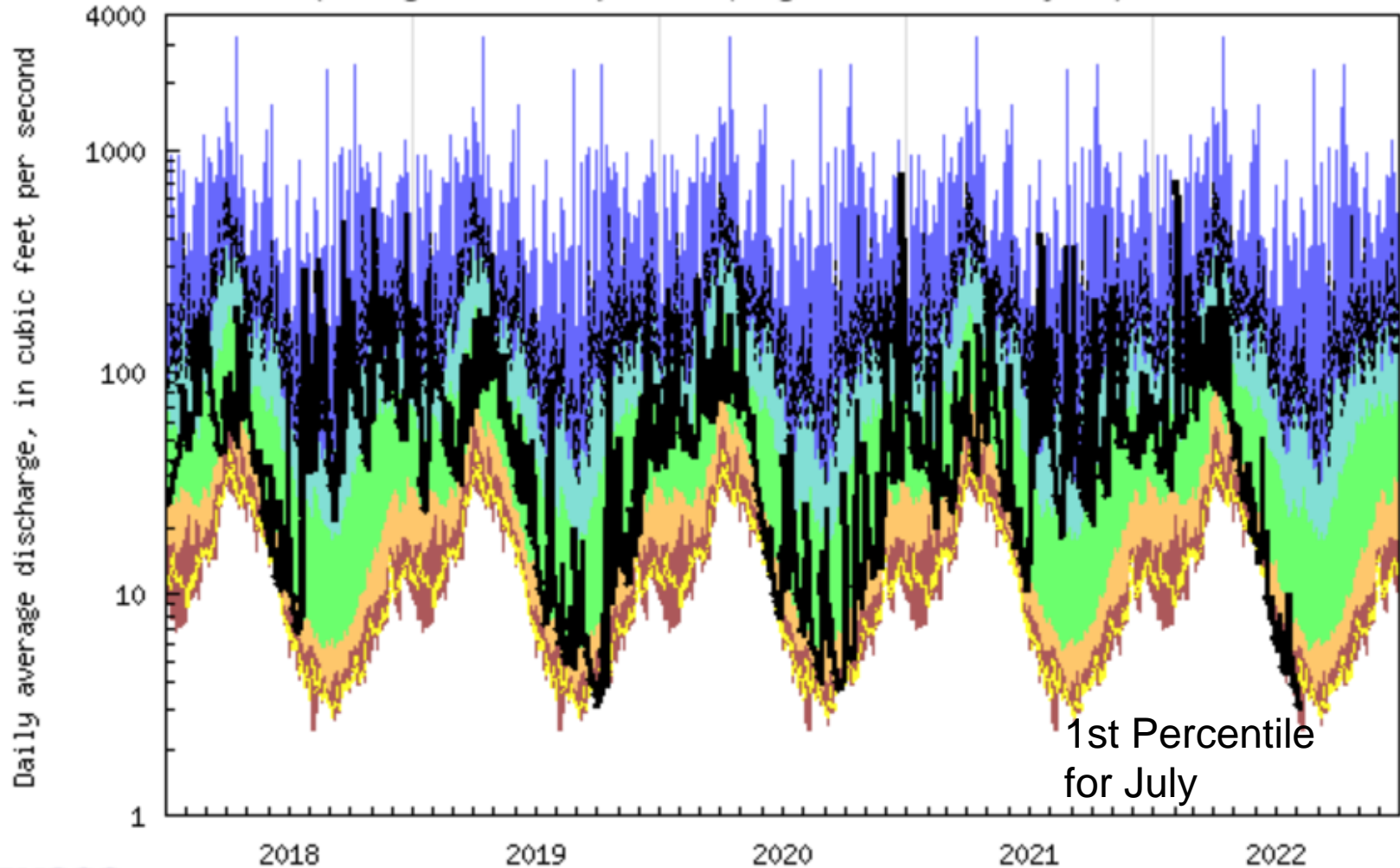


USGS WaterWatch

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		Flow

Daily Avg. – South River– Western MA

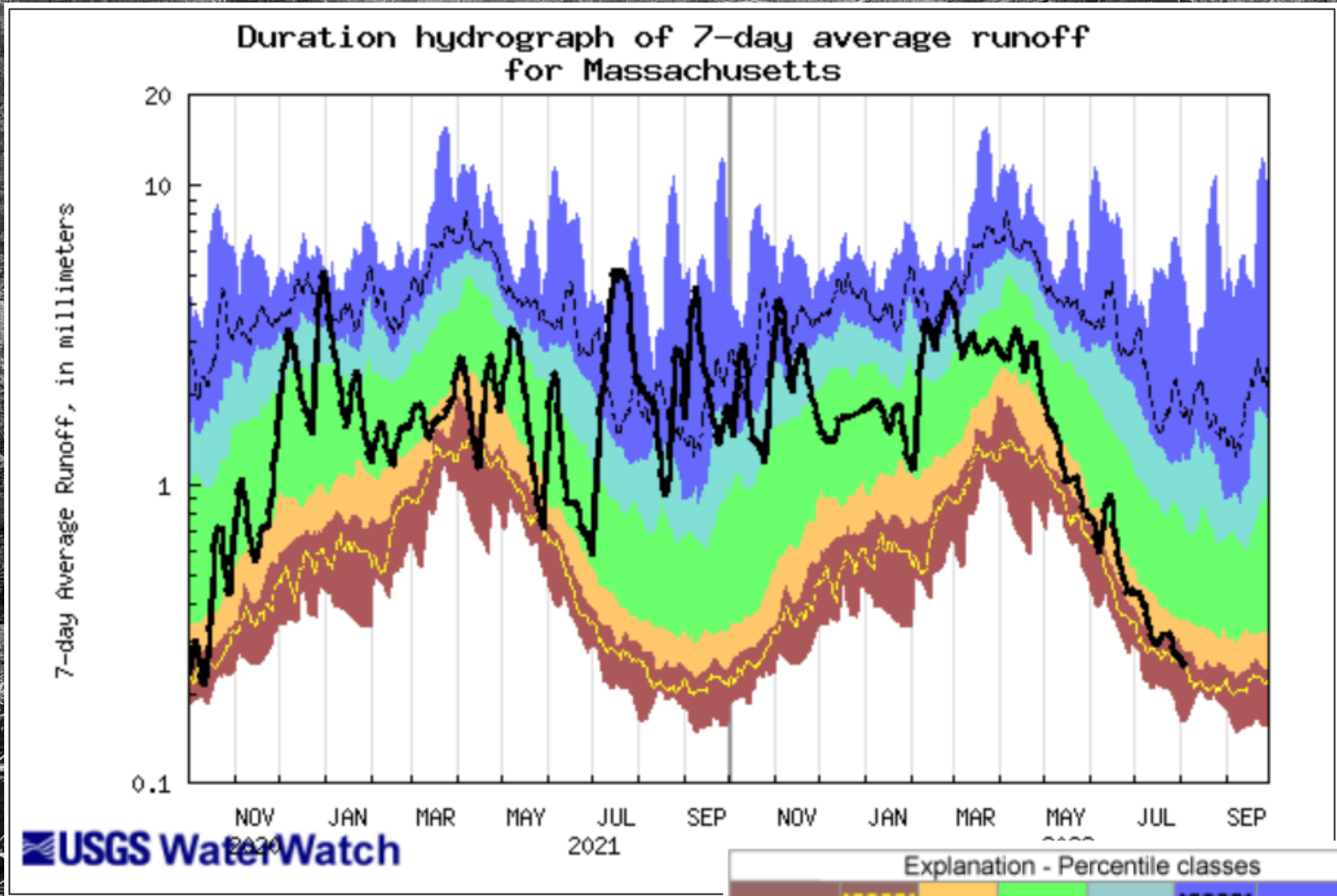
USGS 01169900 SOUTH RIVER NEAR CONWAY, MA
 (Drainage area: 24.1 square miles, length of record: 55 - 56 years)



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		Flow

7-Day Streamflow Conditions Oct. 1, 2020 - Sept. 30, 2022



Explanation - Percentile classes

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

7-Day Streamflow Conditions

Oct. 1, 2020 - Sept. 30, 2022

Summary of Recent 7-day Average Flow Conditions

(2022-07-01 -- 2022-08-01)

["-", no data; ">", greater than all historical minimum values]

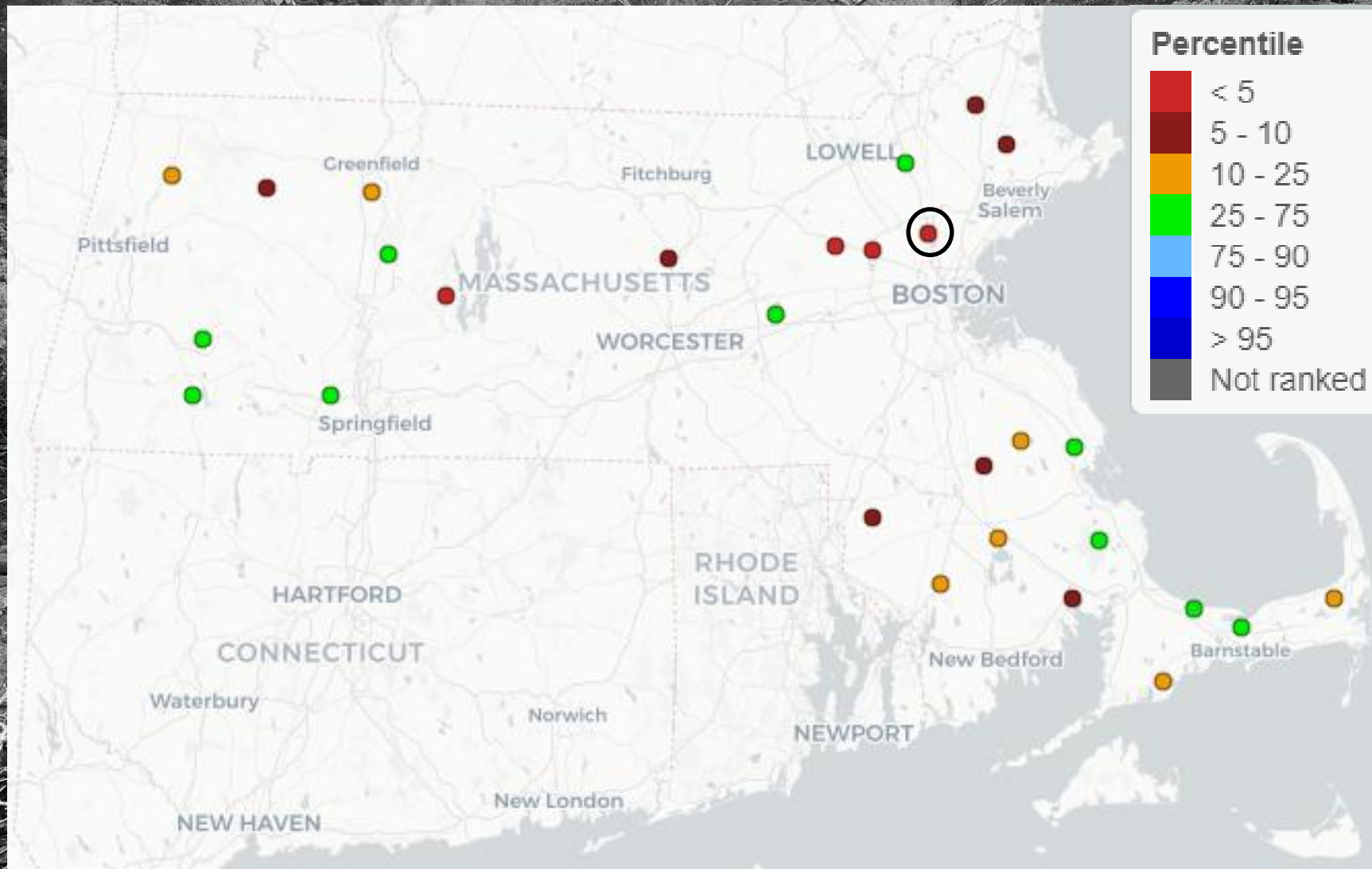
USGS station number	USGS station name	Drain. area [mi ²]	2022-07-01 to 2022-08-01				Historical annual minimum 7-day flows		
			No. of days with zero flows	Lowest 7-day average flow			No. of years	Min. (year) [ft ³ /s]	No. of years with zero flows
				Date	Stream flow [ft ³ /s]	Rank			
01105638	WEIR RIVER AT LEAVITT STREET AT HINGHAM, MA	14.1	5	2022-07-28	0	Tie 1	8	0 (2007)	2
01104420	CAMBRIDGE RES., UNNAMED TRIB 3, NR LEXINGTON, MA	0.73	0	2022-07-28	0.04	Tie 1	7	0.04 (2016)	0
01095434	GATES BROOK NEAR WEST BOYLSTON, MA	3.13	0	2022-07-31	0.62	2	7	0.6 (2014)	0
01103455	TROUT BROOK AT DOVER, MA	3.72	0	2022-07-28	0.51	2	7	0.12 (2016)	0
01104475	STONY BROOK RES., UNNAMED TRIB 1, NEAR WESTON, MA	0.85	0	2022-07-22	0.04	Tie 2	14	0.03 (2016)	0
01105917	MATTAPOISETT RIVER NEAR MATTAPOISETT, MA	24.0	0	2022-07-31	0.36	3	8	0 (2008)	1
01168250	COLD RIVER AT FLORIDA, MA	6.47	0	2022-07-17	0.29	3	3	0.19 (2015)	0
01105600	OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA	4.50	0	2022-07-31	0.11	Tie 3	52	0.06 (1995)	0

Rank

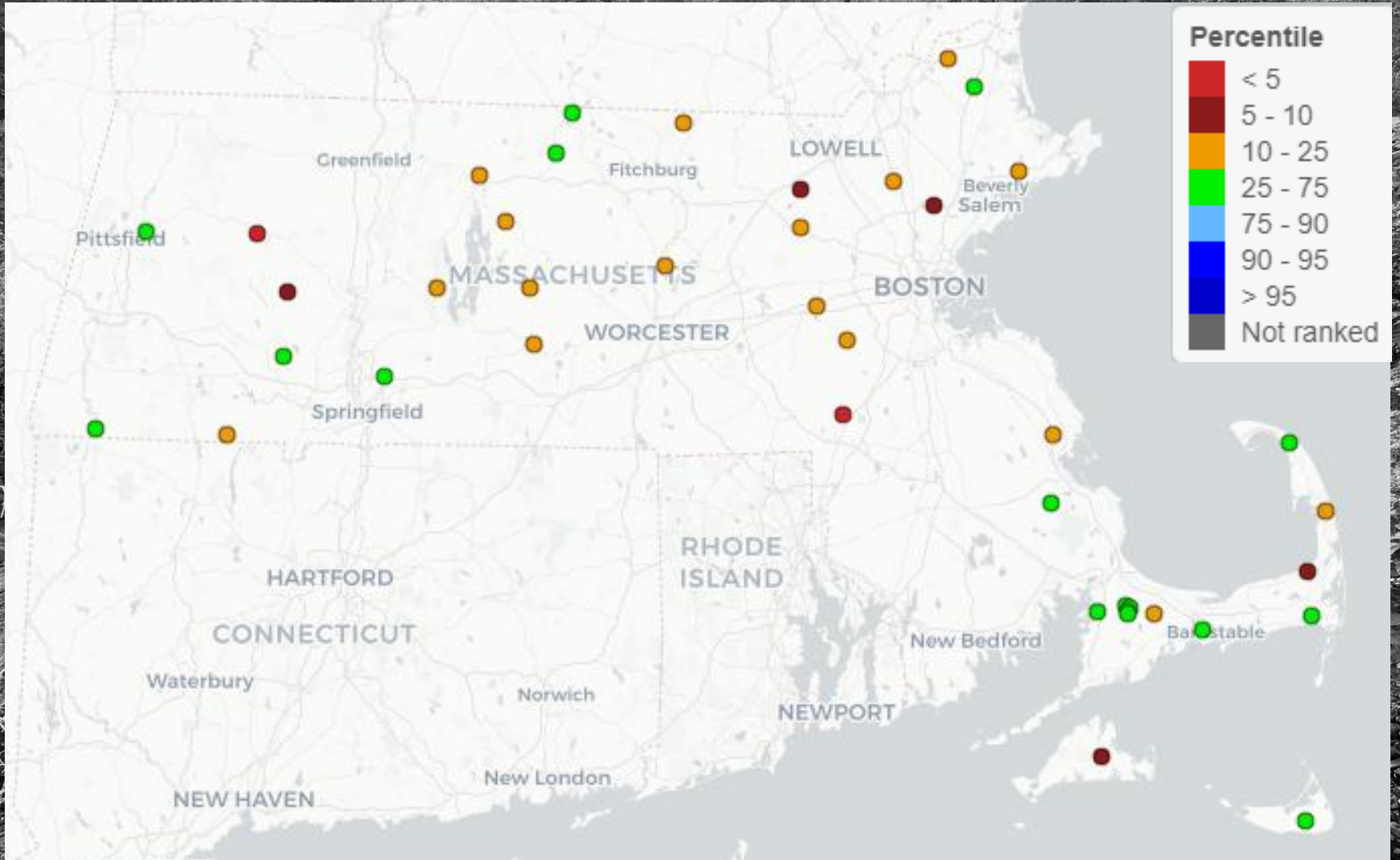
The values shown correspond to the rank of the current 7-day average streamflow with respect to all 7-day periods in the record for each streamgage, with 1 representing the lowest observed streamflow.

- 1 - New all-time record low 7-day average streamflow recorded at this streamgage.
- Tie 1 - Current value ties the all-time record low 7-day average streamflow.
- 2 - Second lowest annual minimum 7-day average streamflow recorded at this streamgage.
- Tie 2 - Current value ties the second lowest annual minimum 7-day average streamflow recorded at this streamgage.
- 3 - Third lowest annual minimum 7-day average streamflow recorded at this streamgage.
- Tie 3 - Current value ties the third lowest annual minimum 7-day average streamflow recorded at this streamgage.

Discrete Climate Response Network (CRN) Groundwater Conditions, July 31, 2022



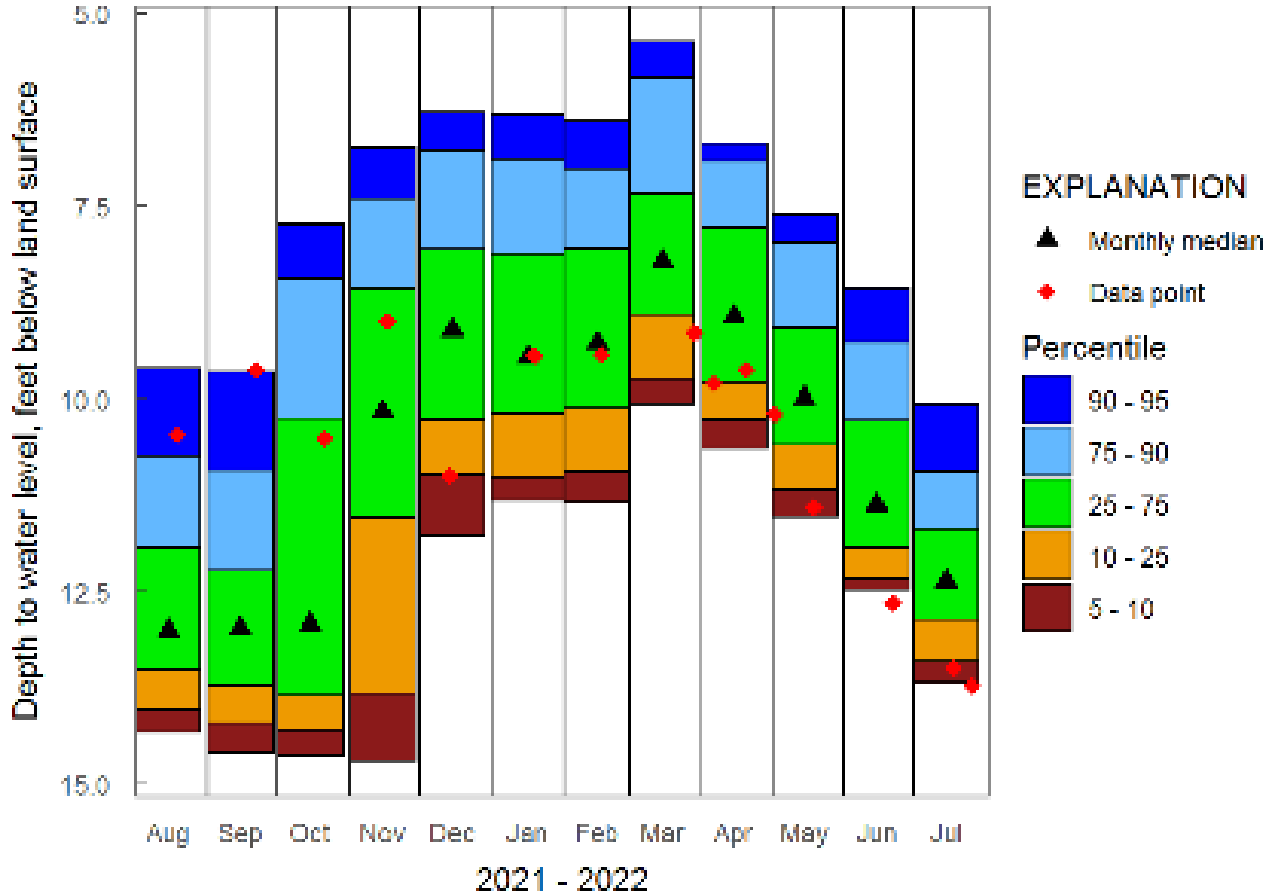
CRN – Realtime Groundwater Conditions July 31 2022



XOW 14, Winchester, MA

422819071065701 MA-XOW 14 WINCHESTER, MA

U.S. Geological Survey



2021 - 2022

Plot created: 2022-07-31

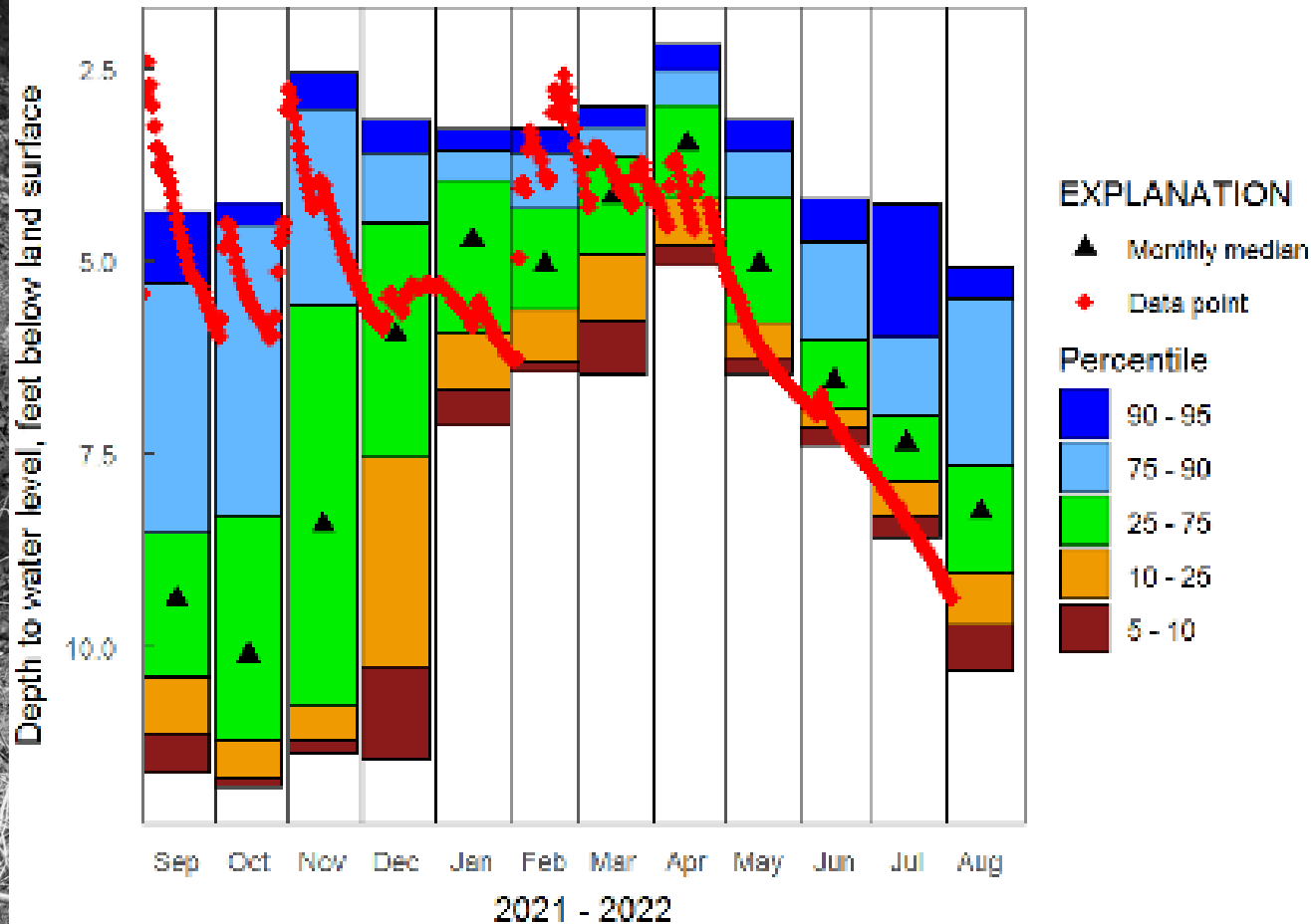
Period of Record

1940 – present

BMW 26 West Boylston, MA

422341071464901 MA-WSW 26 WEST BOYLSTON, MA

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2021 - 2022

Plot created: 2022-08-05

Period of Record

1995 - present

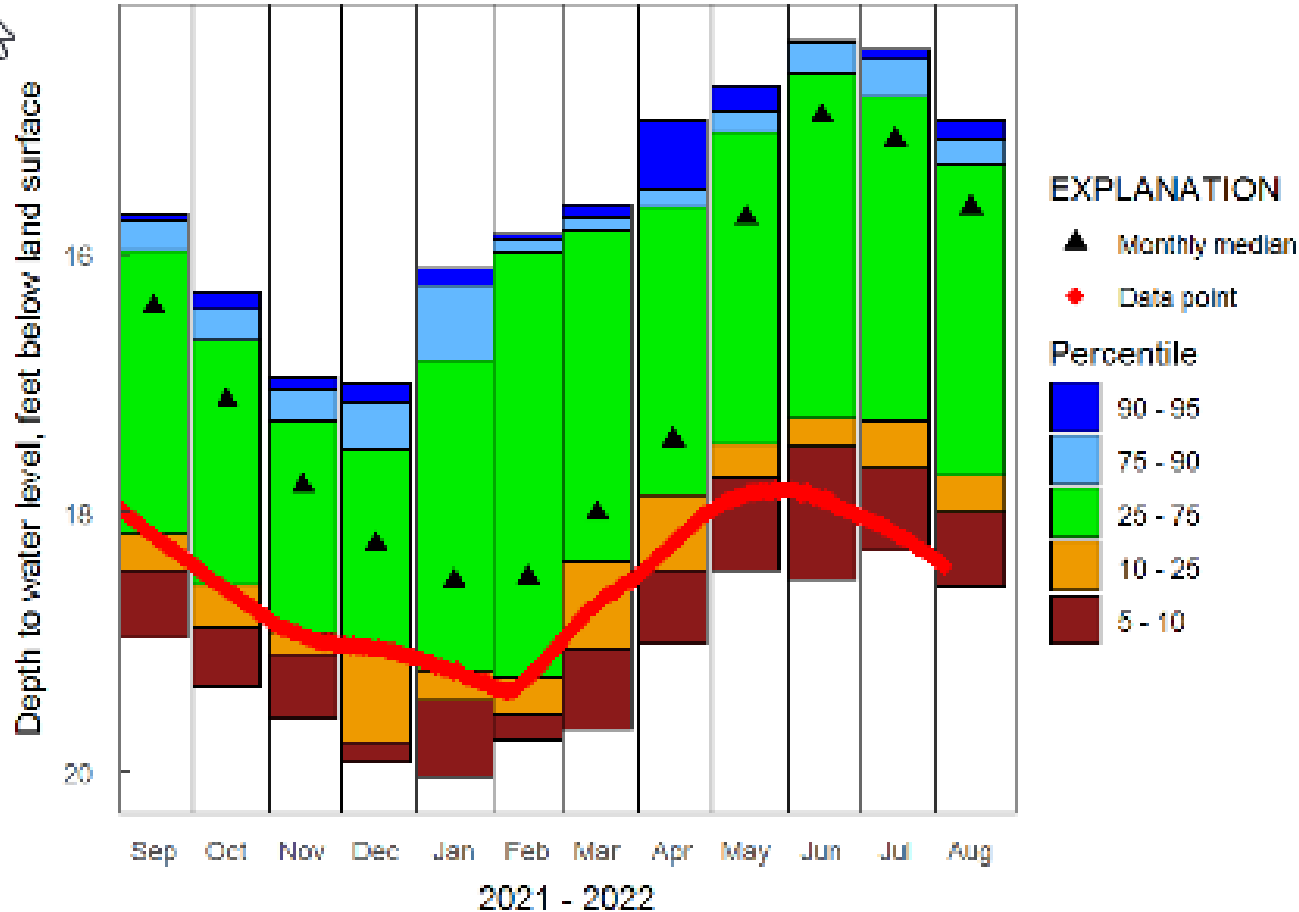
ENW 52, Edgartown, MA

Period of Record

1976 – present

412346070353403 MA-ENW 52 EDGARTOWN, MA

U.S. Geological Survey



Plot created: 2022-08-05

Questions?

