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# Streamflow and Groundwater Conditions in Massachusetts

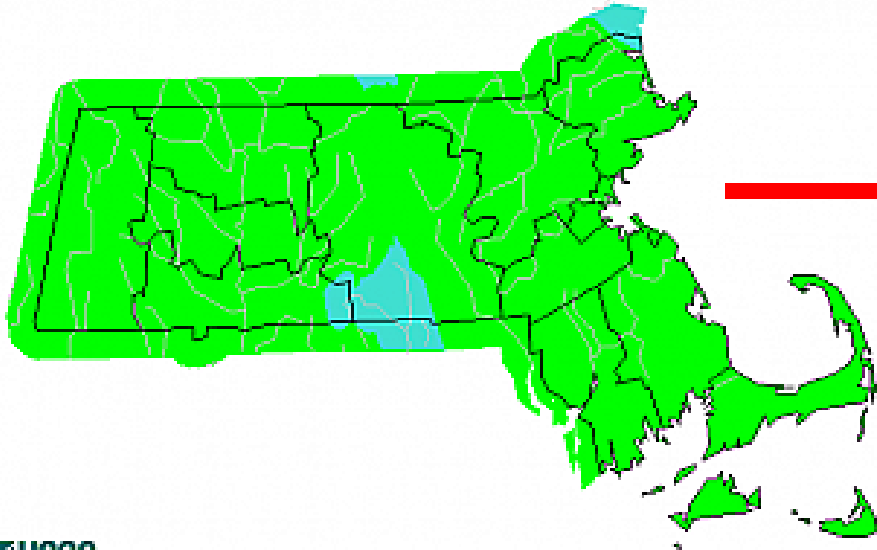
October 6, 2021

Gardner Bent  
U.S. Geological Survey  
New England Water Science Center



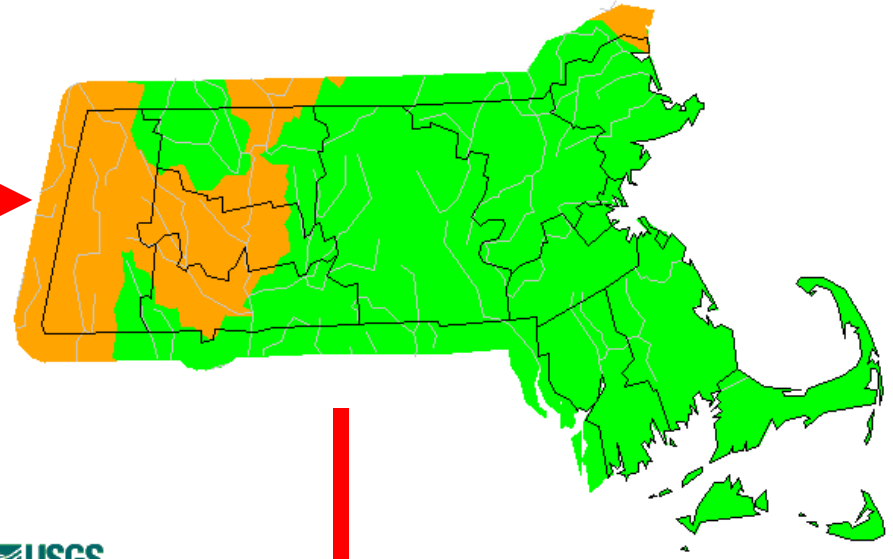
# Average Streamflow Conditions – January-March 2021

January 2021



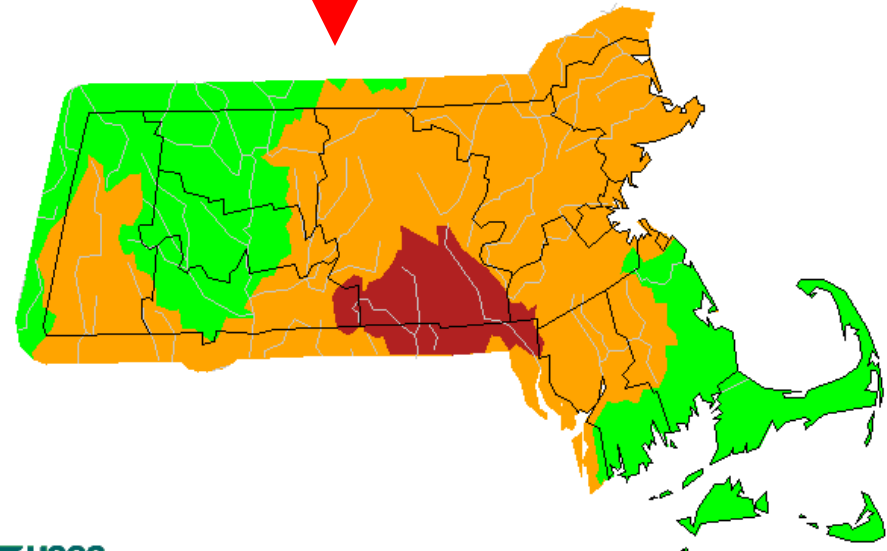
USGS

February 2021



USGS

March 2021



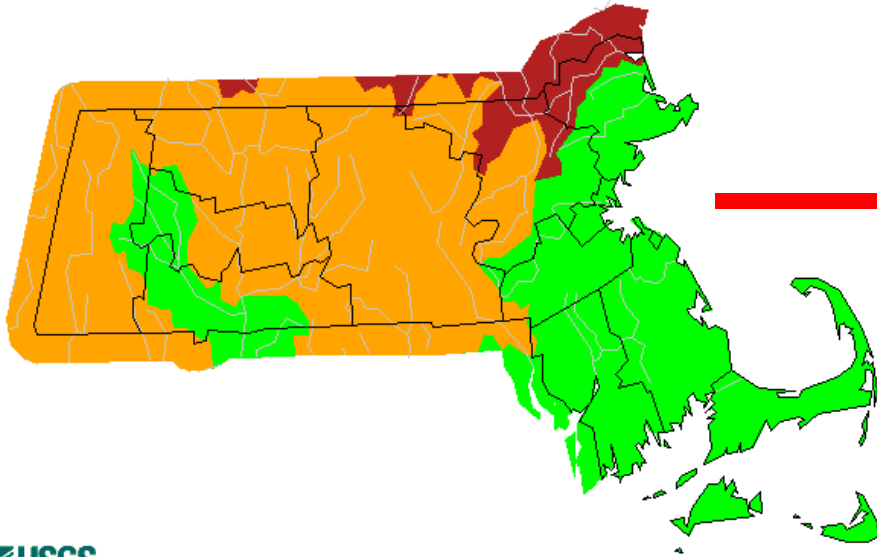
USGS

Explanation - Percentile classes

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

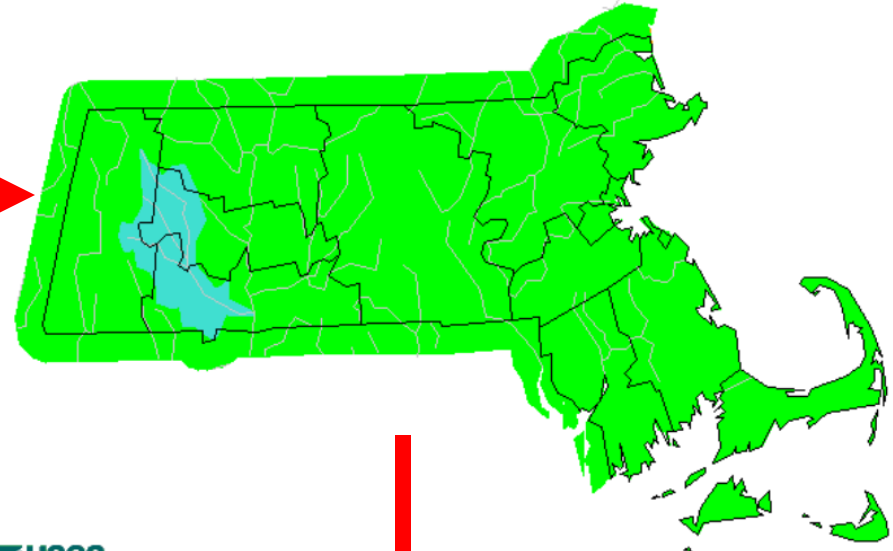
# Average Streamflow Conditions – April-June 2021

April 2021



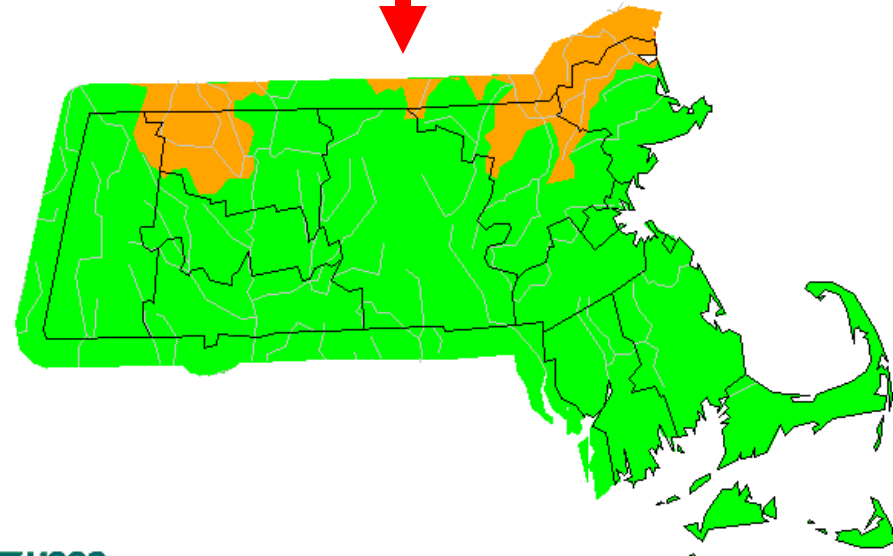
USGS

May 2021



USGS

June 2021



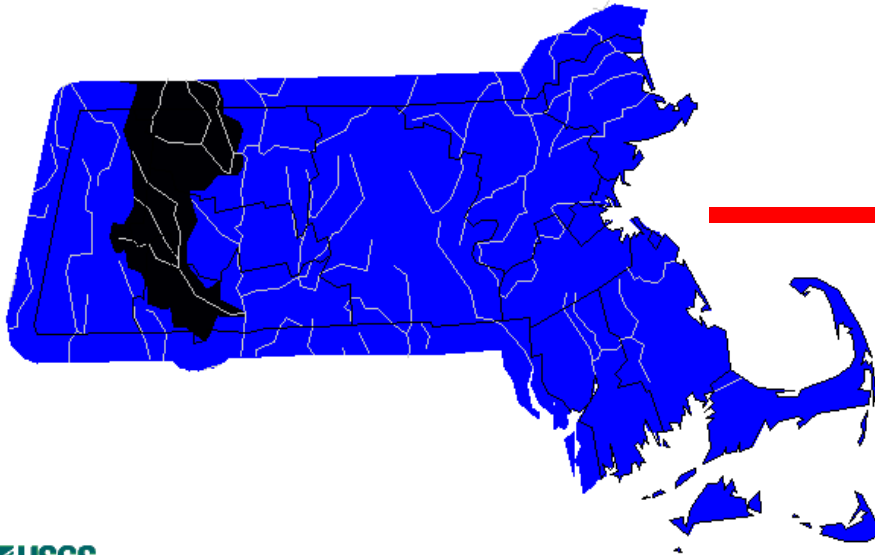
USGS

Explanation - Percentile classes

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

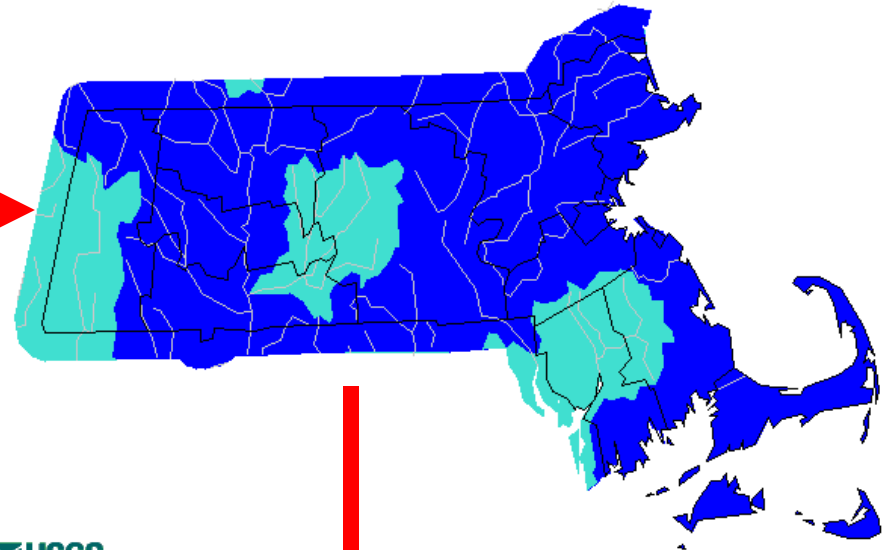
# Average Streamflow Conditions – July-Sept. 2021

July 2021



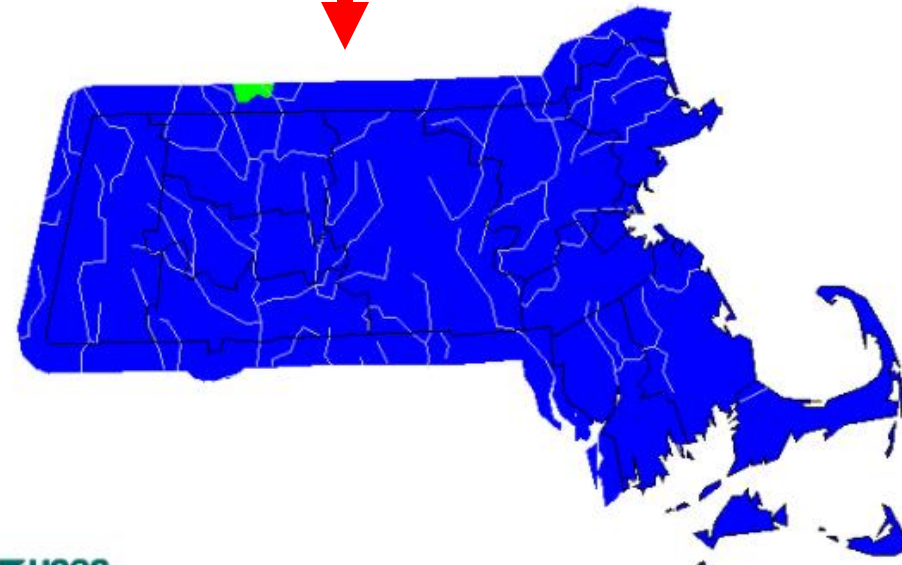
USGS

August 2021



USGS

September 2021



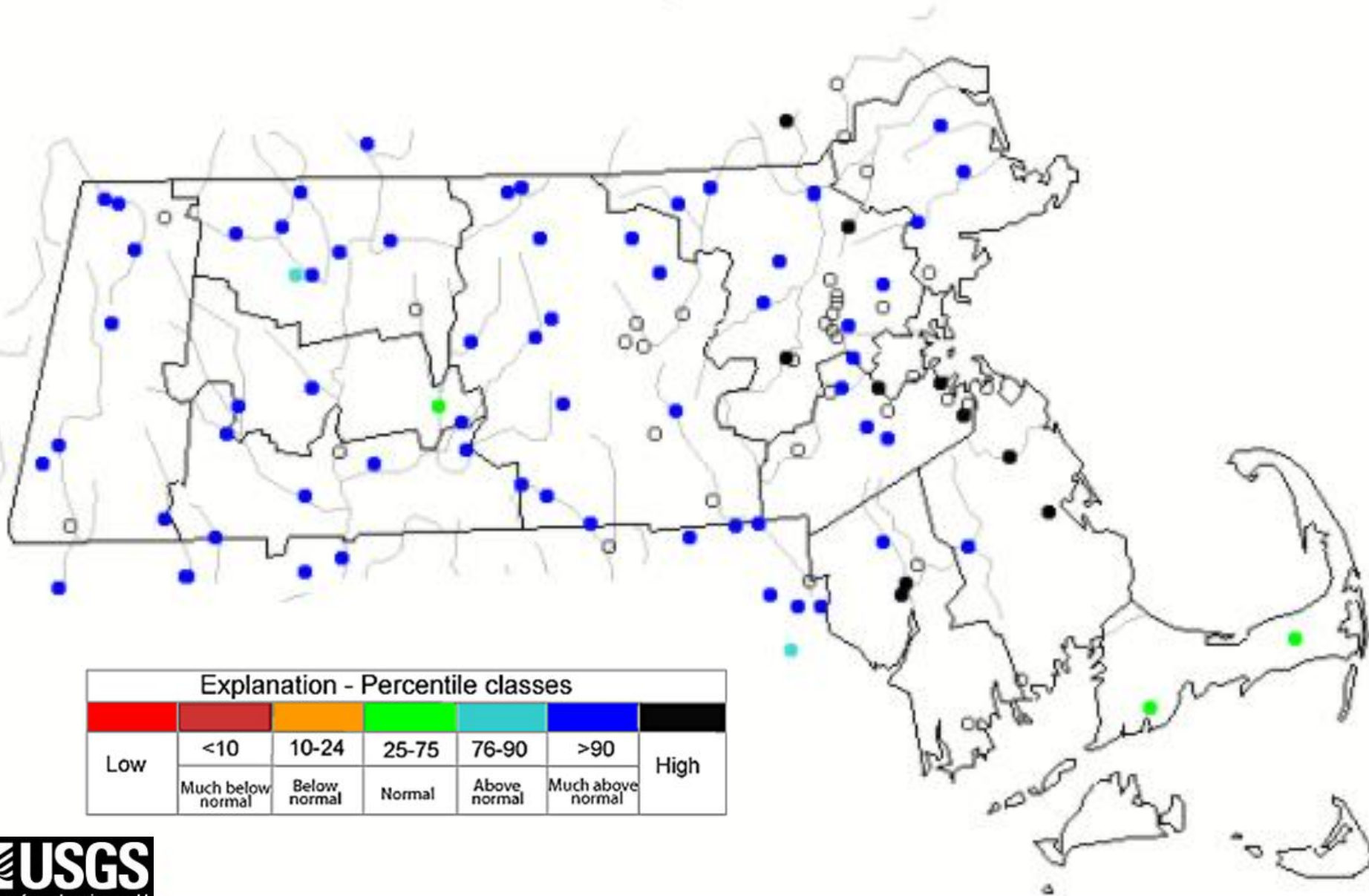
USGS

Explanation - Percentile classes

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

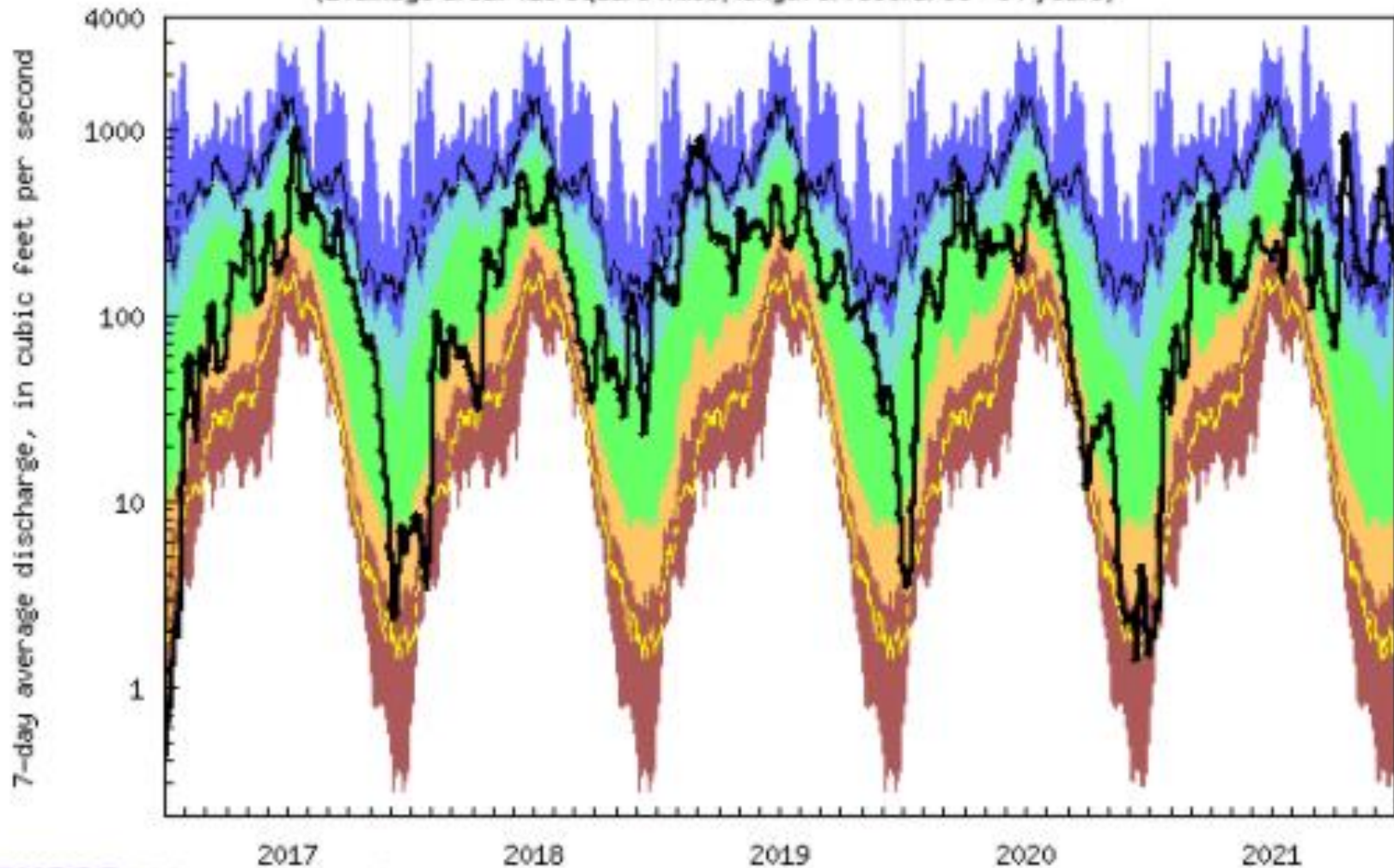
# Average Streamflow Conditions – September 2021

September 2021



# 7-Day Avg. – Ipswich River – Northeastern MA

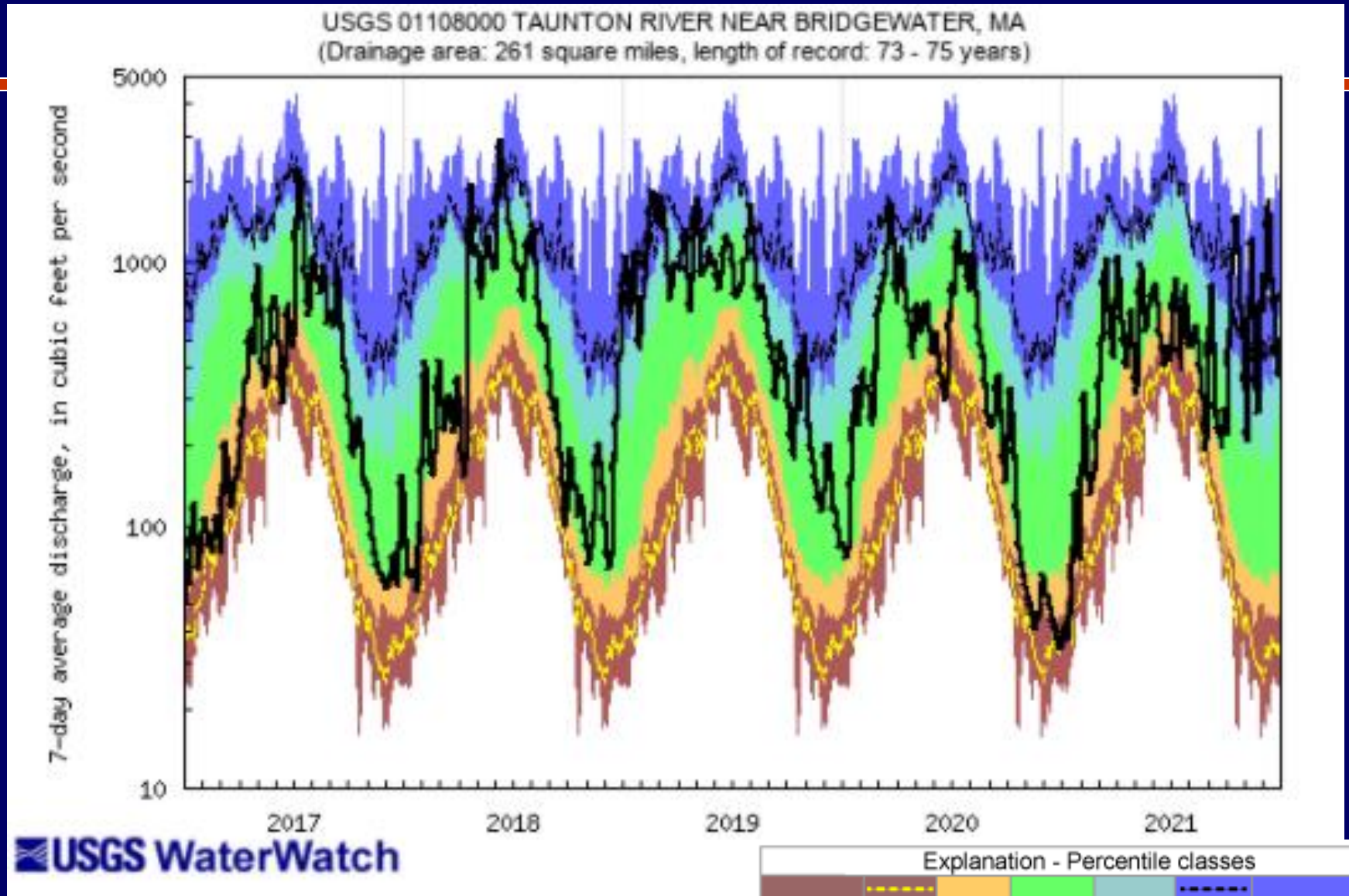
USGS 01102000 IPSWICH RIVER NEAR IPSWICH, MA  
(Drainage area: 125 square miles, length of record: 90 - 91 years)



USGS WaterWatch

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			

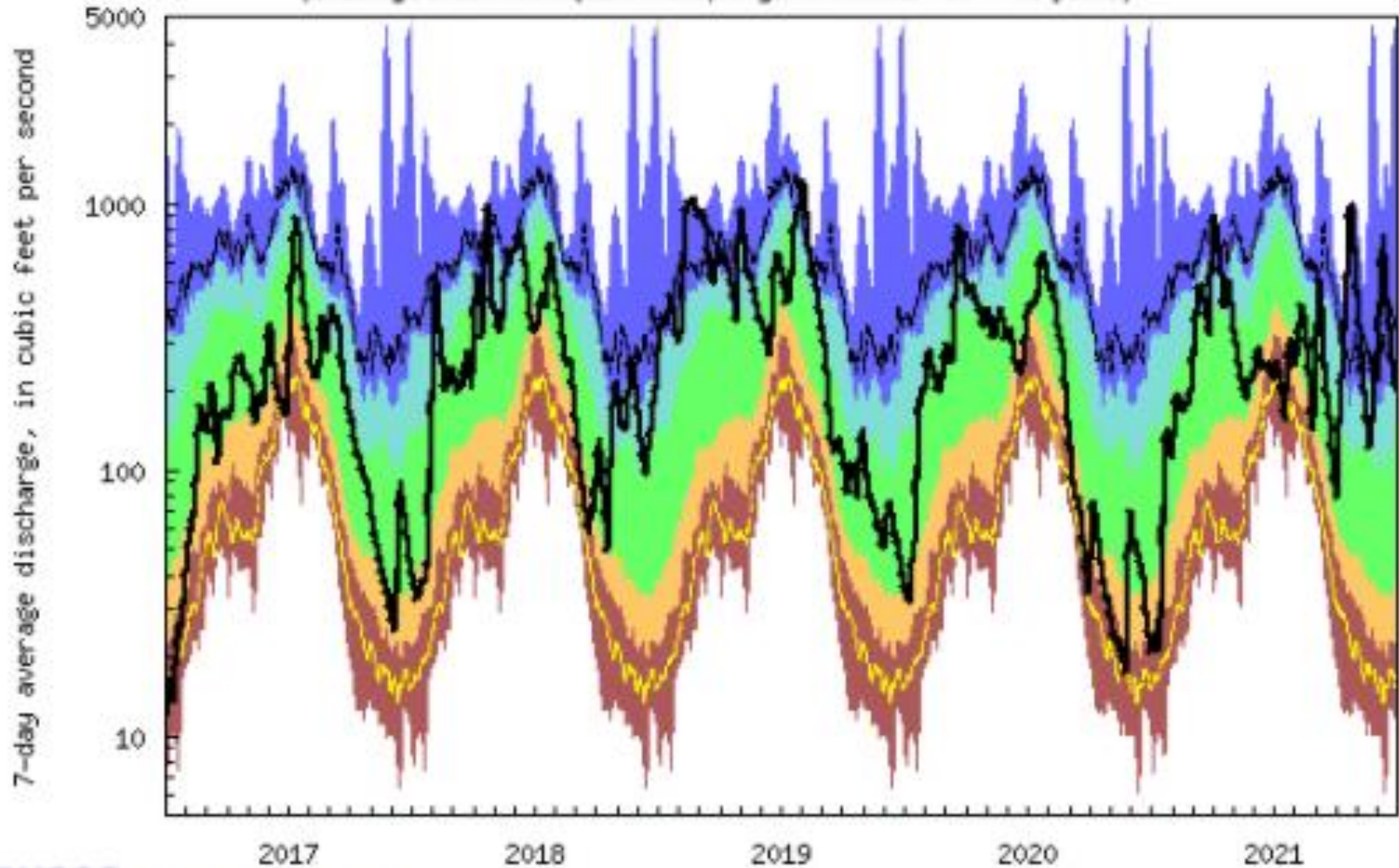
# 7-Day Avg. – Taunton River – Southeastern MA



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			

# 7-Day Avg. – Quaboag River – Central MA

USGS 01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA  
(Drainage area: 150 square miles, length of record: 108 - 109 years)



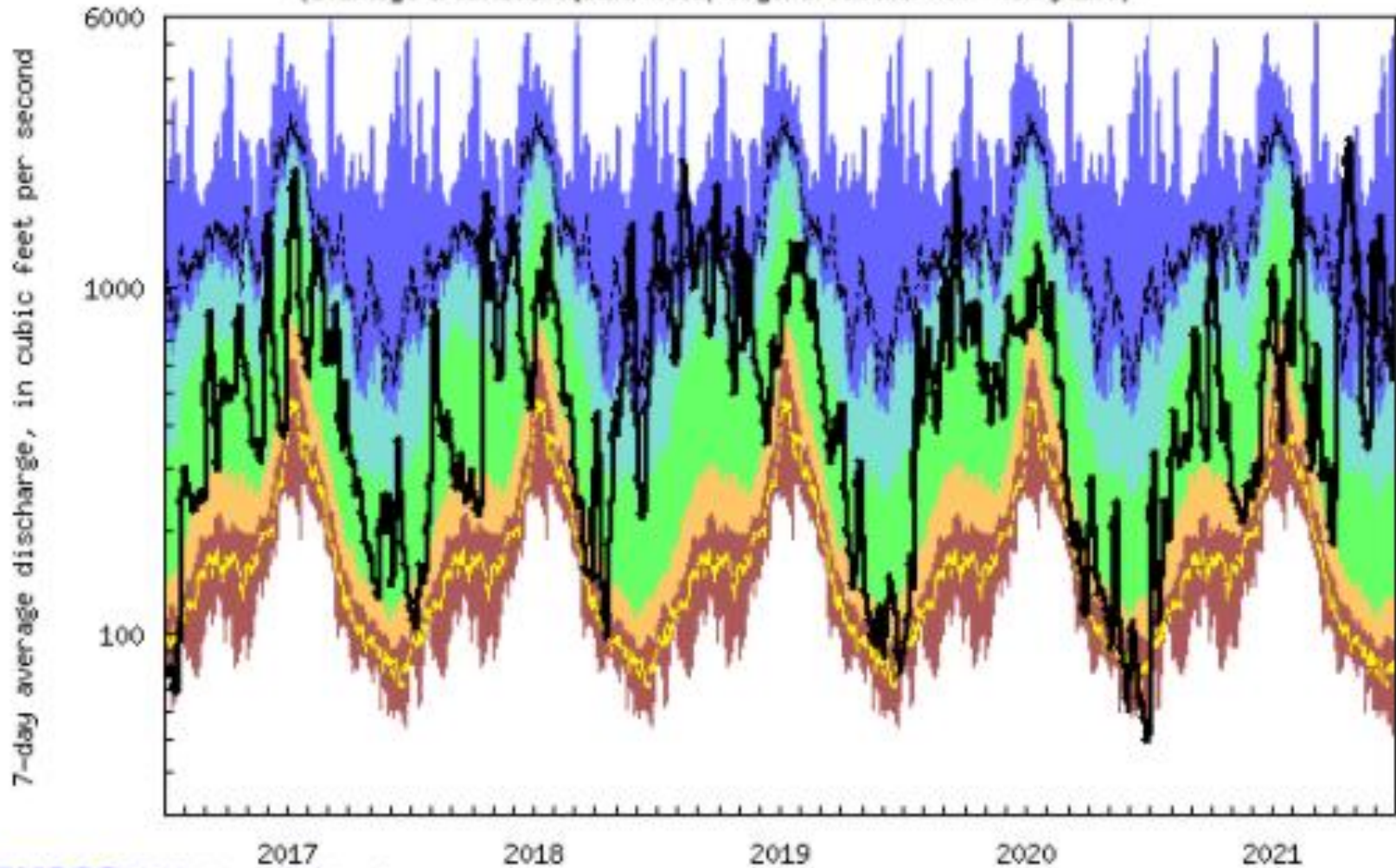
USGS WaterWatch

Explanation - Percentile classes							Flow
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			



# 7-Day Avg. – Housatonic River – Western MA

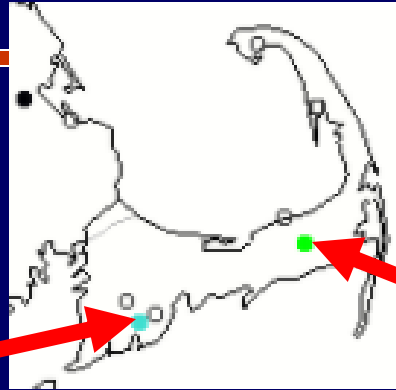
USGS 01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA  
(Drainage area: 282 square miles, length of record: 107 - 108 years)



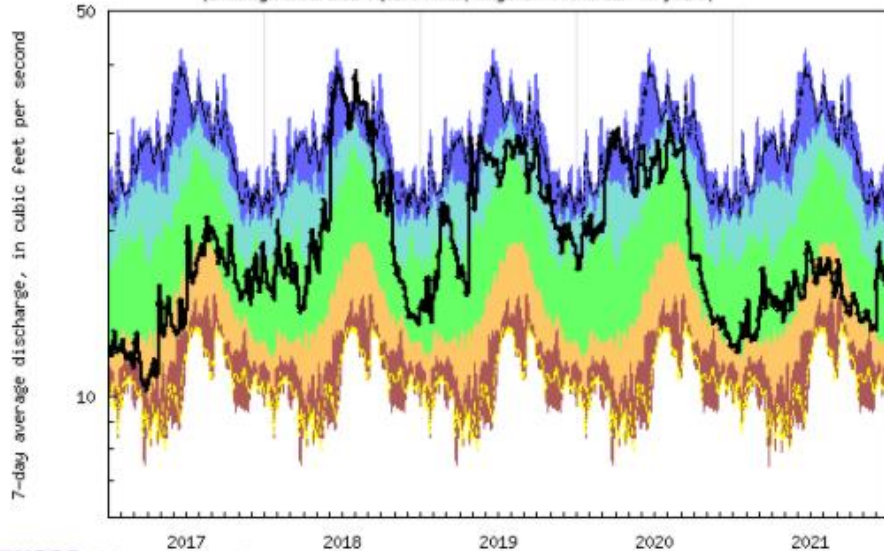
USGS WaterWatch

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 Avg. Herring and Quashnet River – Cape Cod



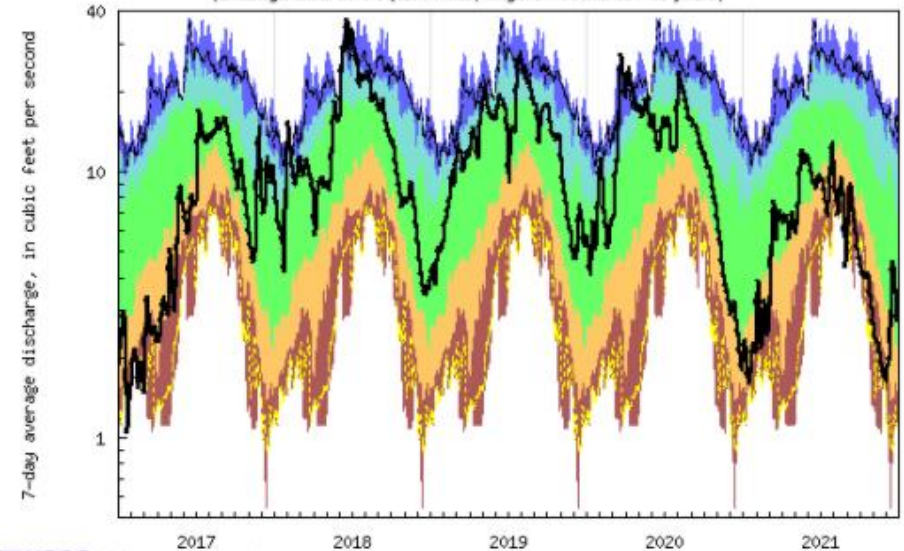
USGS 011058837 QUASHNET RIVER AT WAQUOIT VILLAGE, MA  
(Drainage area: 2.58 square miles, length of record: 32 - 33 years)



USGS WaterWatch

Last updated: 2021-10-05

USGS 011058880 HERRING RIVER AT NORTH HARWICH, MA  
(Drainage area: 9.40 square miles, length of record: 35 - 36 years)



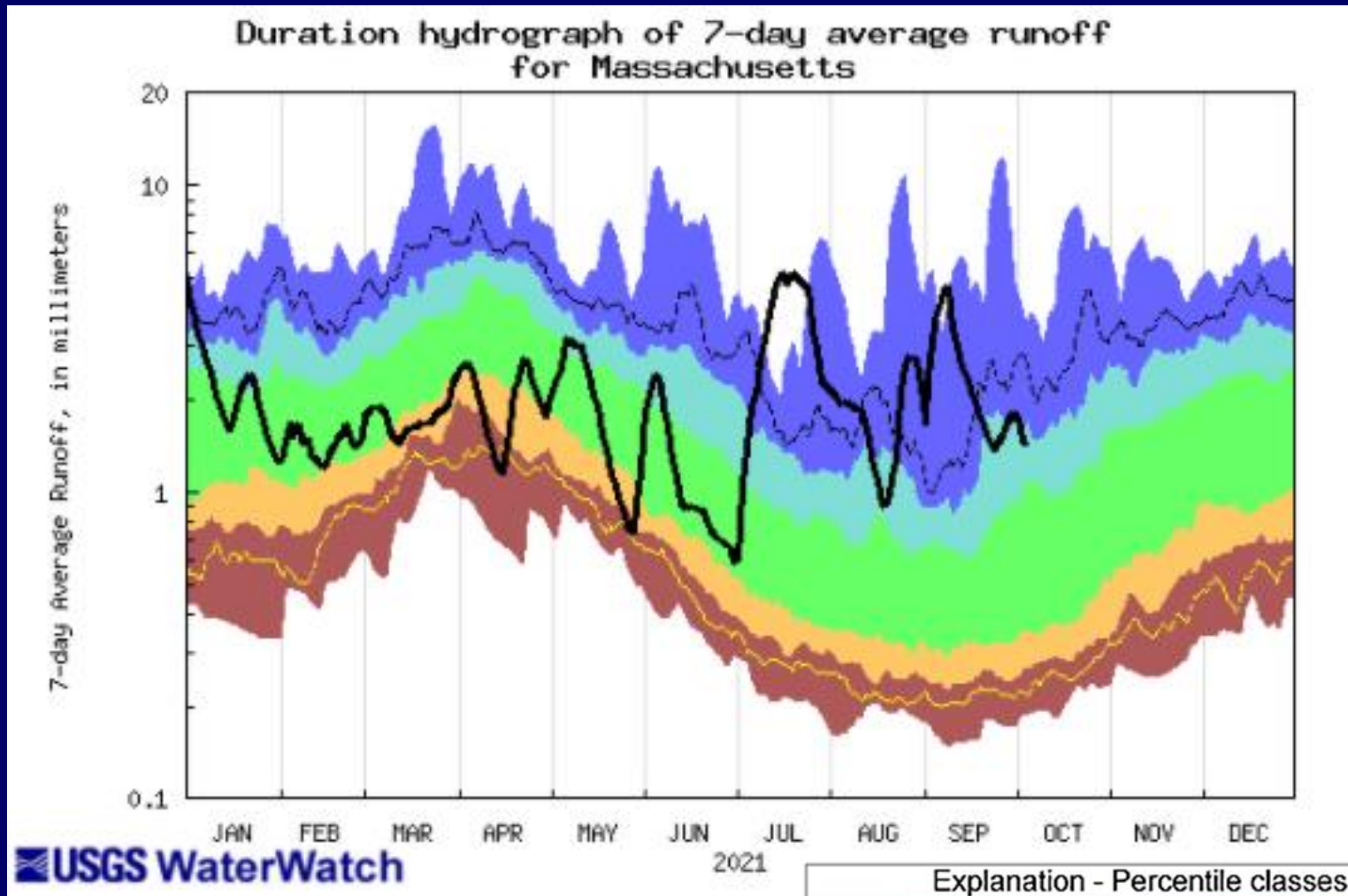
USGS WaterWatch

Last updated: 2021-10-05

## Explanation - Percentile classes

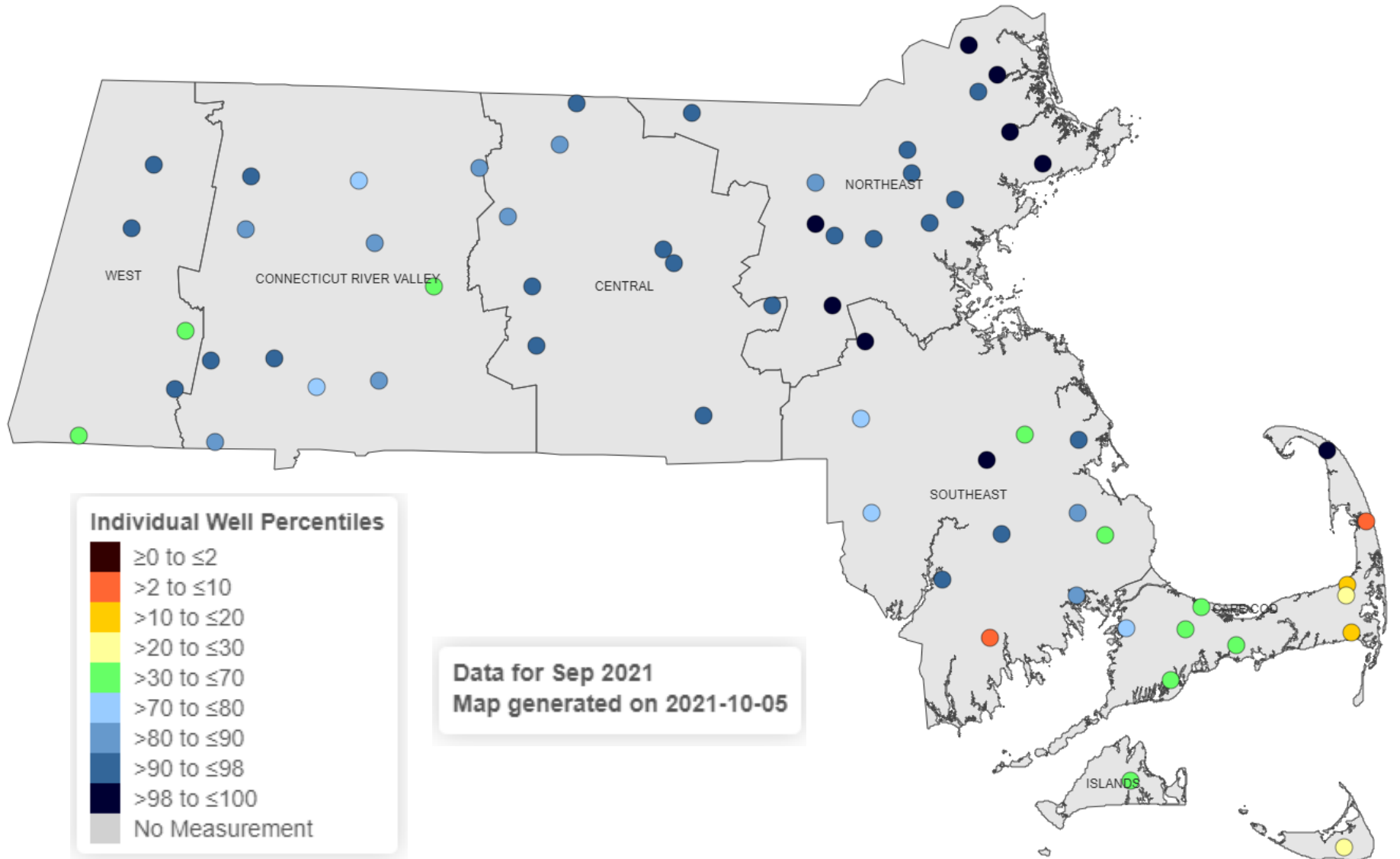
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest	Flow
Much below Normal	Below normal	Normal	Above normal	Much above normal			

# 7-Day Streamflow Conditions Jan. 1 - Sept. 30, 2021

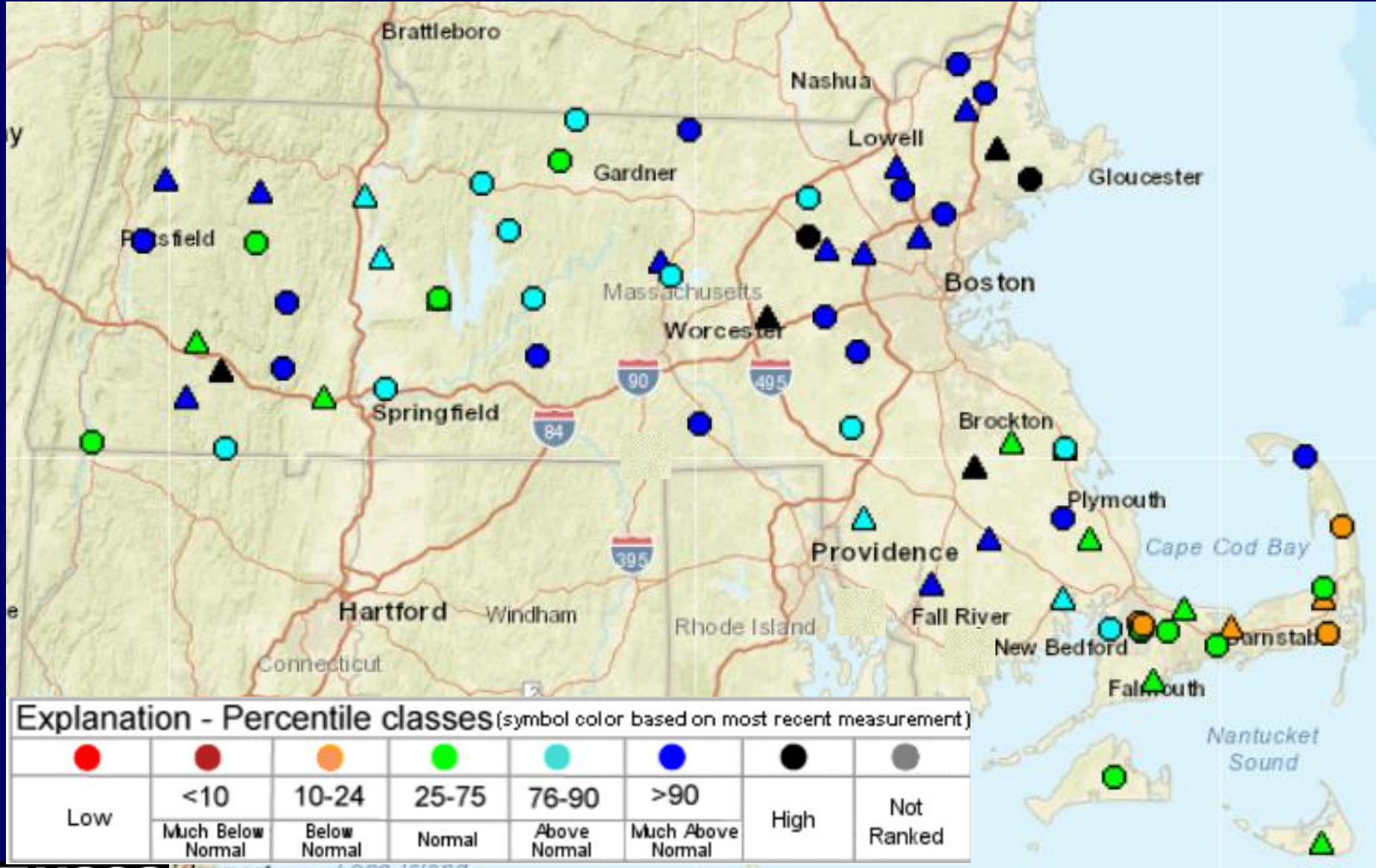


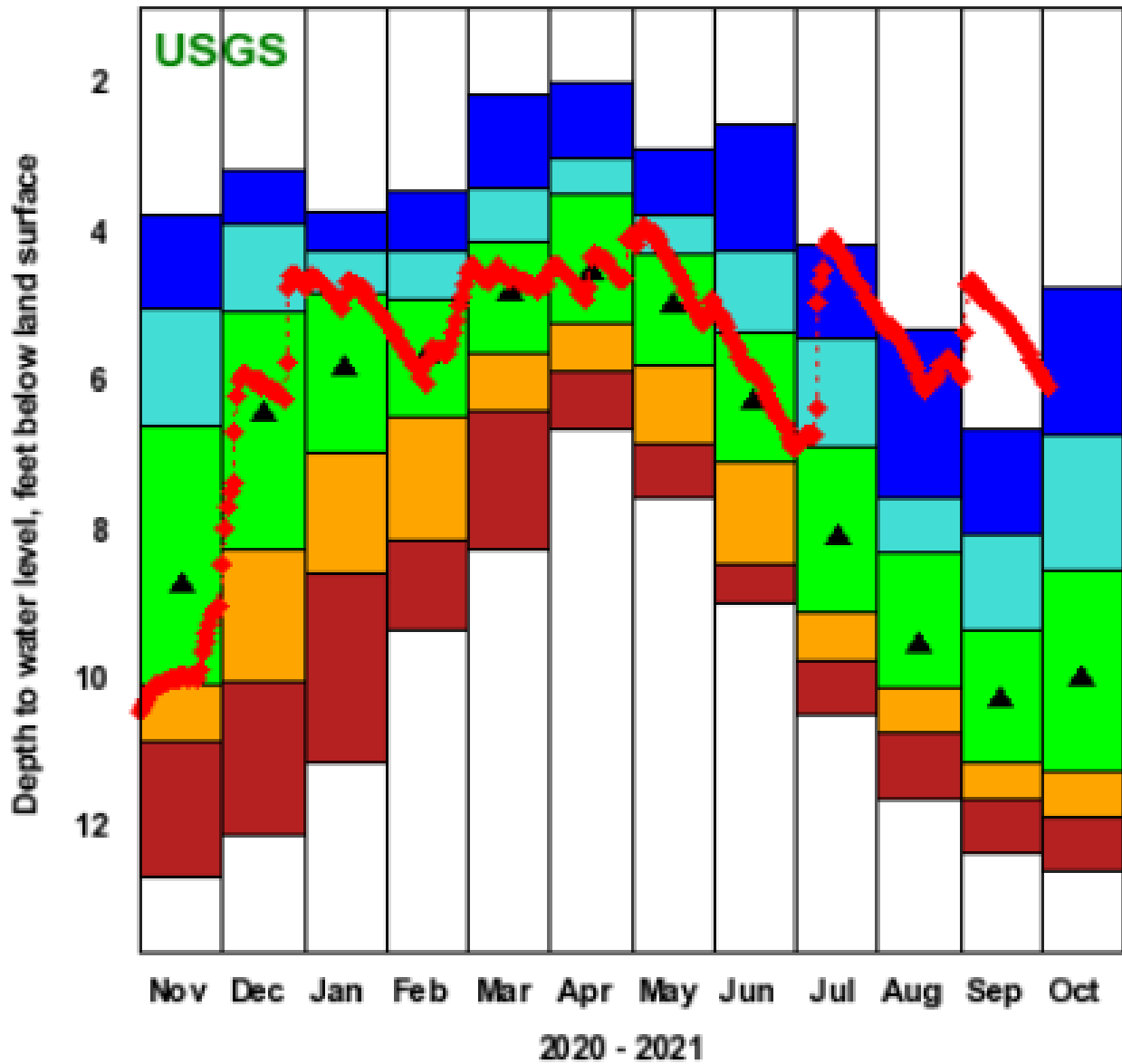
Explanation - Percentile classes						
	<10	10-24	25-75	76-90	>90	
Low	Much below normal	Below normal	Normal	Above normal	Much above normal	High

# Avg. Groundwater Conditions – September 2021



# Groundwater Conditions – October 4, 2021





Plot created 10/05/21 08:14

Explanation - Percentile Classes

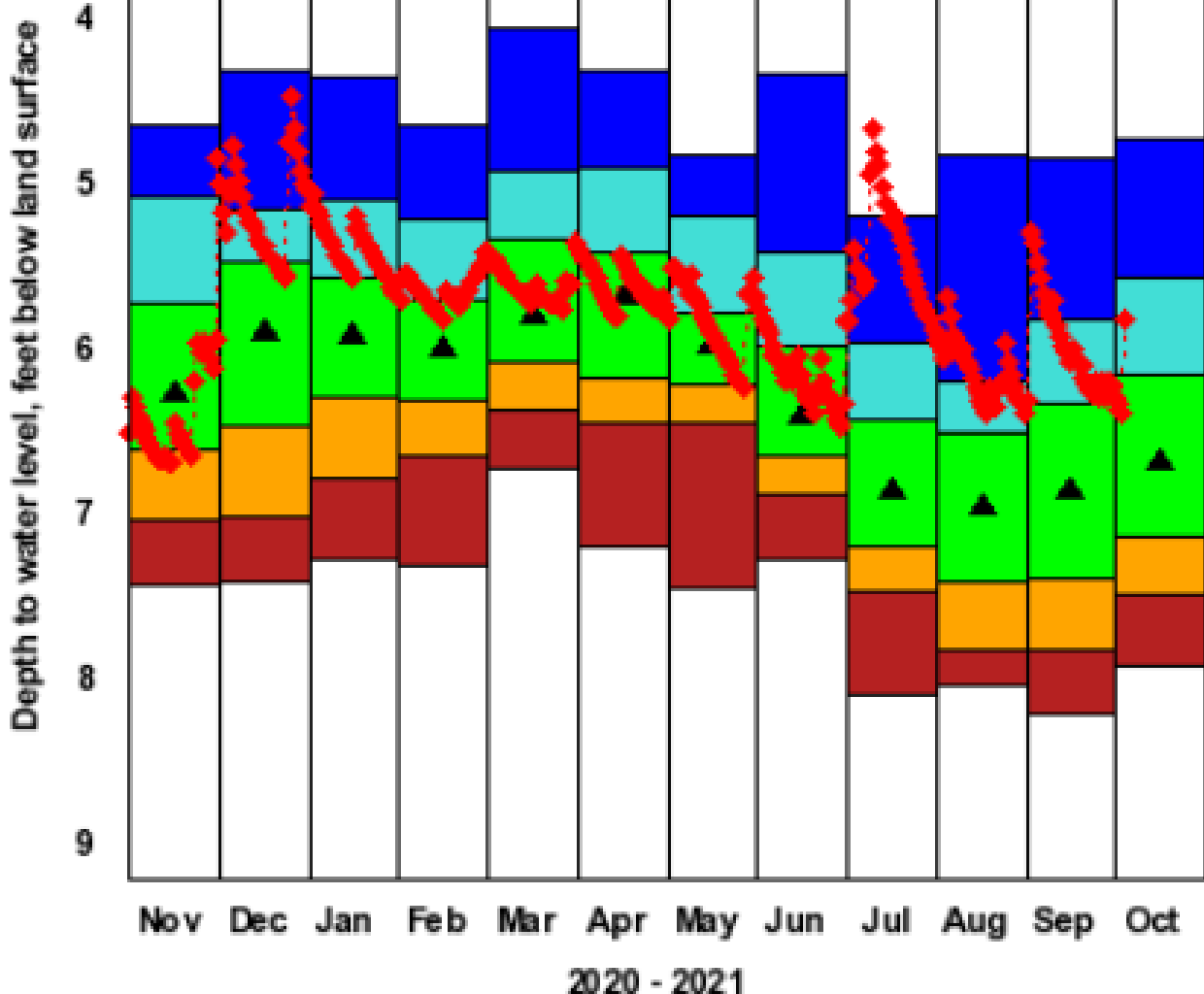
- ◆ Data Point
- < 10
- 10 - 24
- 25 - 75
- 76 - 90
- > 90
- ▲ Monthly Median

## Period of Record

All data  
July 1959 – present

Continuous data  
Oct. 1984 - present

USGS



Pbt created 10/05/21 08:13

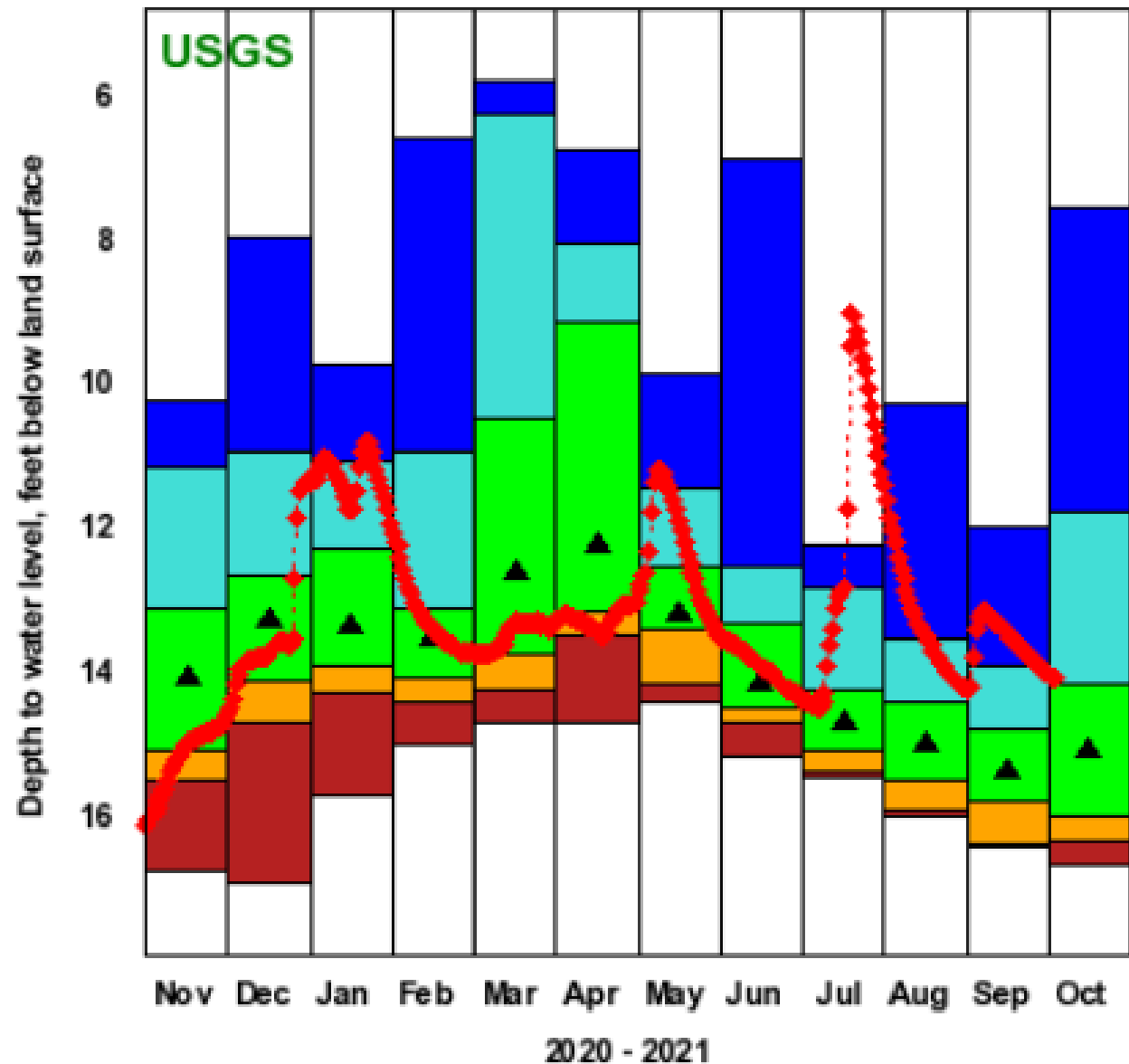
Explanation - Percentile Classes

- ◆ Data Point
- <10
- 10-24
- 25-75
- 76-90
- >90
- ▲ Monthly Median

## Period of Record

All data  
Dec. 1964 – present

Continuous data  
Aug. 2001 - present



Plot created 10/05/21 08:14

Explanation - Percentile Classes

◆ Data Point

● <10   ● 10-24   ● 25-75   ● 76-90   ● >90

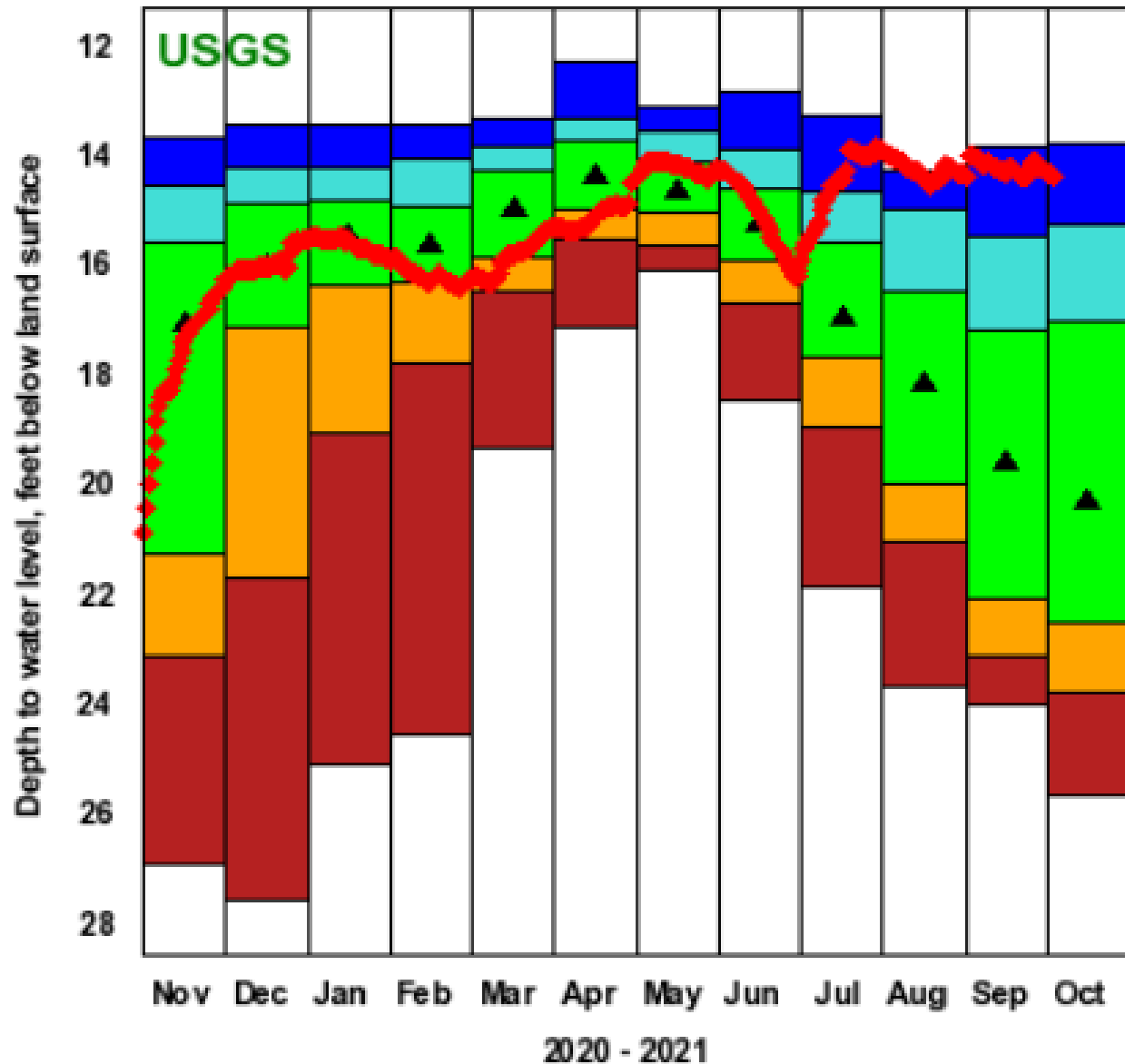
▲ Monthly Median

## Period of Record

All data  
Jan. 1984 – present

Continuous data  
May 2012 - present





Plot created 10/05/21 08:14

Explanation - Percentile Classes

◆ Data Point

● <10   ● 10-24   ● 25-75   ● 76-90   ● >90

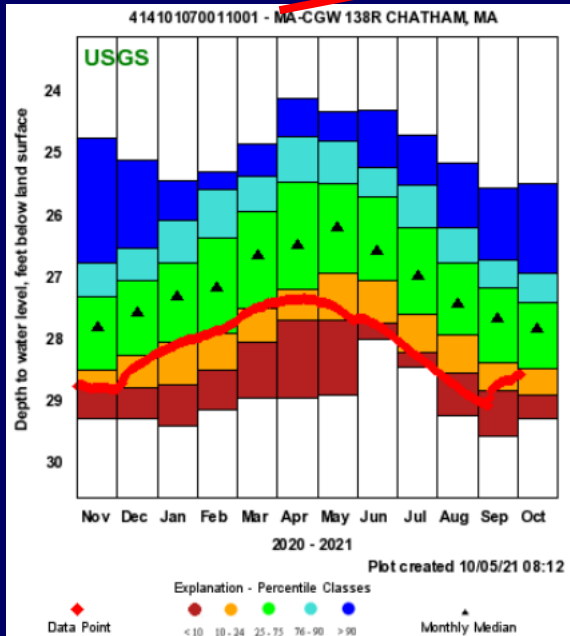
▲ Monthly Median

## Period of Record

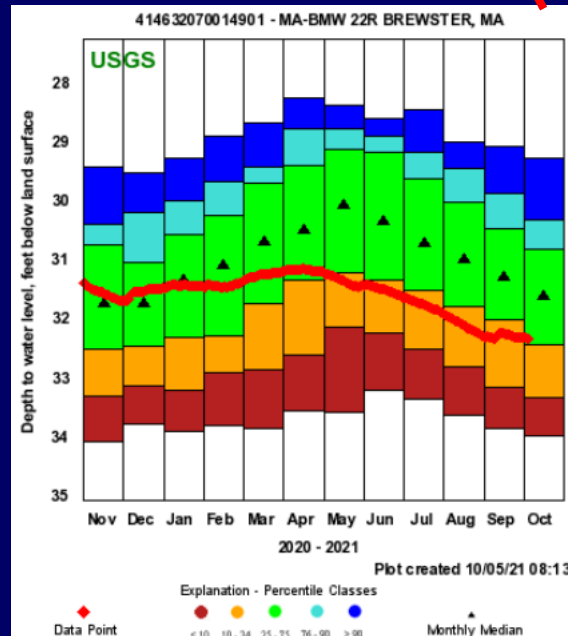
All data  
Aug. 1963 – present

Continuous data  
Oct. 1984 - present

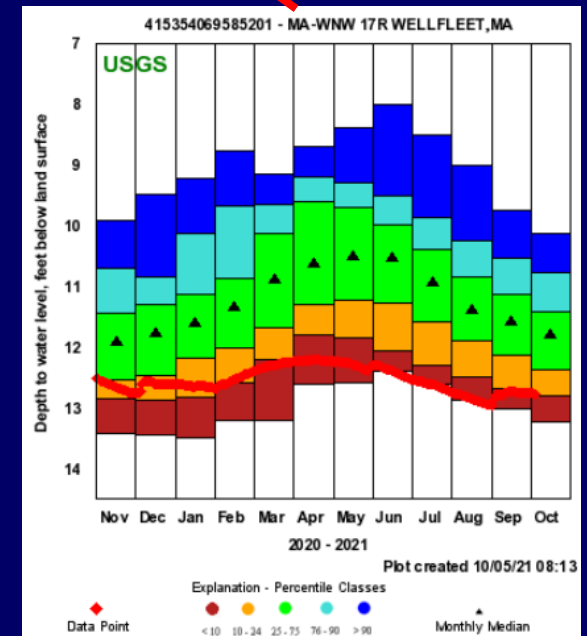
# Daily GW Nov. 2020 – Oct. 2021



Period of Record  
All data  
Nov. 1962 – present



Period of Record  
All data  
Nov. 1962 – present

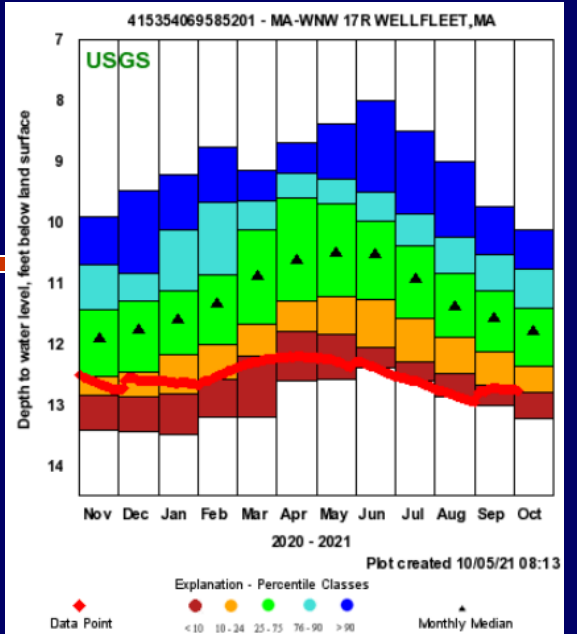
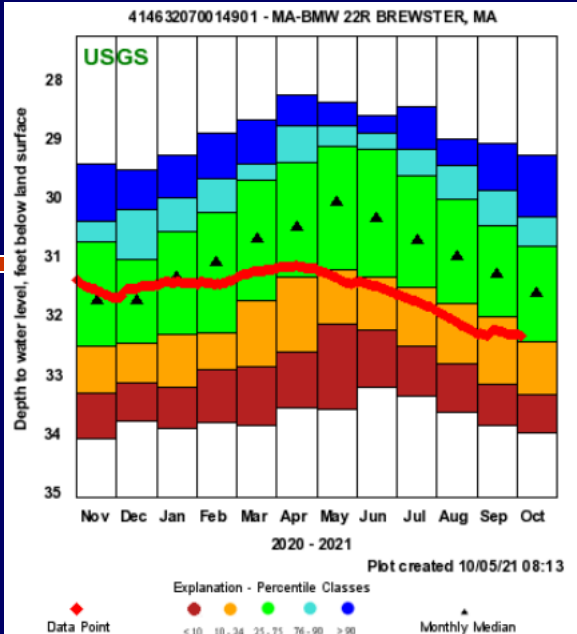
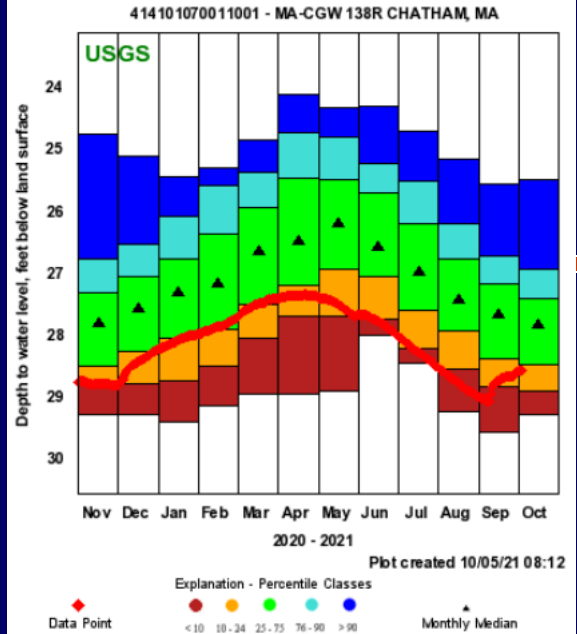


Period of Record  
All data  
Nov. 1962 – present

Continuous data  
May 2012 - present

Continuous data  
Dec. 2001 - present

Continuous data  
May 2012 - present



Period of Record  
All data  
 Nov. 1962 – present

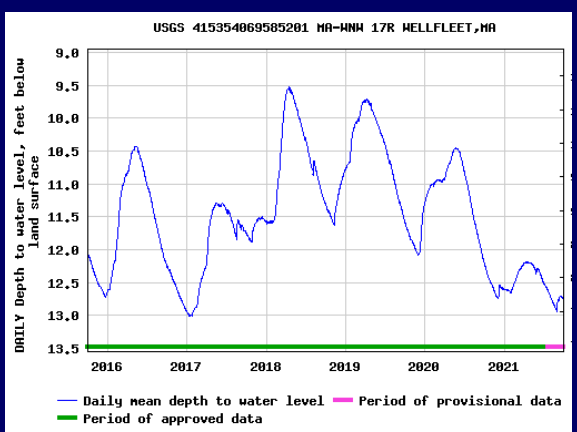
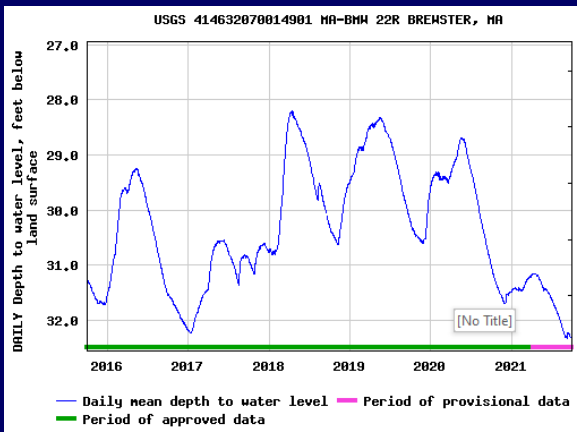
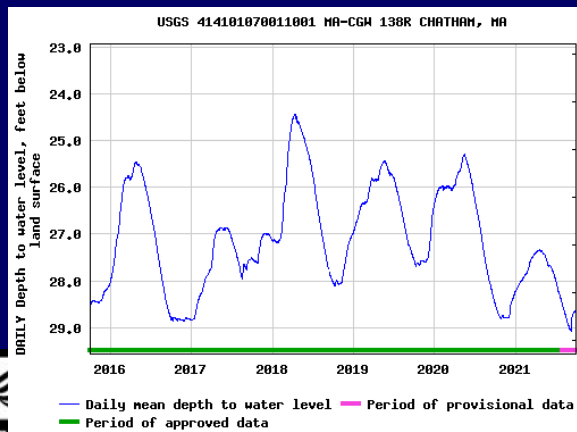
Continuous data  
 May 2012 - present

Period of Record  
All data  
 Nov. 1962 – present

Continuous data  
 Dec. 2001 - present

Period of Record  
All data  
 Nov. 1962 – present

Continuous data  
 May 2012 - present



# Questions

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