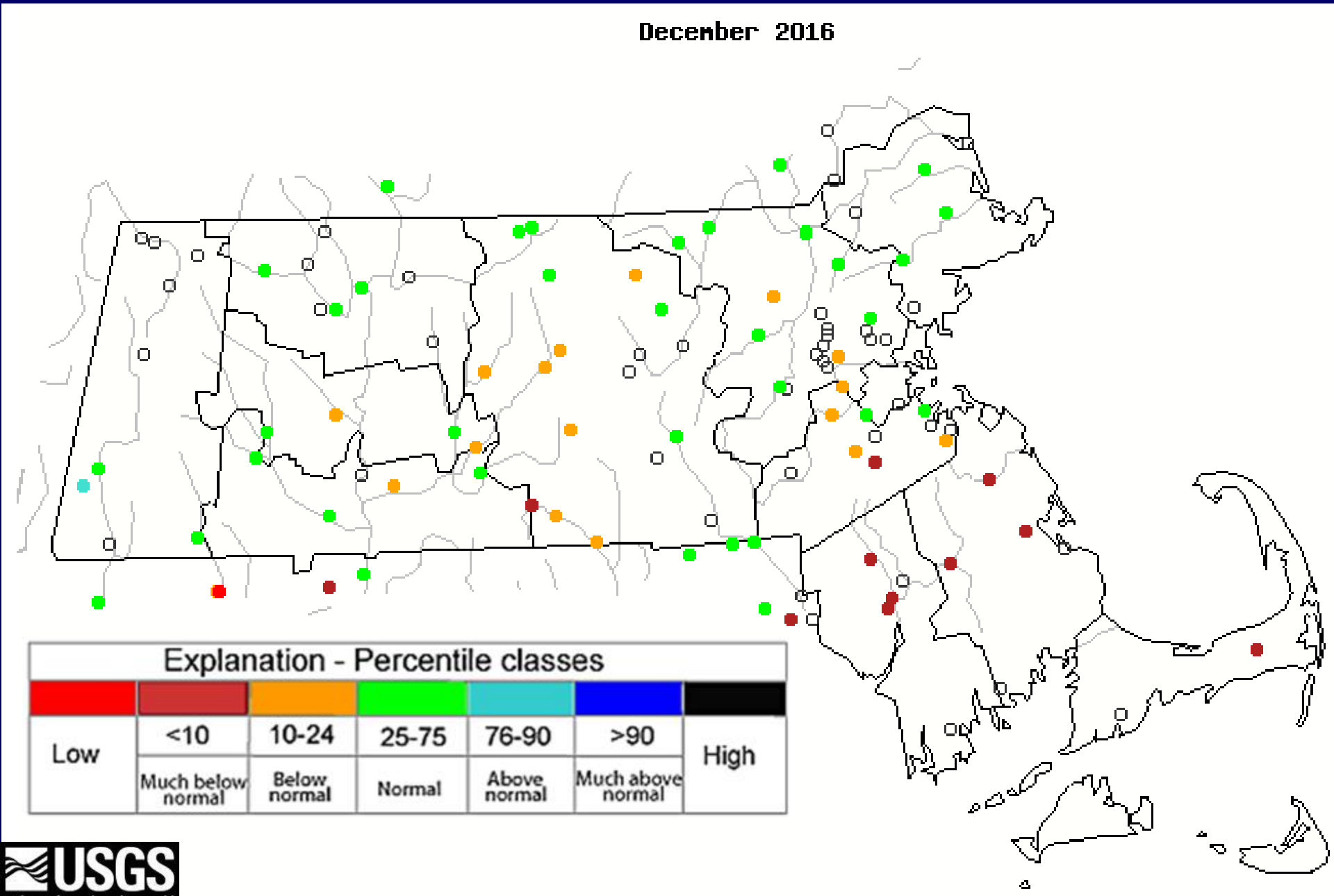
Streamflow and Groundwater Conditions in Massachusetts

March 7, 2017

Gardner Bent
U.S. Geological Survey
New England Water Science Center
Massachusetts – Rhode Island Office

Average Streamflow Conditions – Dec. 2016



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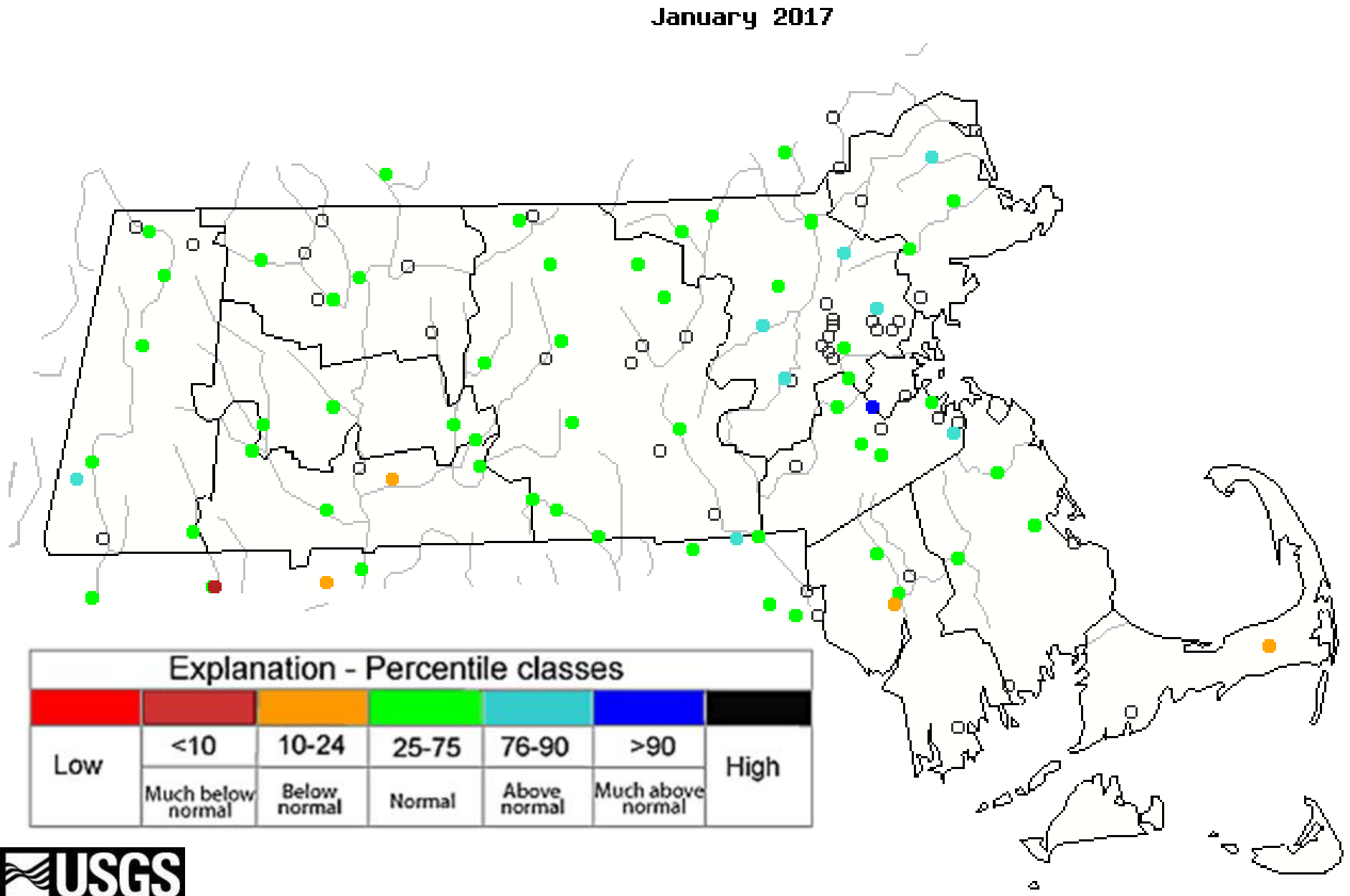
Average Streamflow Conditions – Jan. 2017



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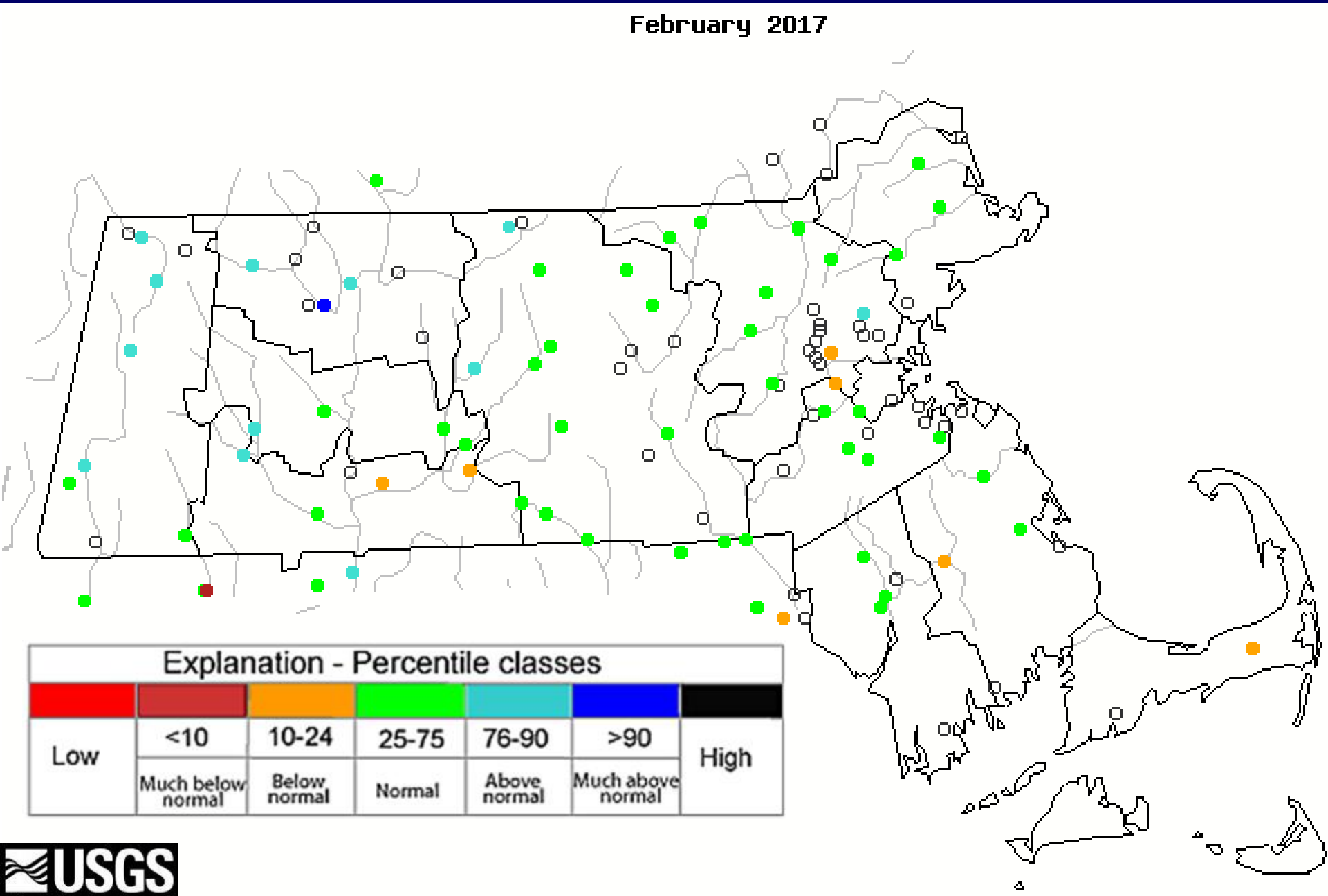
Average Streamflow Conditions – Feb. 2017



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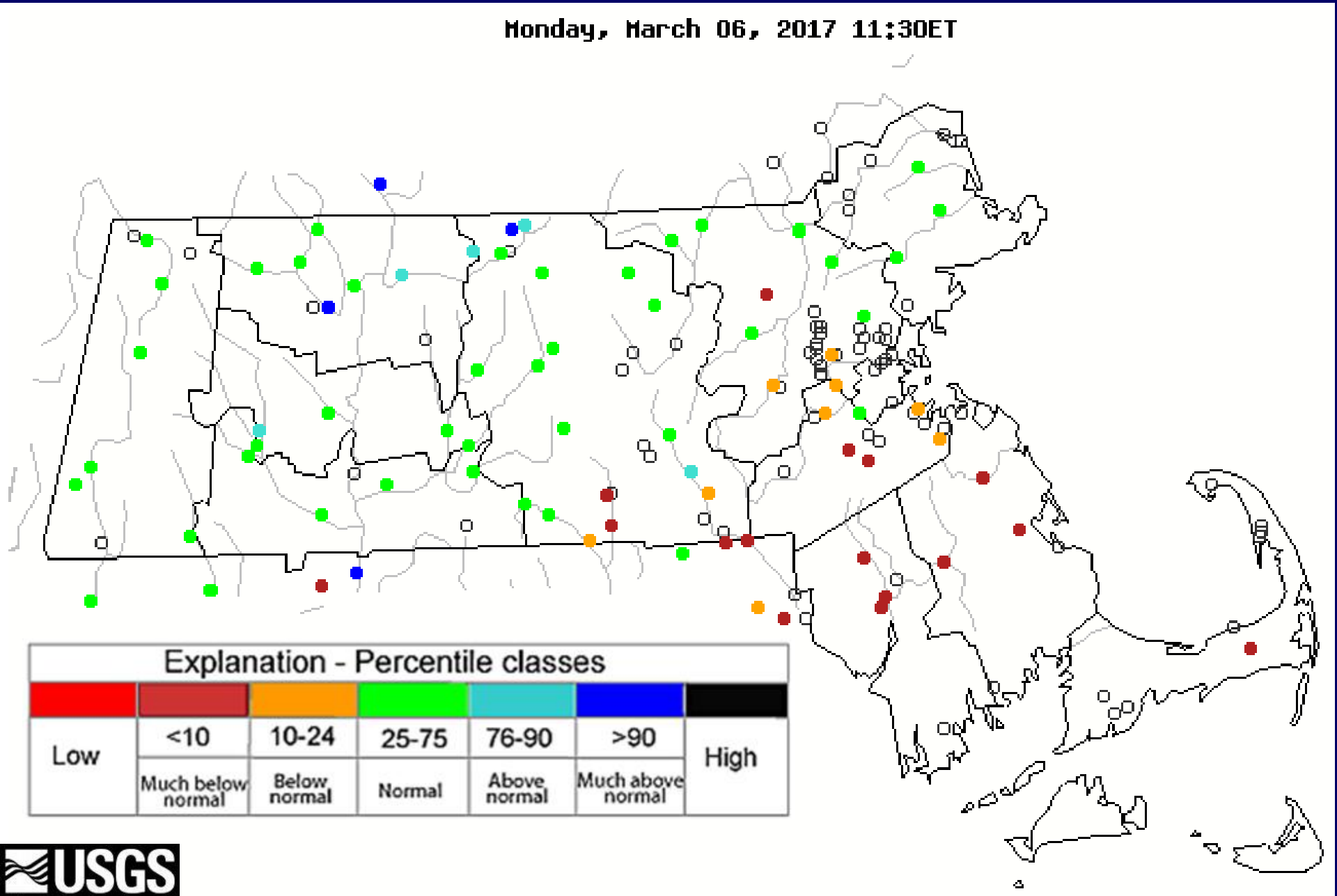
Current Streamflow Conditions – March 6, 2017



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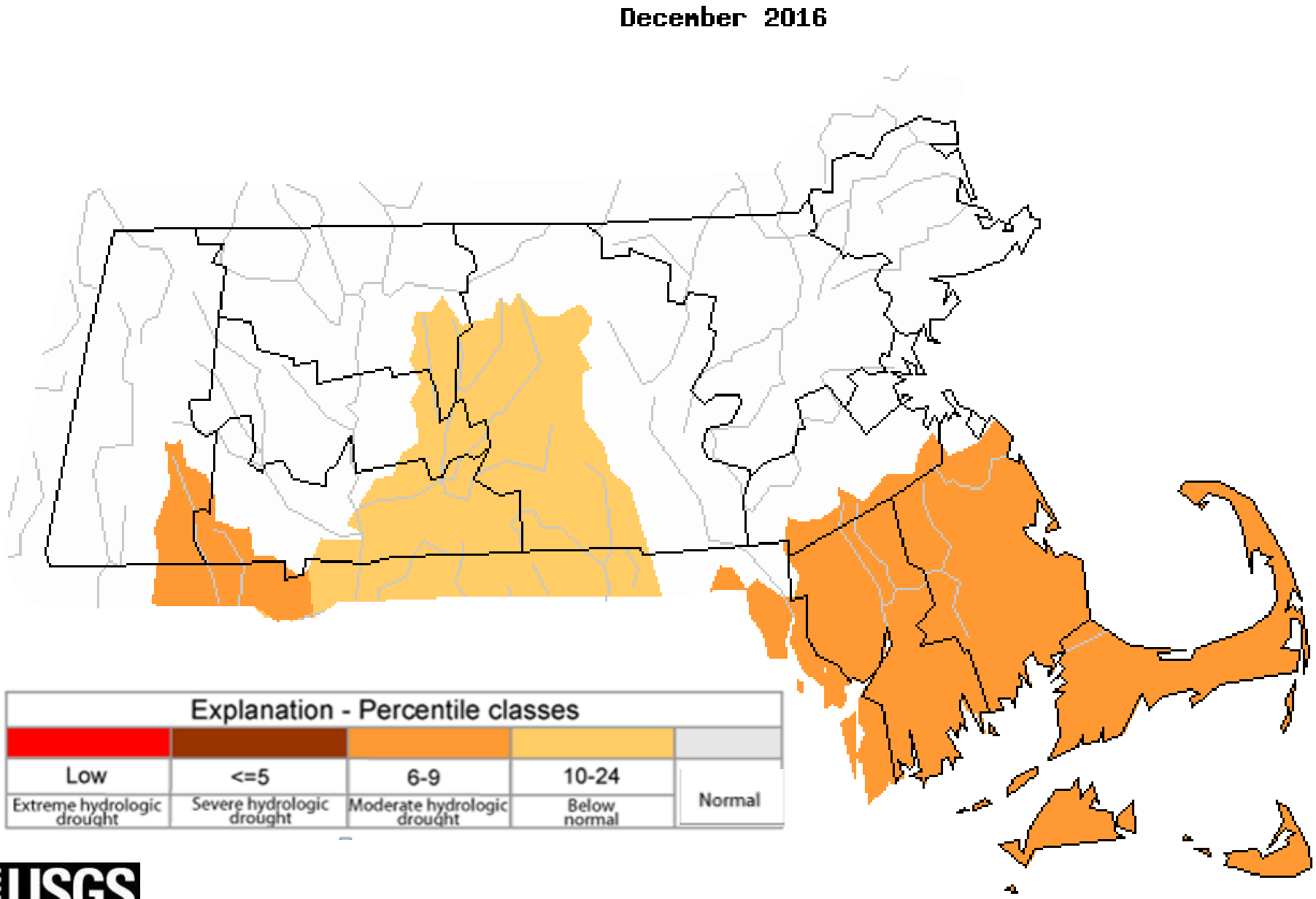
Below normal average monthly streamflow – Dec. 2016



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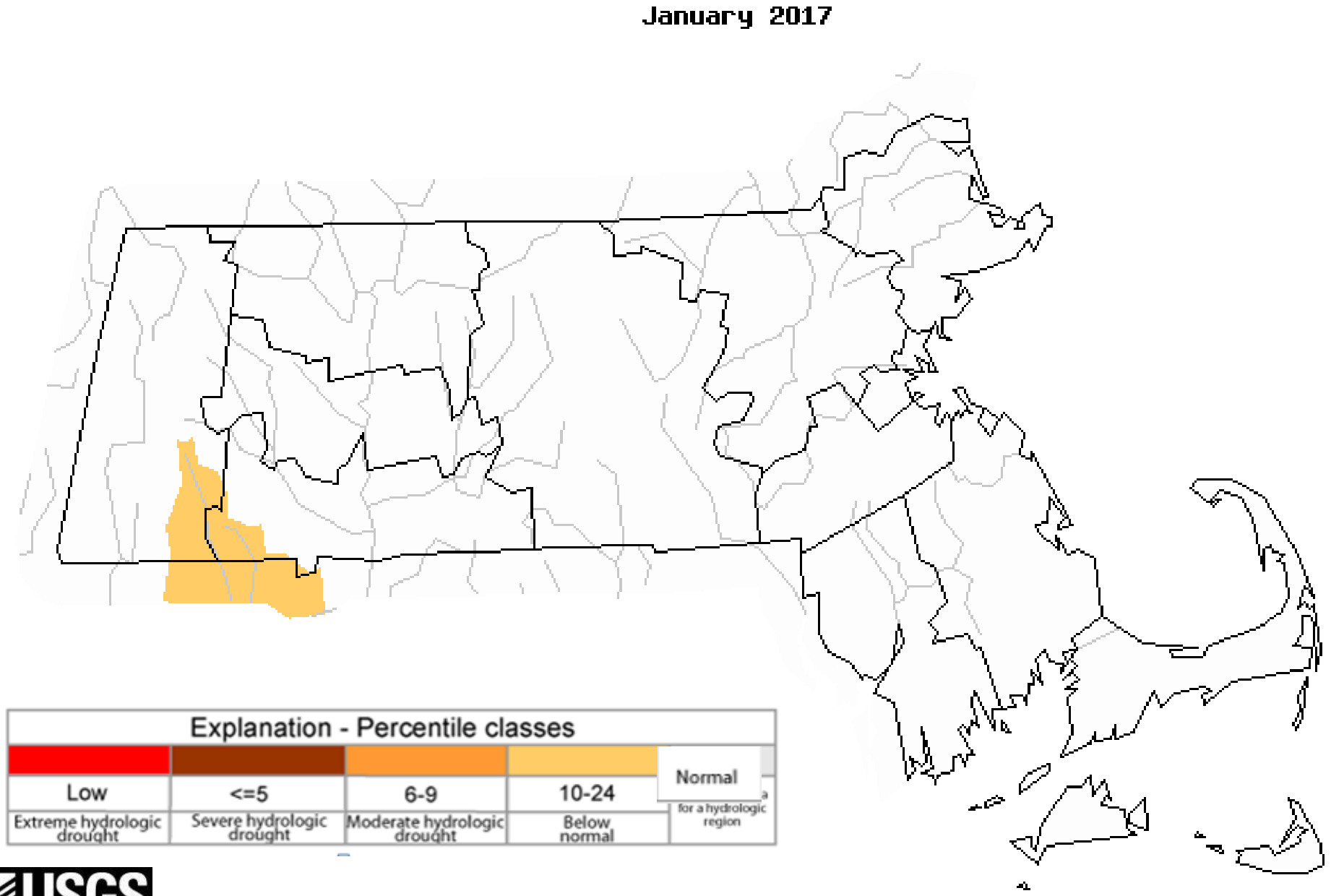
Below normal average monthly streamflow – Jan. 2017



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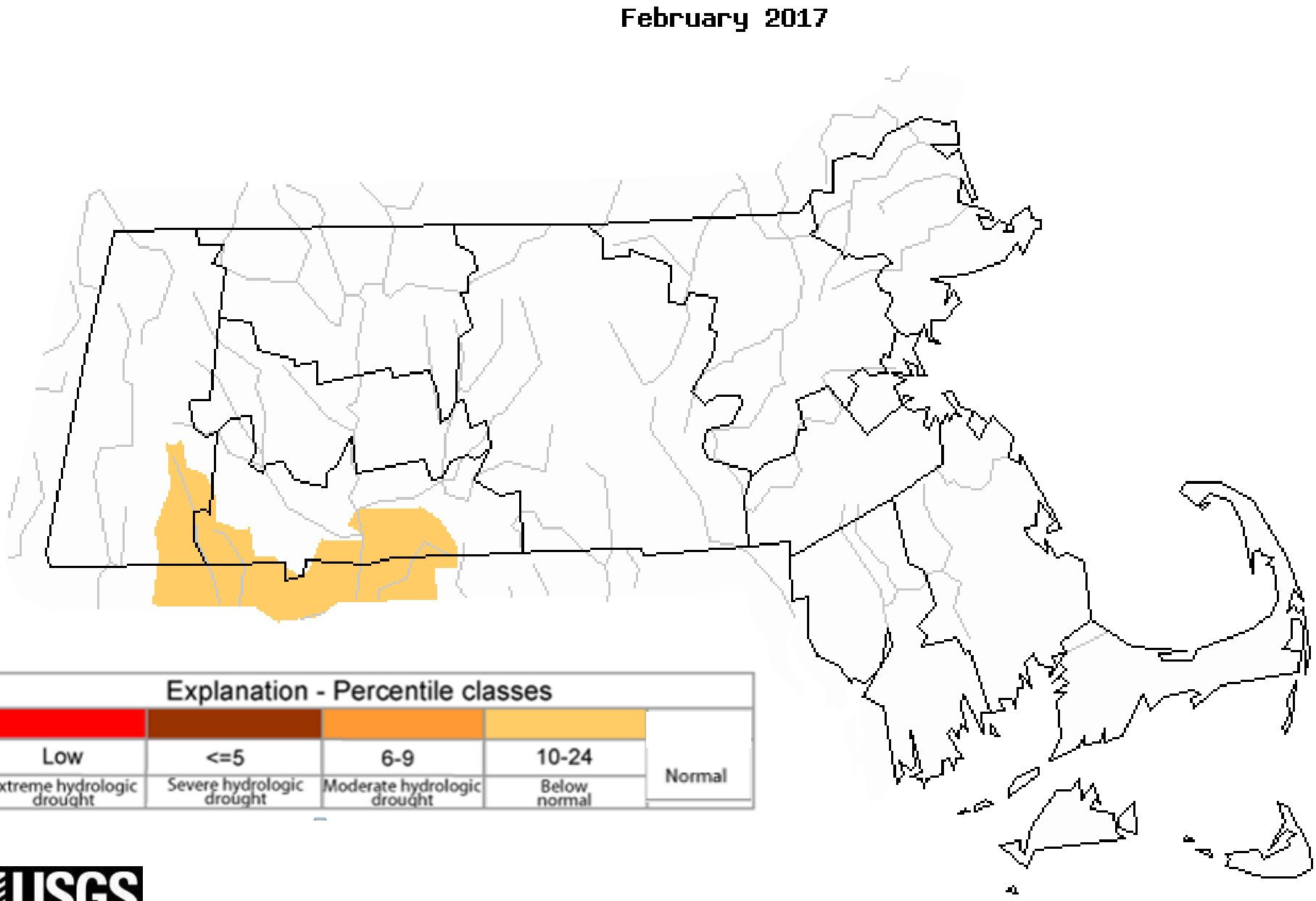
Below normal average monthly streamflow – Feb. 2017



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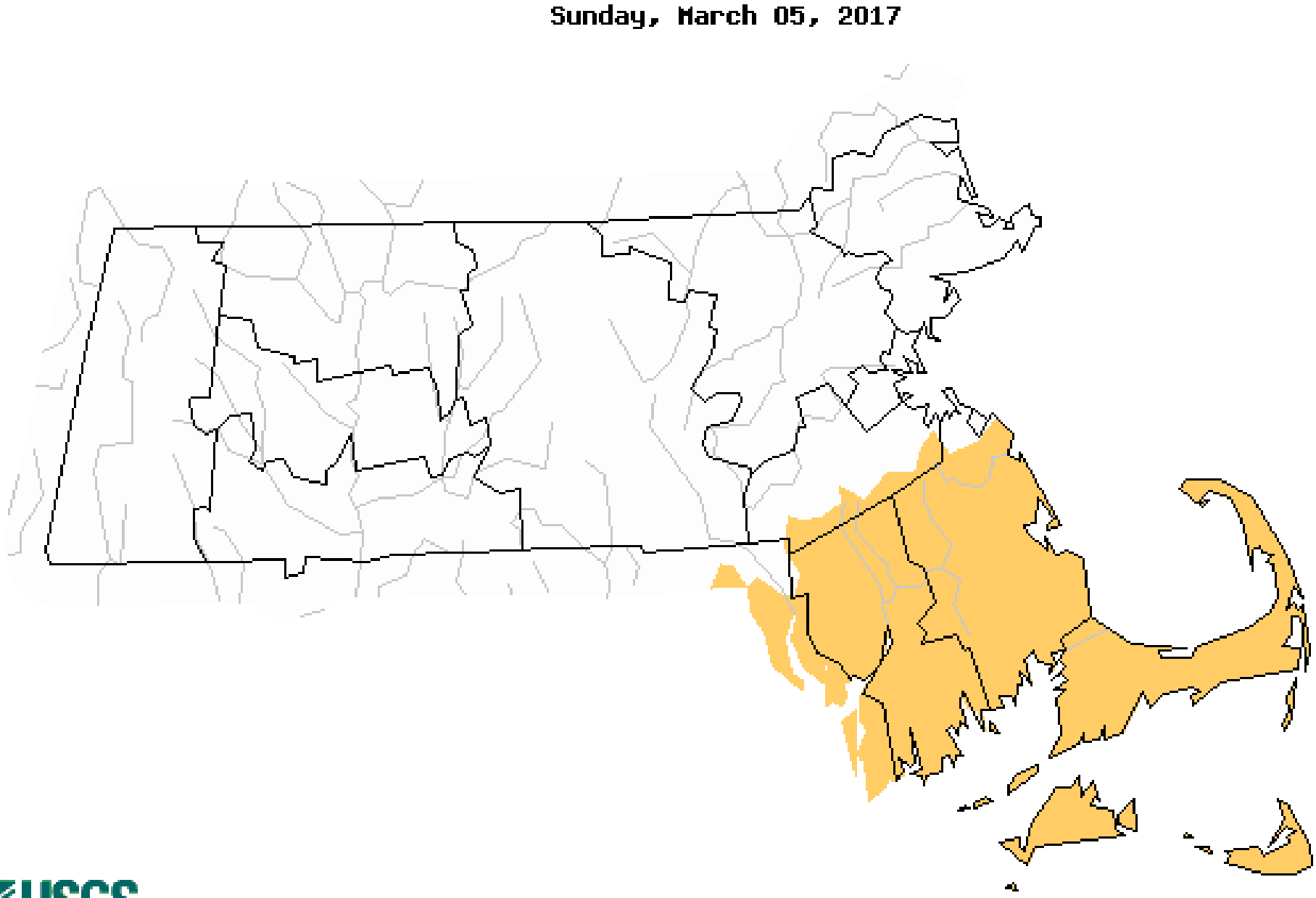
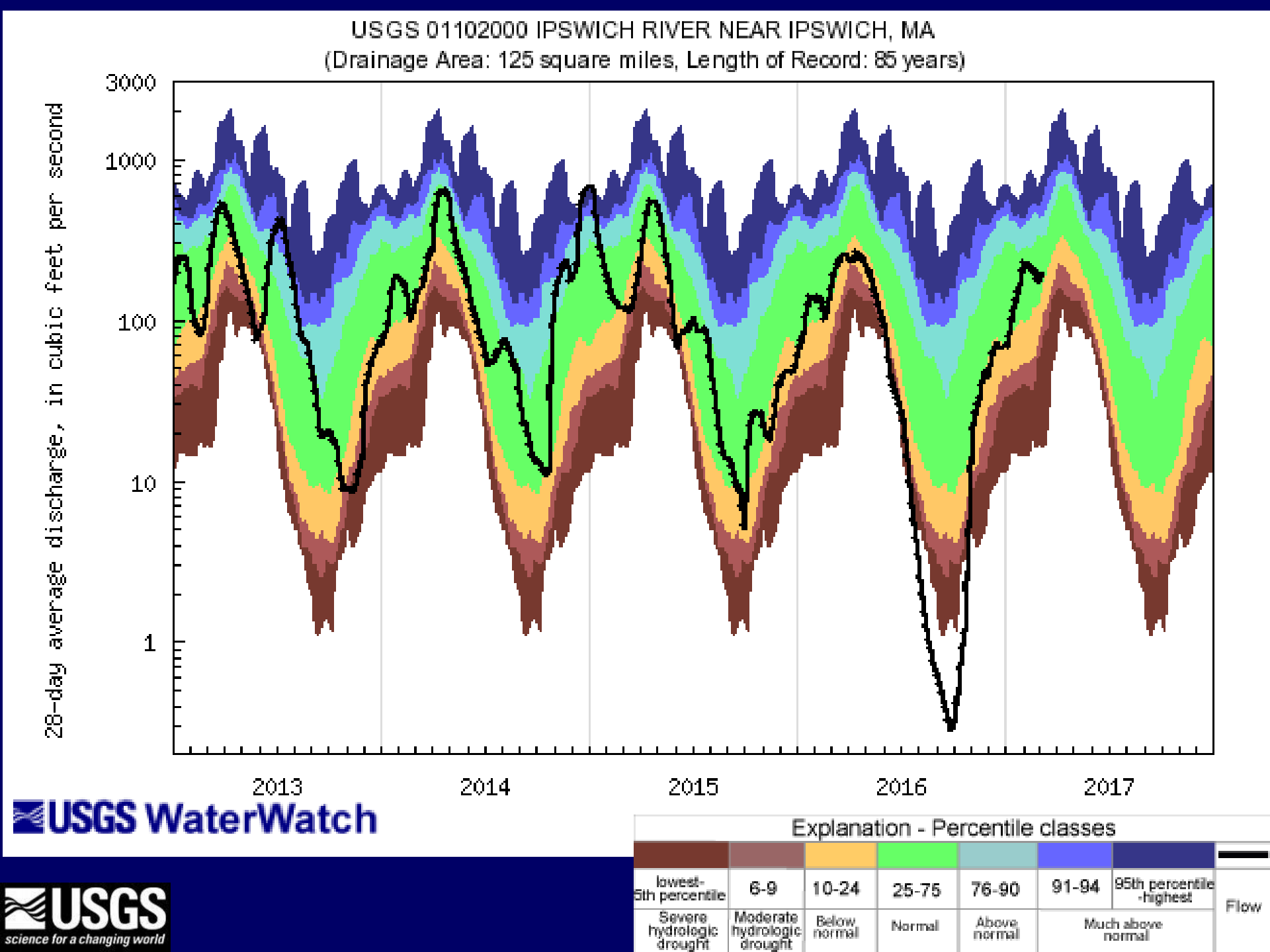
Below normal 7-day average streamflow – current



USGS


USGS 01102000 IPSWICH RIVER NEAR IPSWICH, MA
(Drainage Area: 125 square miles, Length of Record: 85 years)
28-day average discharge, in cubic feet per second
3000
1000
100
10
1
2013
2014
2015
2016
2017
USGS WaterWatch
Explanation - Percentile classes
lowest-5th percentile
6-9
10-24
25-75
76-90
91-94
95th percentile -highest
Flow
Severe hydrologic drought
Moderate hydrologic drought
Below normal
Normal
Above normal
Much above normal
USGS
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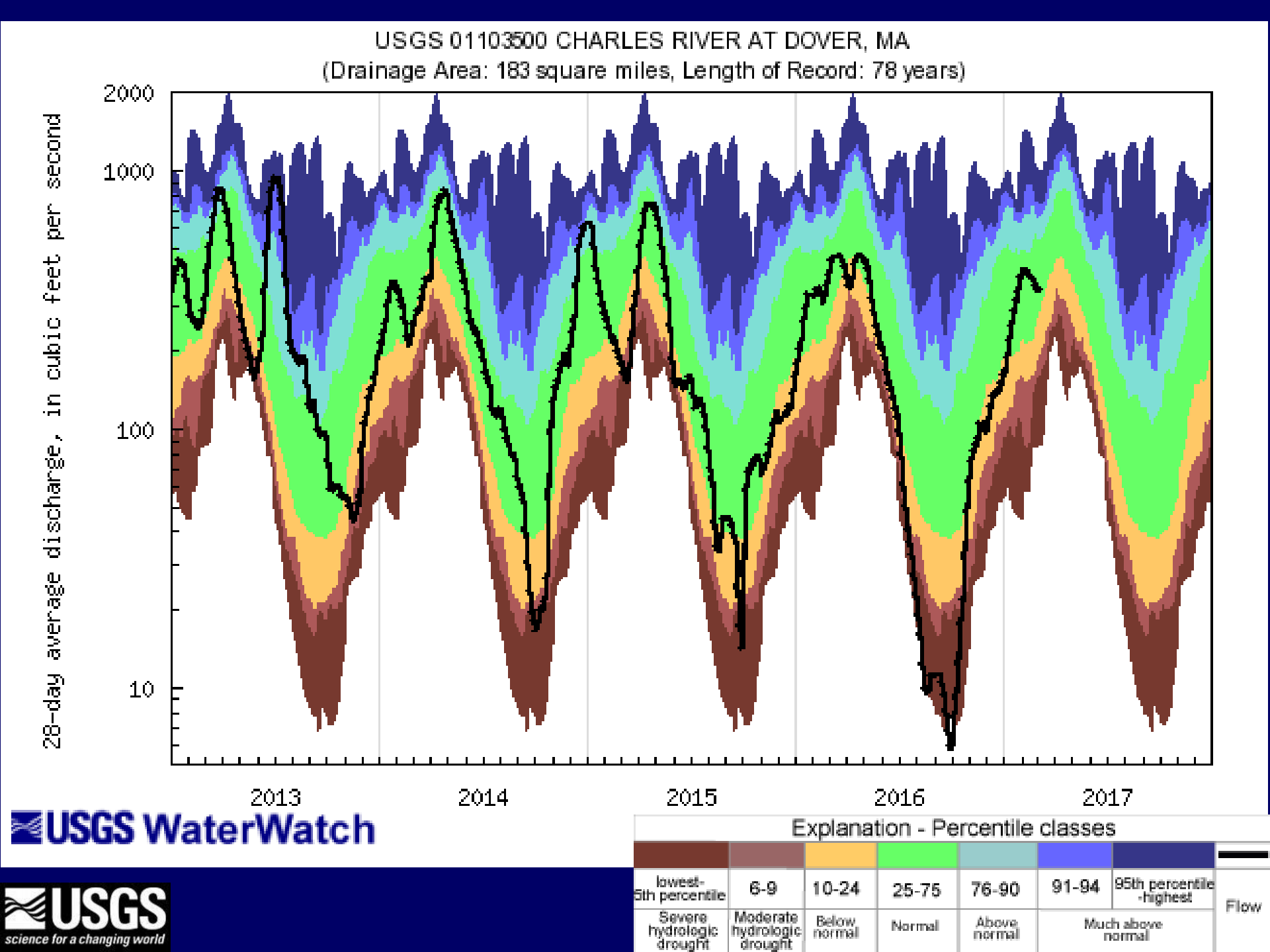
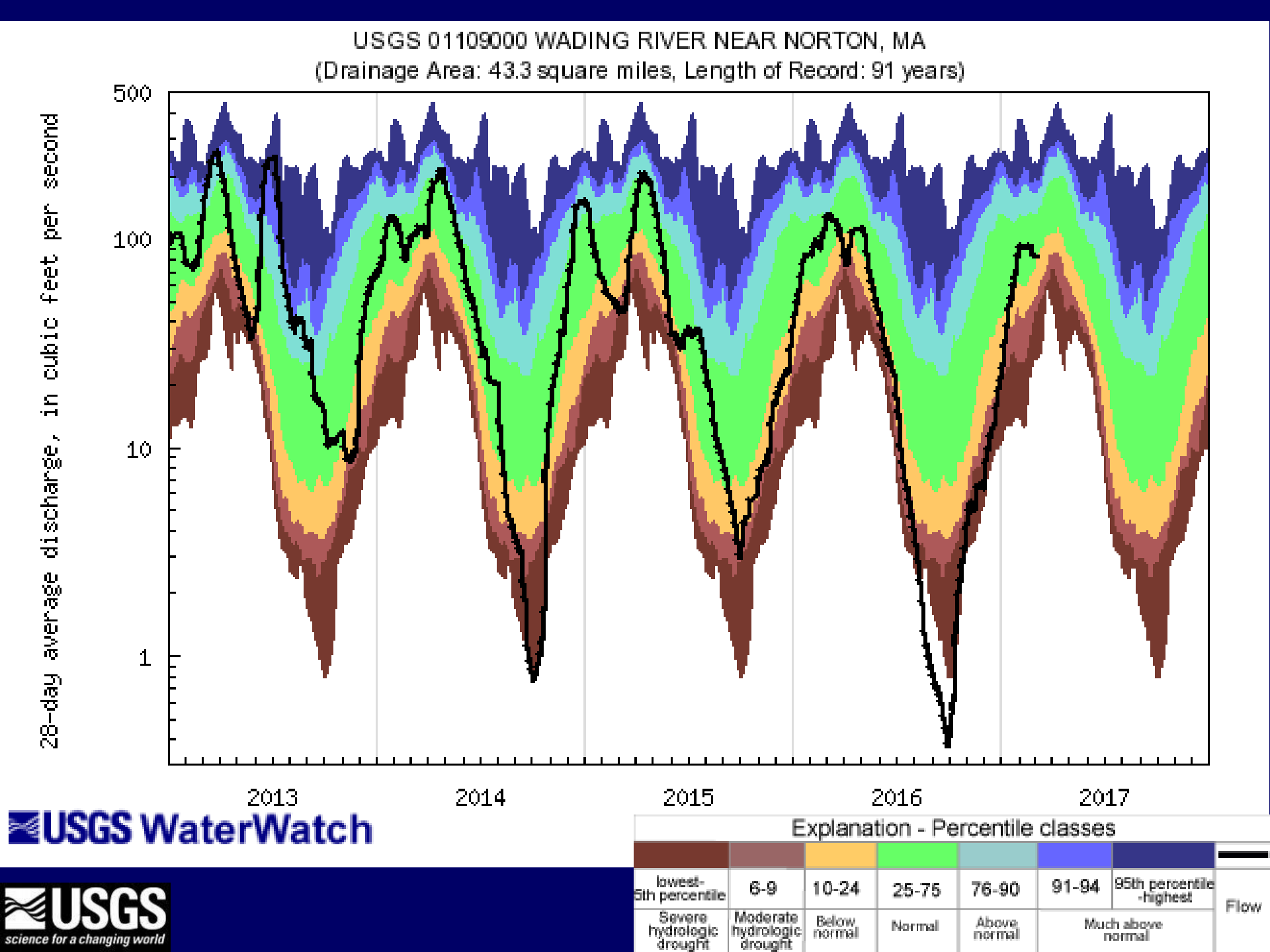

USGS 01103500 CHARLES RIVER AT DOVER, MA
(Drainage Area: 183 square miles, Length of Record: 78 years)
28-day average discharge, in cubic feet per second
2000
1000
100
10
2013
2014
2015
2016
2017
USGS WaterWatch
Explanation - Percentile classes
lowest-5th percentile
6-9
10-24
25-75
76-90
91-94
95th percentile -highest
Flow
Severe hydrologic drought
Moderate hydrologic drought
Below normal
Normal
Above normal
Much above normal
USGS
science for a changing world


USGS 01109000 WADING RIVER NEAR NORTON, MA
(Drainage Area: 43.3 square miles, Length of Record: 91 years)
28-day average discharge, in cubic feet per second
500
100
10
1
2013
2014
2015
2016
2017
USGS WaterWatch
Explanation - Percentile classes
lowest-5th percentile
6-9
10-24
25-75
76-90
91-94
95th percentile -highest
Flow
Severe hydrologic drought
Moderate hydrologic drought
Below normal
Normal
Above normal
Much above normal
USGS
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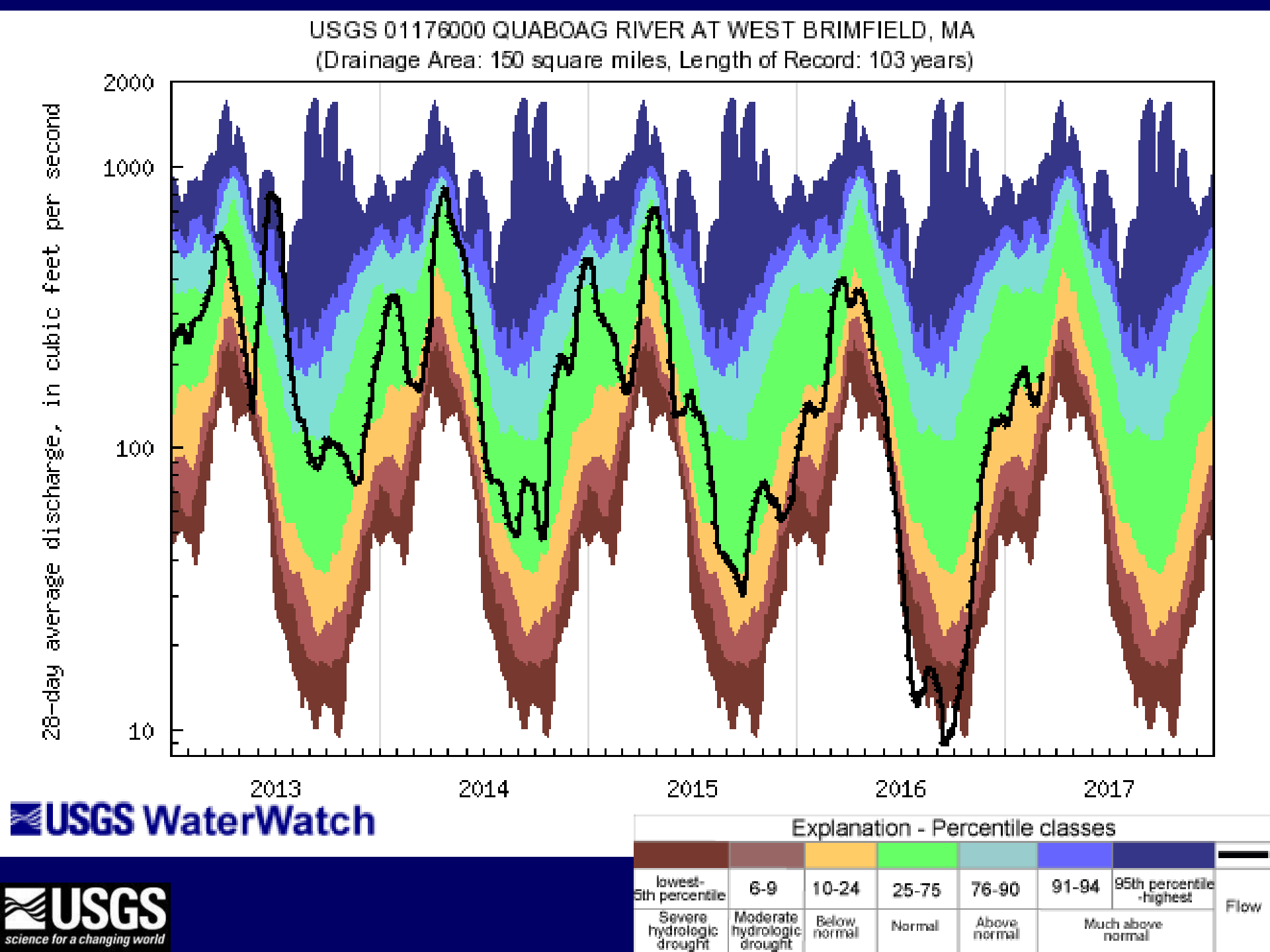
USGS 01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA
(Drainage Area: 150 square miles, Length of Record: 103 years)
28-day average discharge, in cubic feet per second
2000
1000
100
10
2013
2014
2015
2016
2017
USGS WaterWatch
Explanation - Percentile classes
lowest-5th percentile
6-9
10-24
25-75
76-90
91-94
95th percentile -highest
Flow
Severe hydrologic drought
Moderate hydrologic drought
Below normal
Normal
Above normal
Much above normal
USGS
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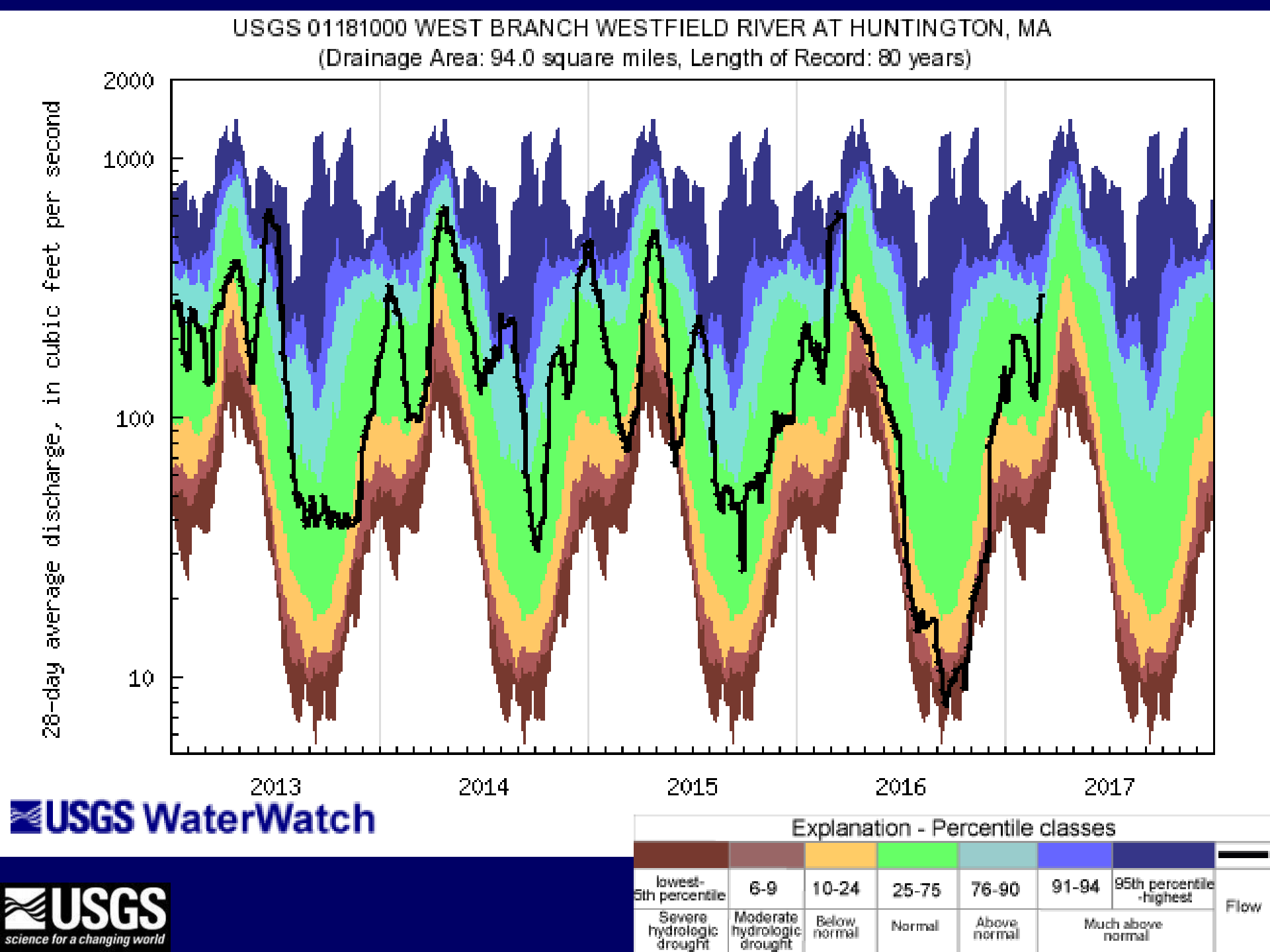
USGS 01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA
(Drainage Area: 94.0 square miles, Length of Record: 80 years)
28-day average discharge, in cubic feet per second
2000
1000
100
10
2013
2014
2015
2016
2017
USGS WaterWatch
Explanation - Percentile classes
lowest-5th percentile
6-9
10-24
25-75
76-90
91-94
95th percentile -highest
Flow
Severe hydrologic drought
Moderate hydrologic drought
Below normal
Normal
Above normal
Much above normal
USGS
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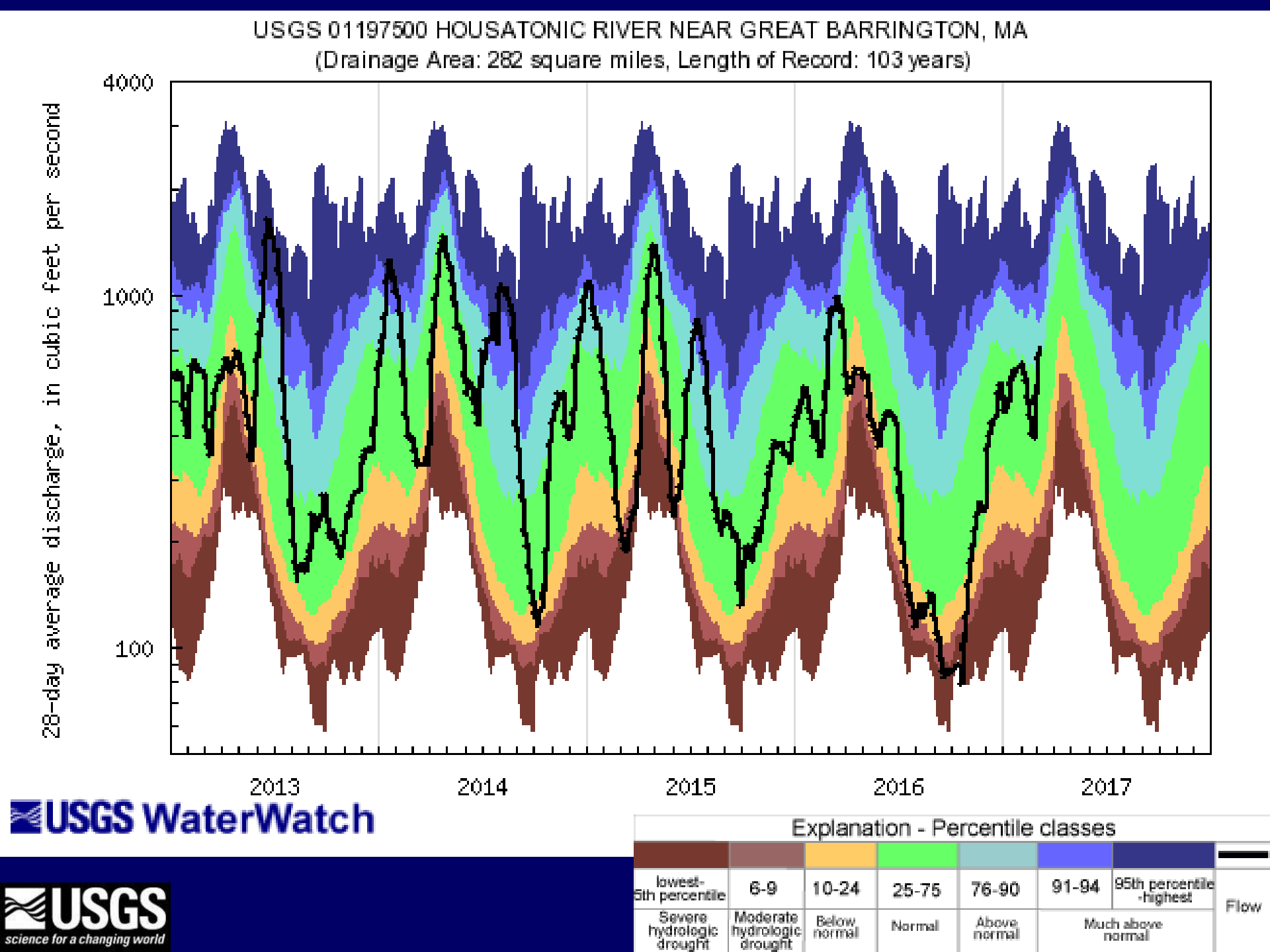
USGS 01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA
(Drainage Area: 282 square miles, Length of Record: 103 years)
28-day average discharge, in cubic feet per second
4000
1000
100
2013
2014
2015
2016
2017
USGS WaterWatch
Explanation - Percentile classes
lowest-5th percentile
6-9
10-24
25-75
76-90
91-94
95th percentile -highest
Flow
Severe hydrologic drought
Moderate hydrologic drought
Below normal
Normal
Above normal
Much above normal
USGS
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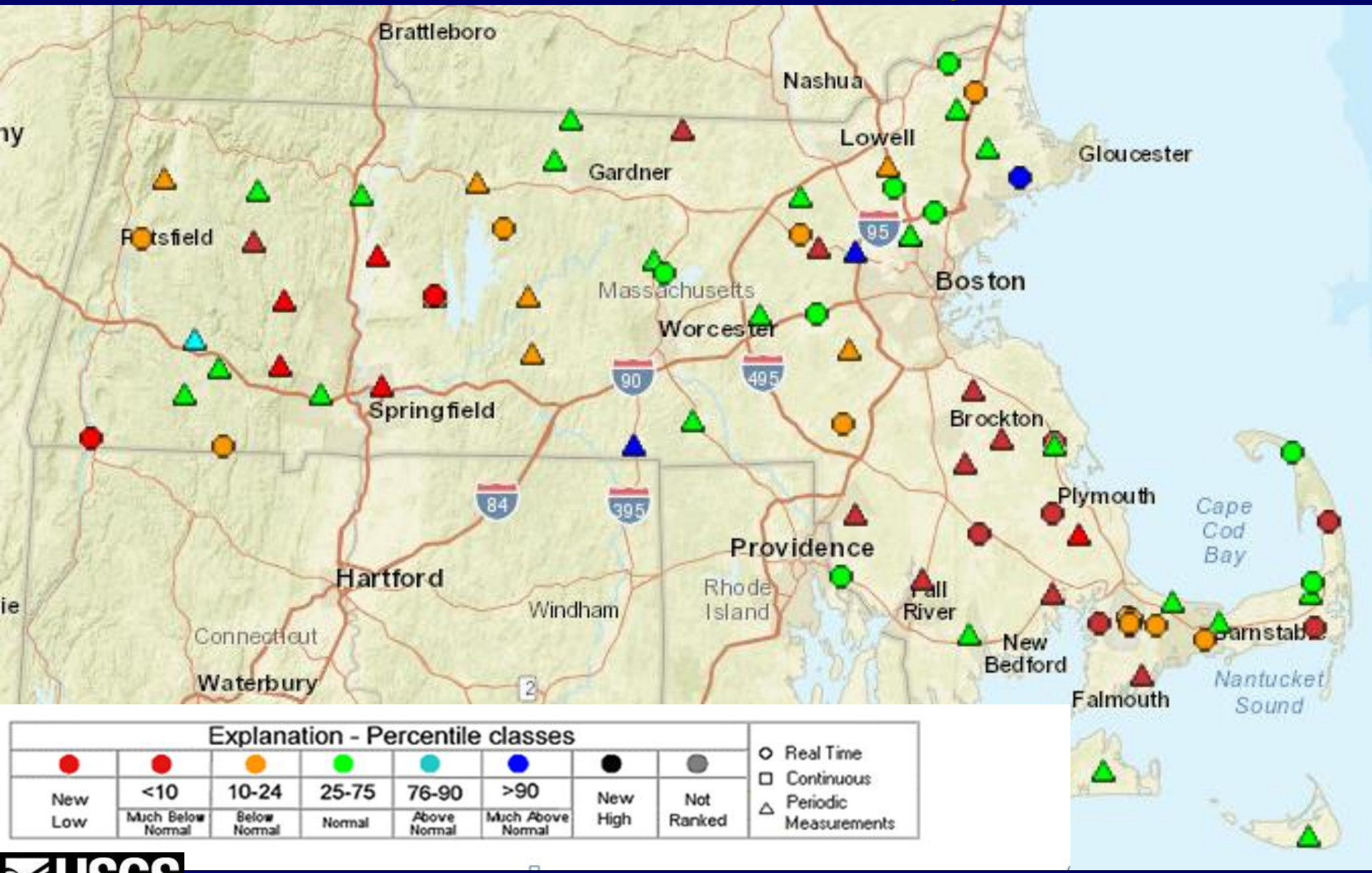
Groundwater Conditions During Dec. 2016



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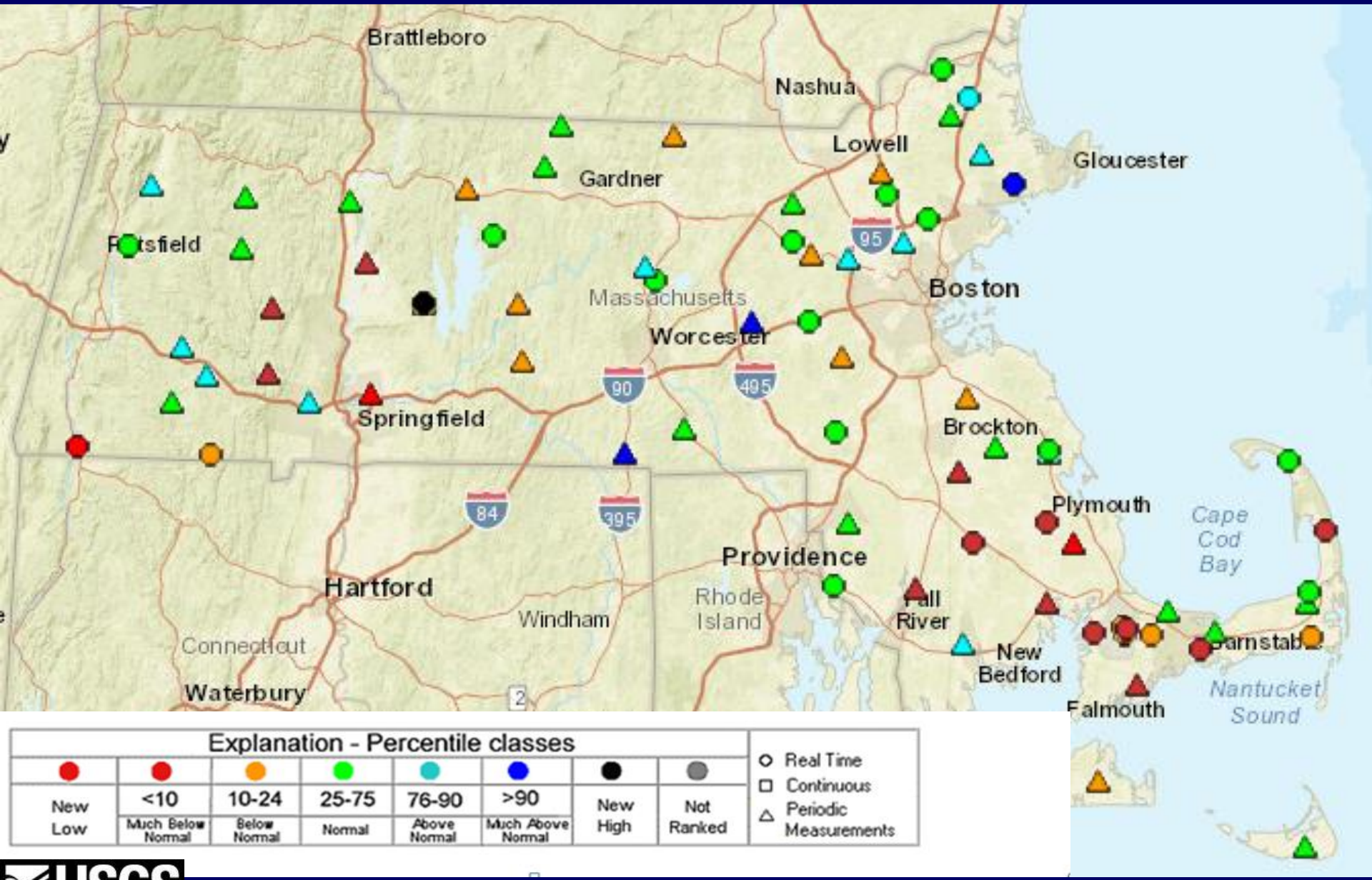
Groundwater Conditions During Jan. 2017



Explanation - Percentile classes								
								○ Real Time
New Low	<10 Much Below Normal	10-24 Below Normal	25-75 Normal	76-90 Above Normal	>90 Much Above Normal	New High	Not Ranked	□ Continuous
								△ Periodic Measurements

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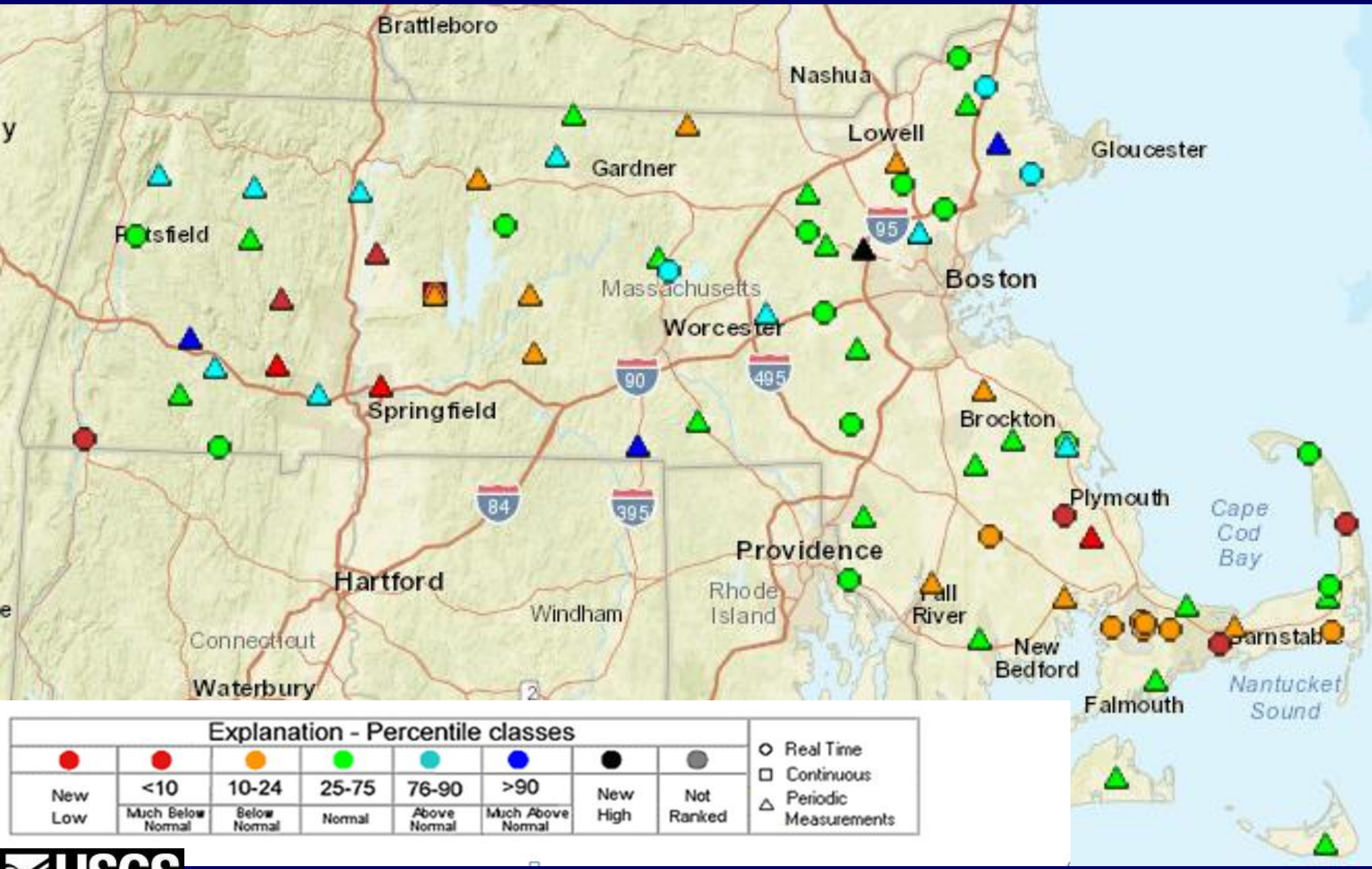
Groundwater Conditions During Feb. 2017



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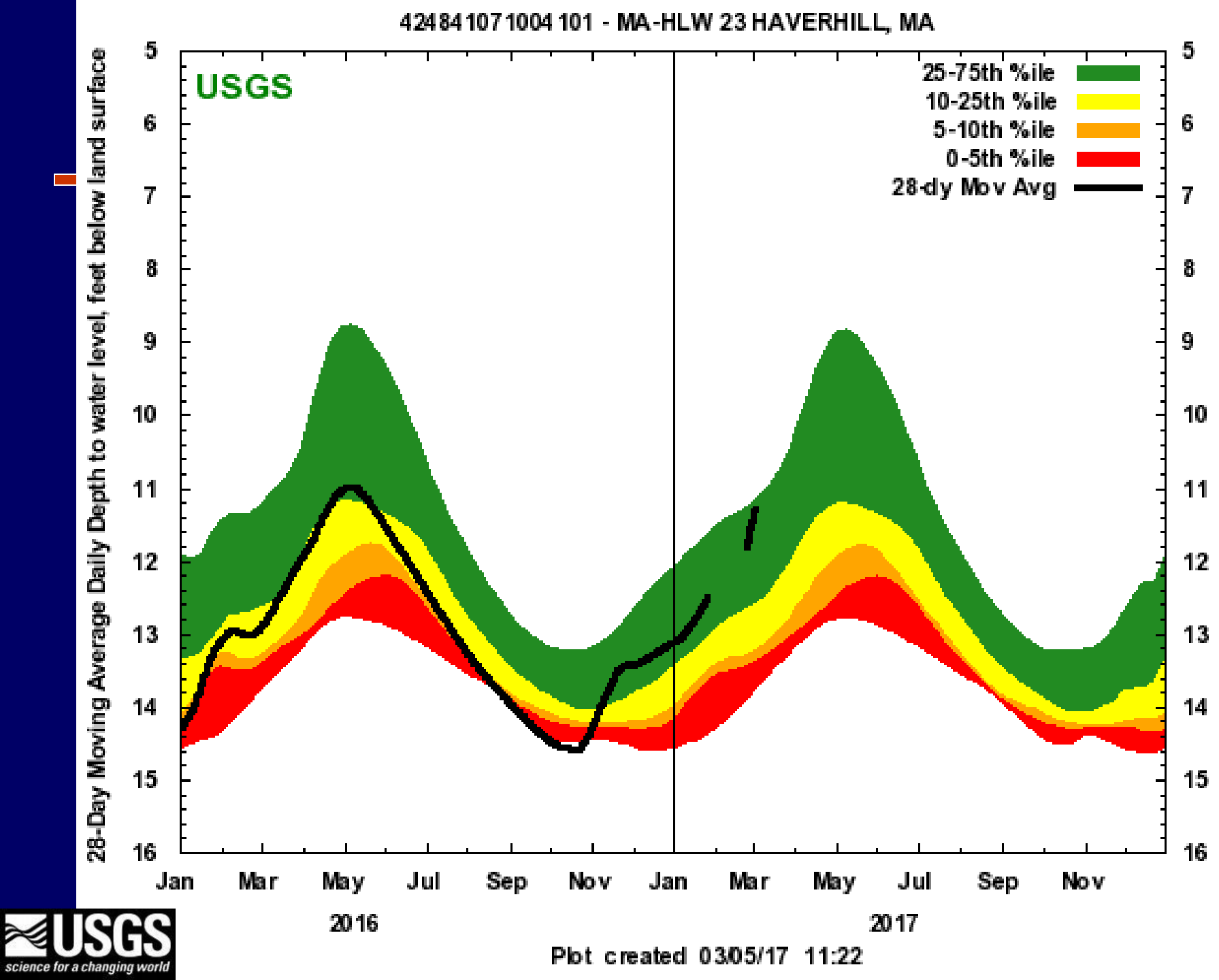

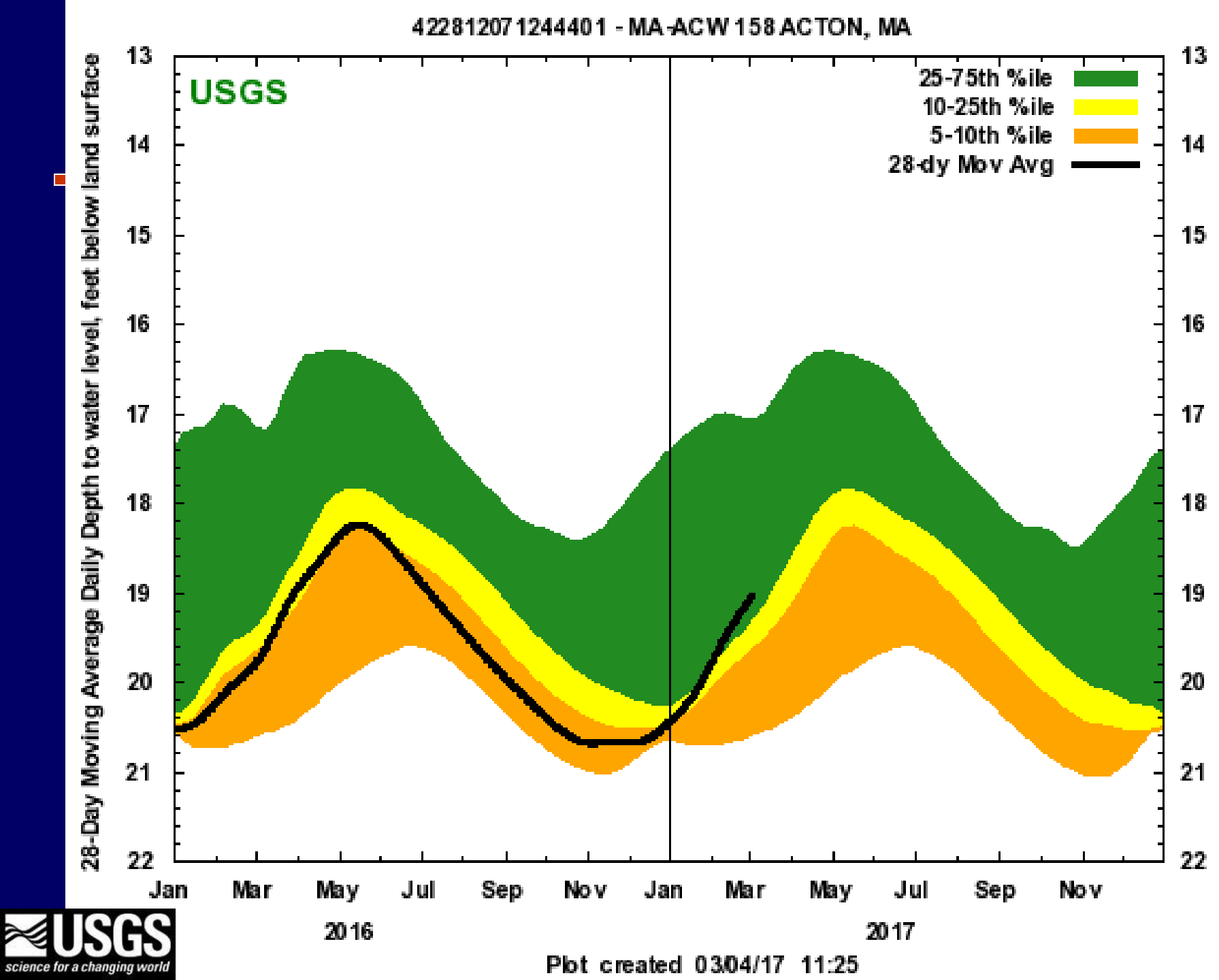
422812071244401 - MA-ACW 158 ACTON, MA
USGS
25-75th %ile
10-25th %ile
5-10th %ile
28-dy Mov Avg
28-Day Moving Average Daily Depth to water level, feet below land surface
13
14
15
16
17
18
19
20
21
22
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
Jul
Sep
Nov
2016
2017
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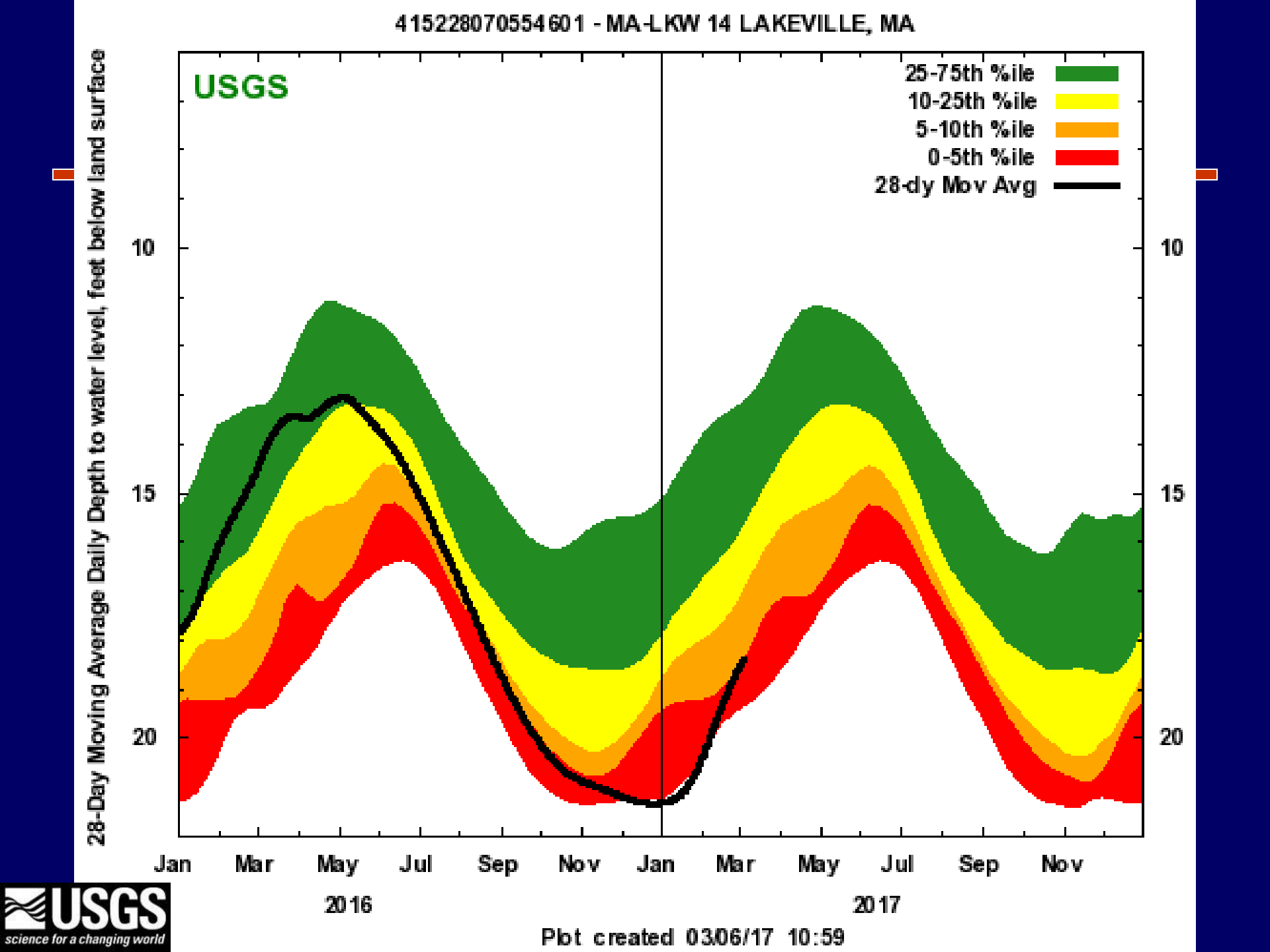
415228070554601 - MA-LKW 14 LAKEVILLE, MA
USGS
25-75th %ile
10-25th %ile
5-10th %ile
0-5th %ile
28-dy Mov Avg
28-Day Moving Average Daily Depth to water level, feet below land surface
10
15
20
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
Jul
Sep
Nov
2016
2017
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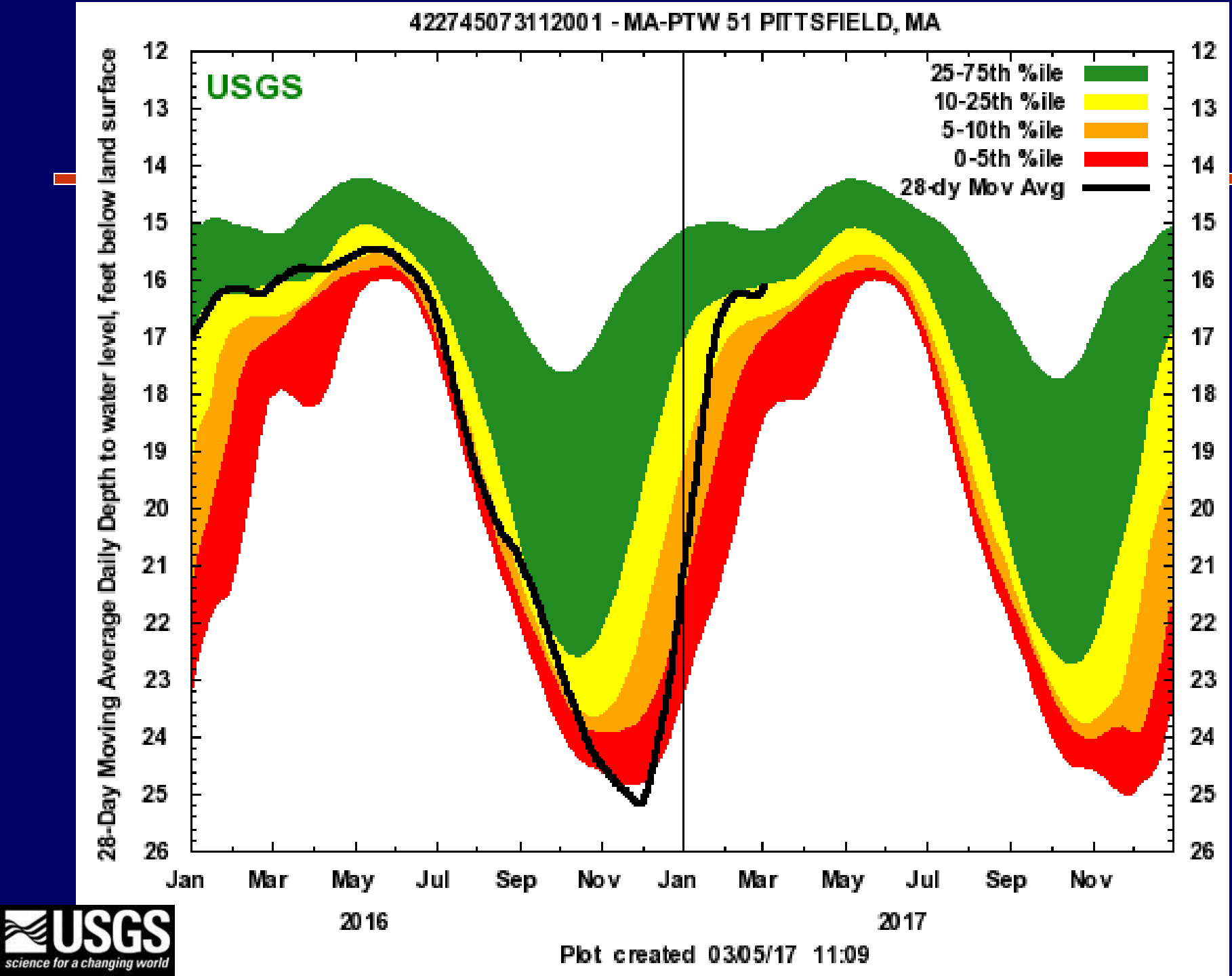
422745073112001 - MA-PTW 51 PITTSFIELD, MA
USGS
25-75th %ile
10-25th %ile
5-10th %ile
0-5th %ile
28-dy Mov Avg
28-Day Moving Average Daily Depth to water level, feet below land surface
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
Jan
Mar
May
Jul
Sep
Nov
Jan
Mar
May
Jul
Sep
Nov
2016
2017
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USGS
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