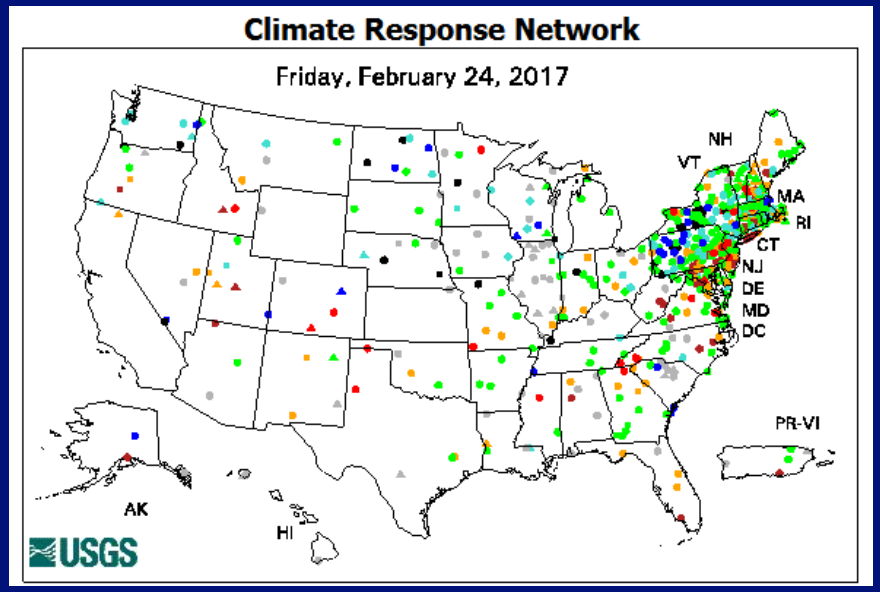
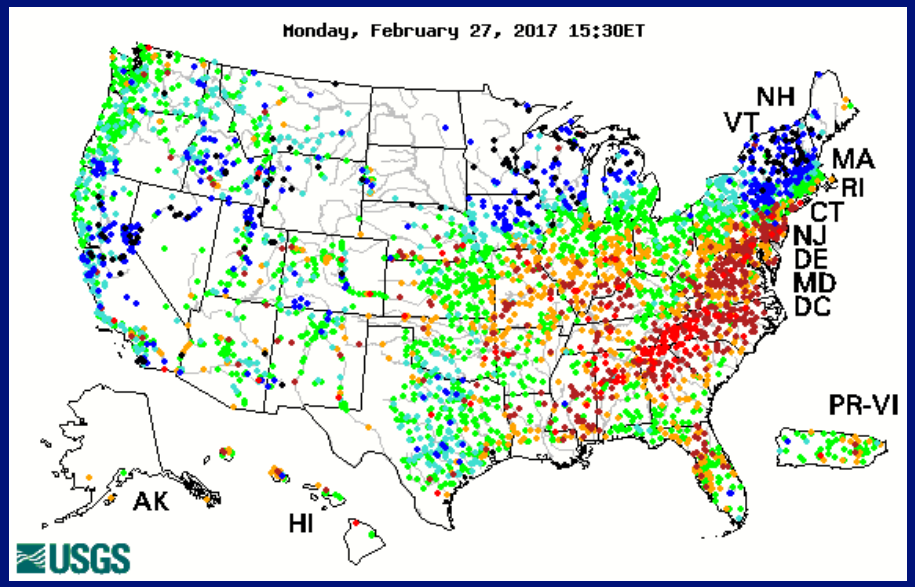
Northeast Streamflow and Groundwater Conditions



https://groundwaterwatch.usgs.gov/



https://waterwatch.usgs.gov/

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New England Water Science Center
gbent@usgs.gov and tjmack@usgs.gov

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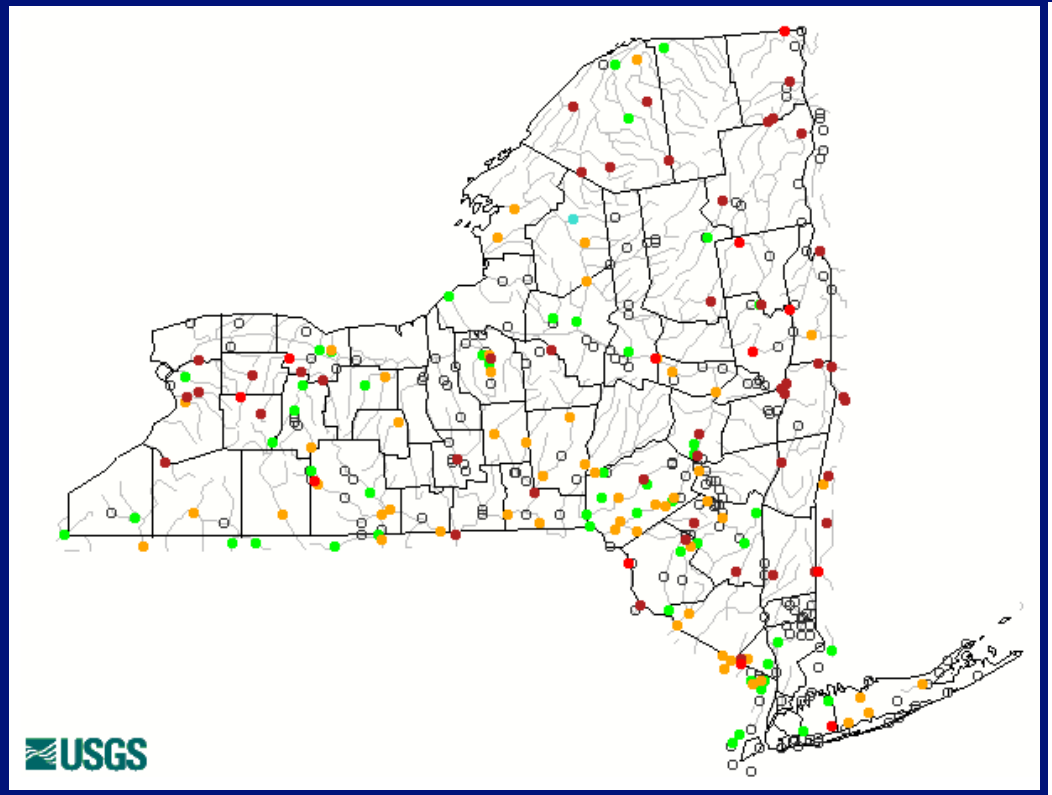
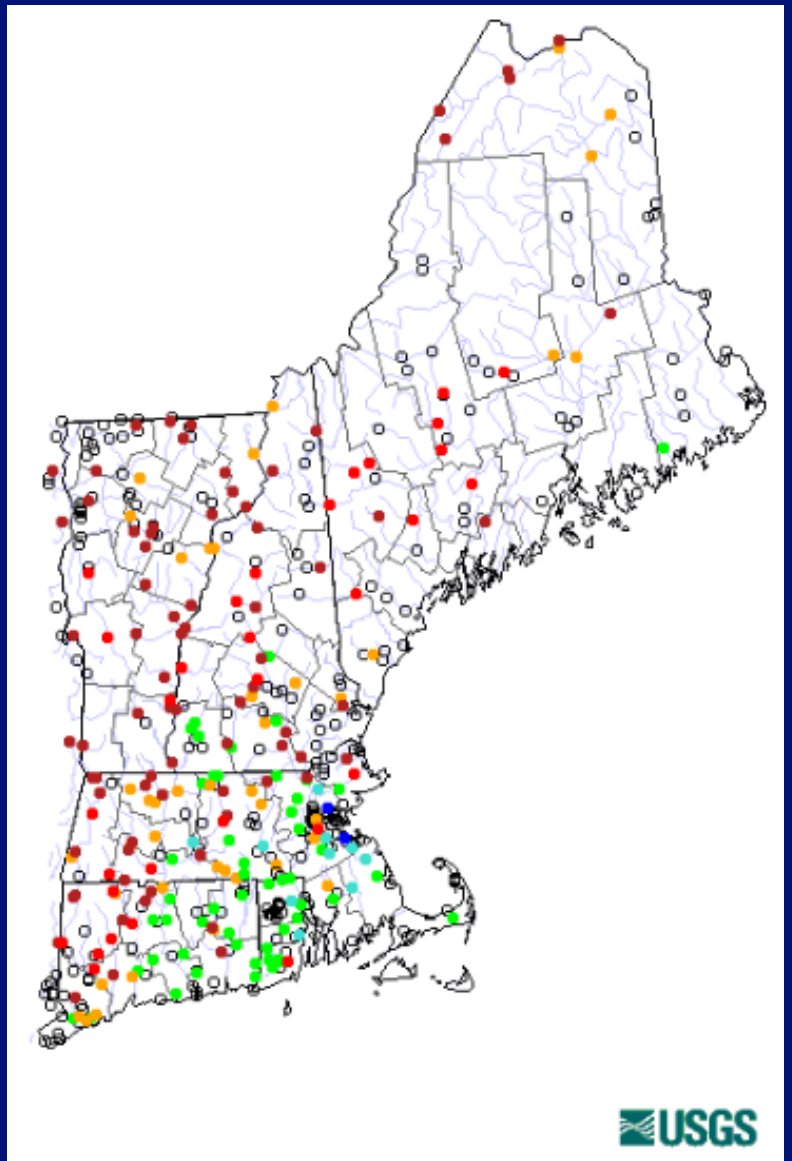
Streamflow Conditions – Oct. 10, 2016





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

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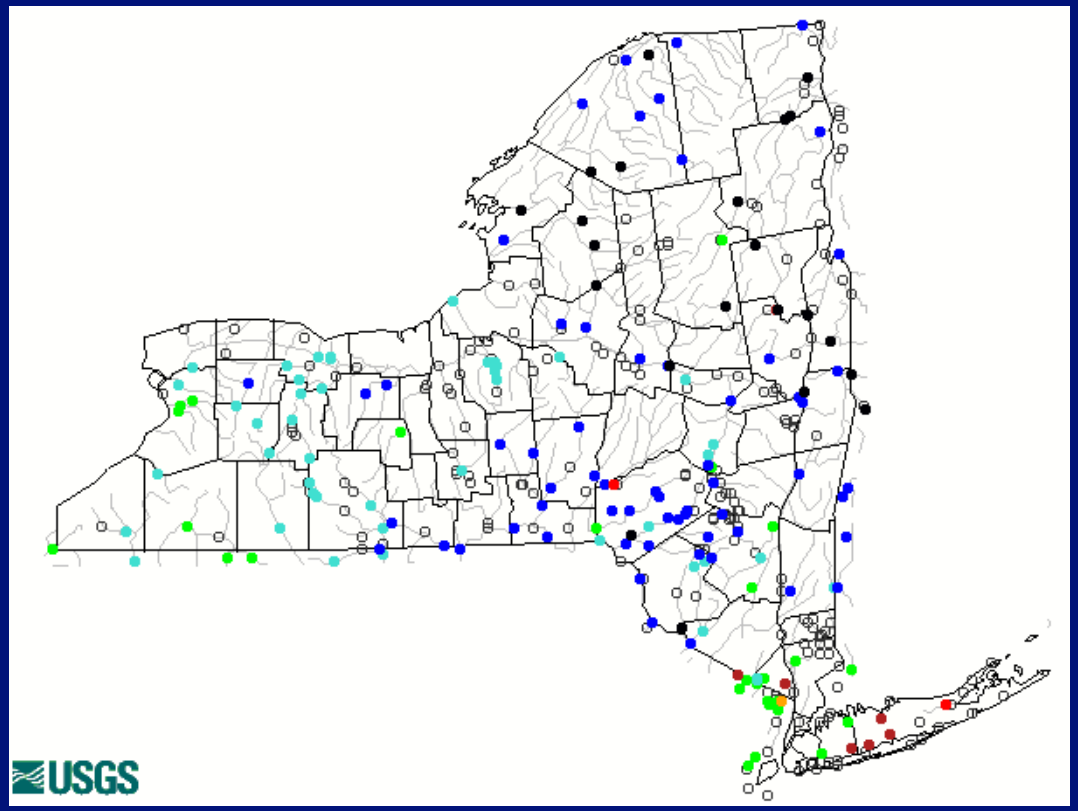
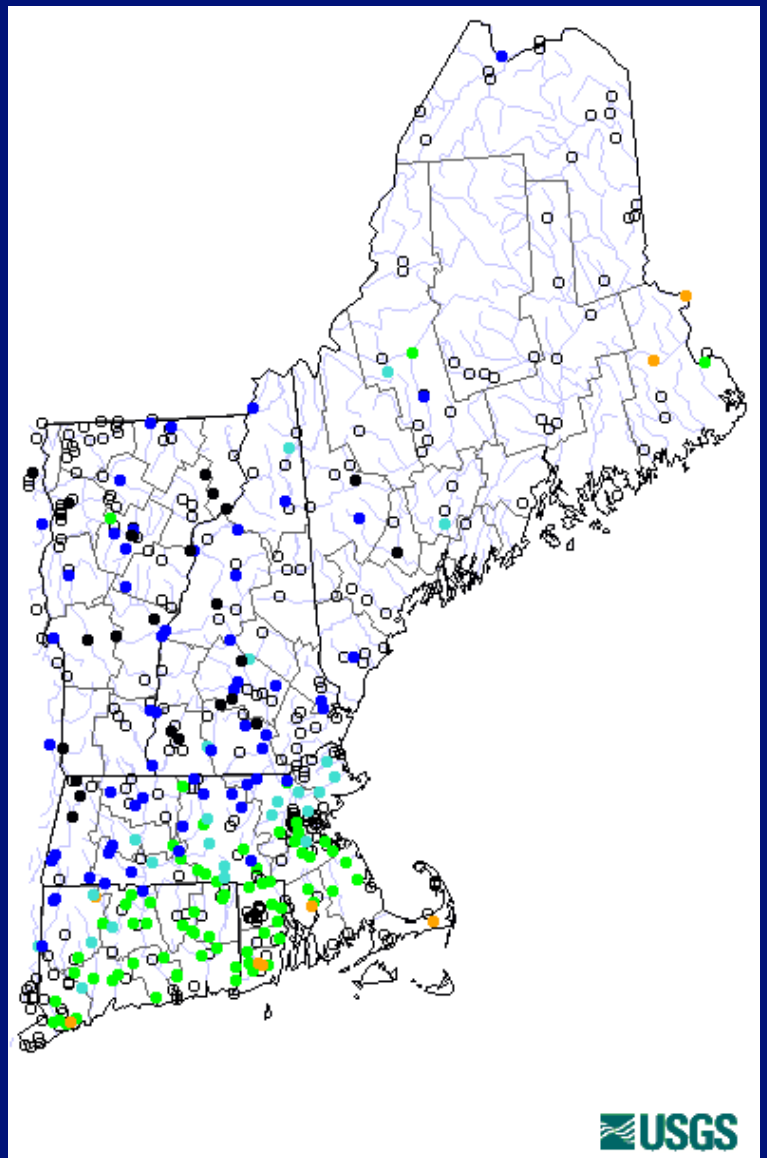
Streamflow Conditions – Feb. 27, 2017





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

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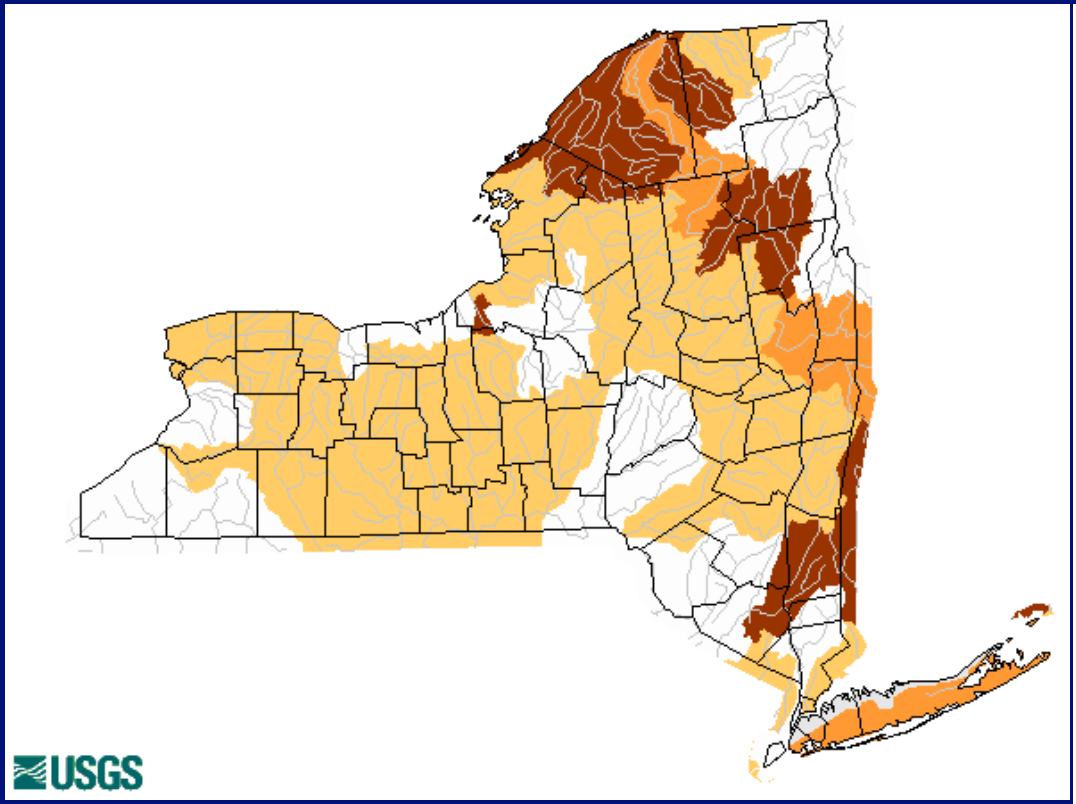
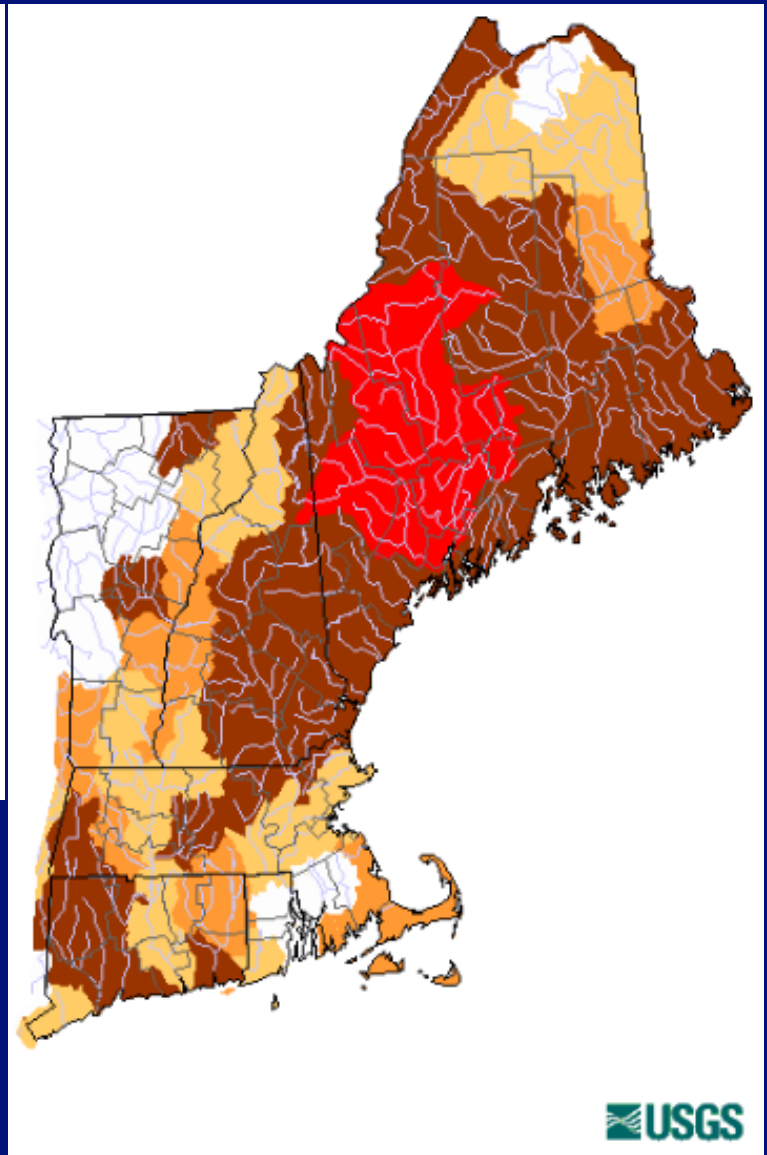
Below normal average – last 7 days (Oct. 3-9, 2016)





Explanation - Percentile classes				
Low	<=5	6-9	10-24	Normal
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

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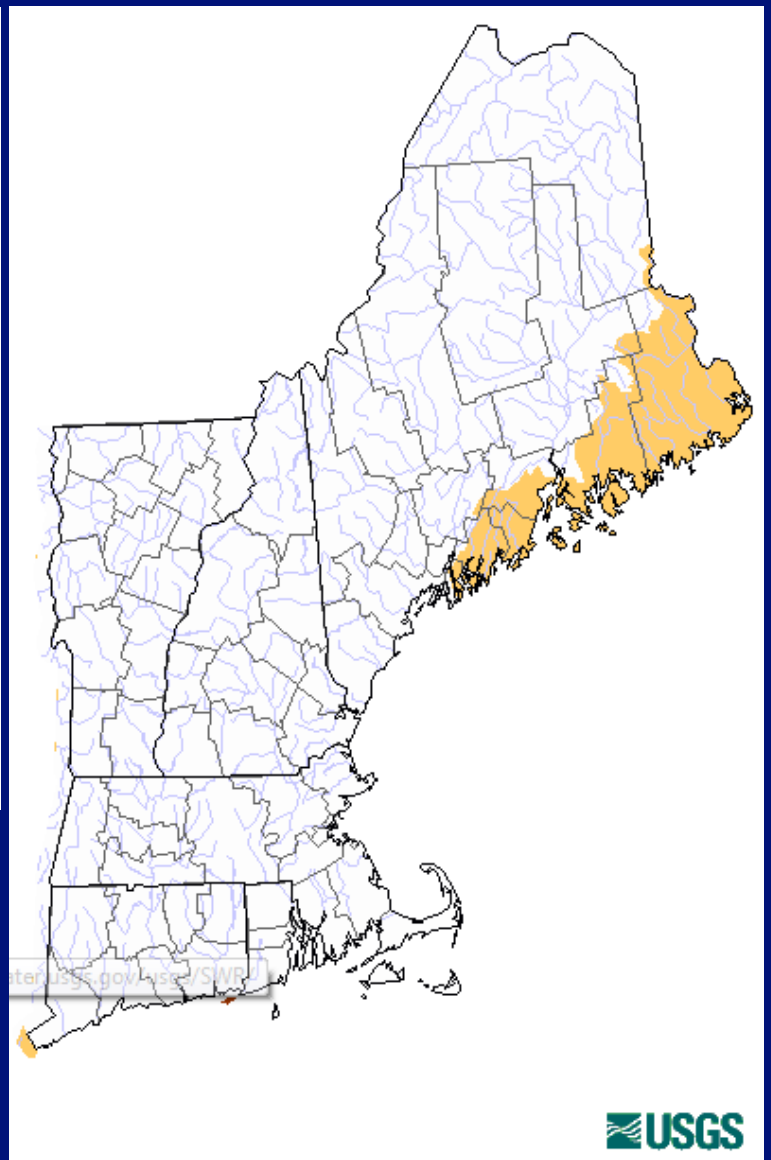
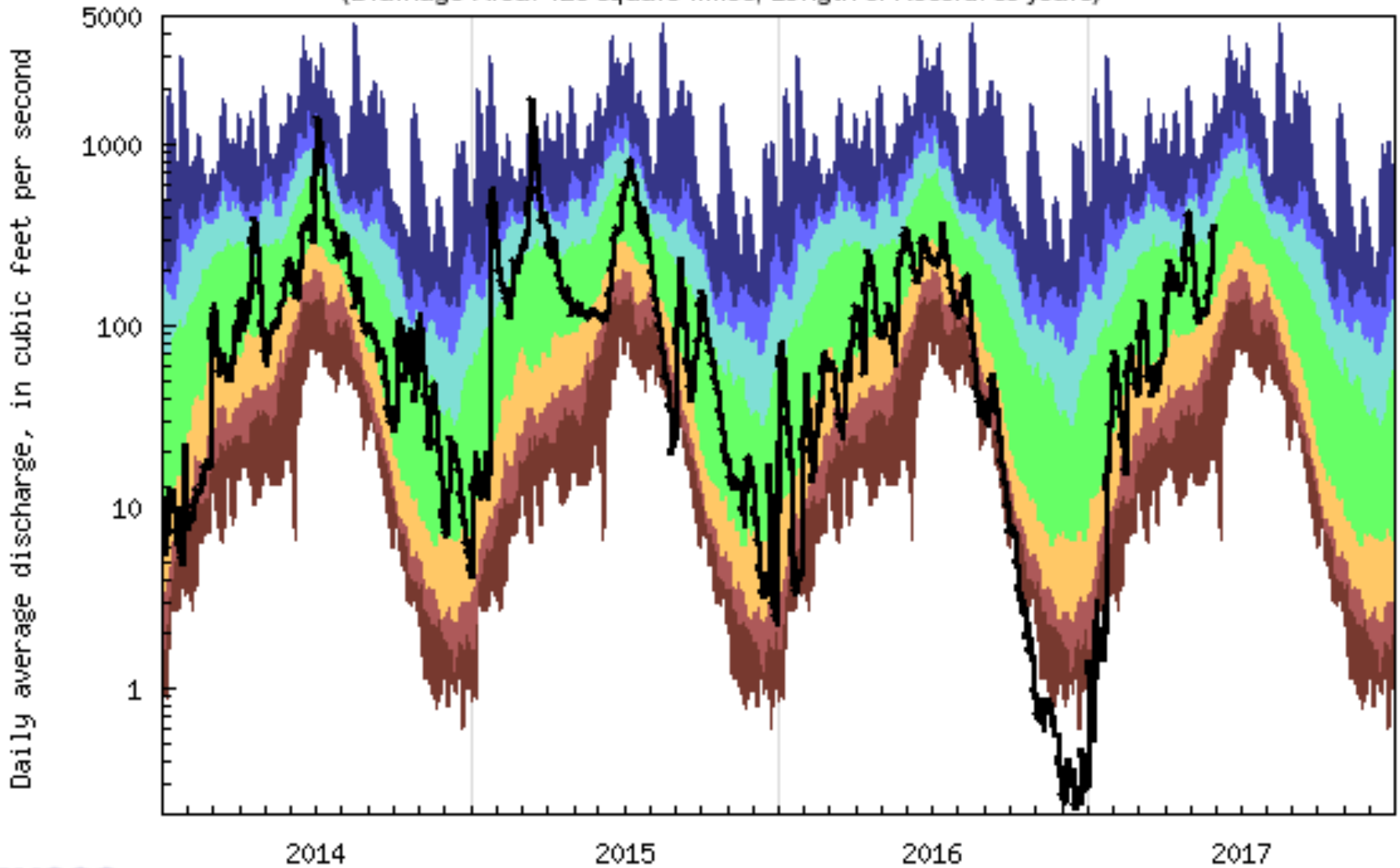
Below normal average – last 7 days (Feb. 20-26, 2017)

Explanation - Percentile classes				
Low	<=5	6-9	10-24	Normal
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	



USGS 01102000 IPSWICH RIVER NEAR IPSWICH, MA
(Drainage Area: 125 square miles, Length of Record: 85 years)



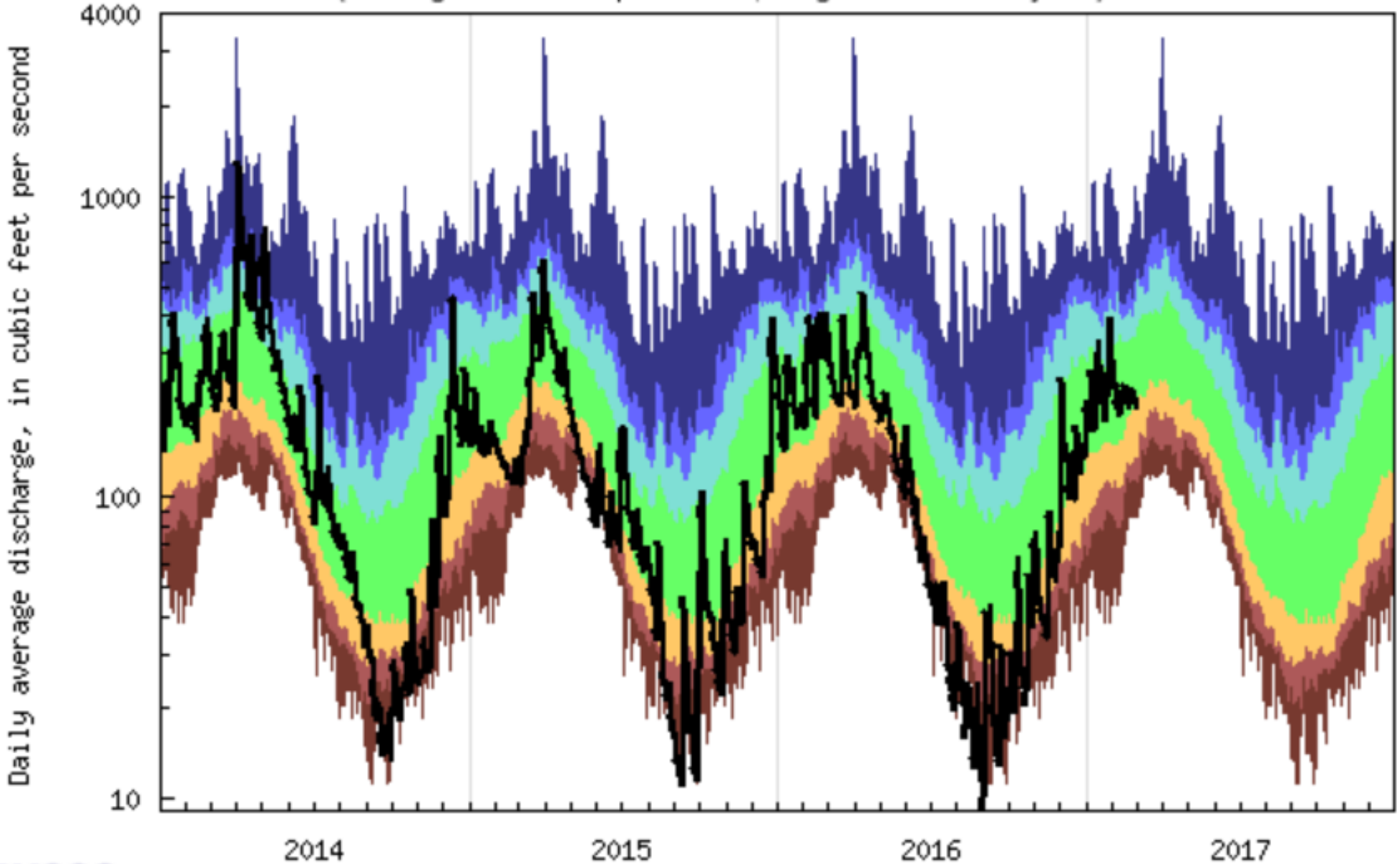
USGS WaterWatch

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 01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI
(Drainage Area: 100 square miles, Length of Record: 75 years)



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 01306460 CONNETQUOT BK NR CENTRAL ISLIP NY
(Drainage Area: 21.9 square miles, Length of Record: 36 years)

Daily average discharge, in cubic feet per second

200
100
10

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		

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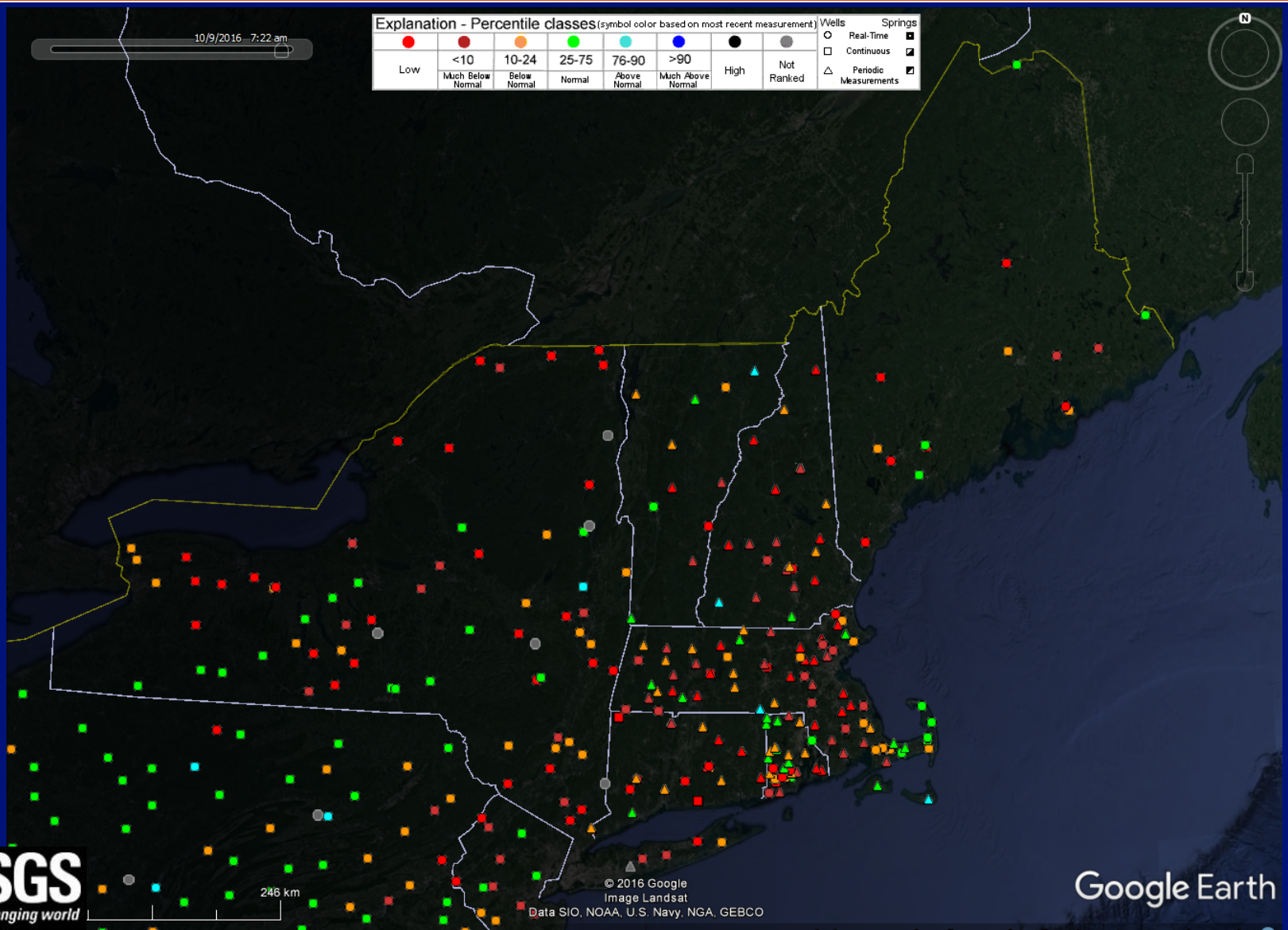
Groundwater Conditions (CRN) – Oct. 9, 2016



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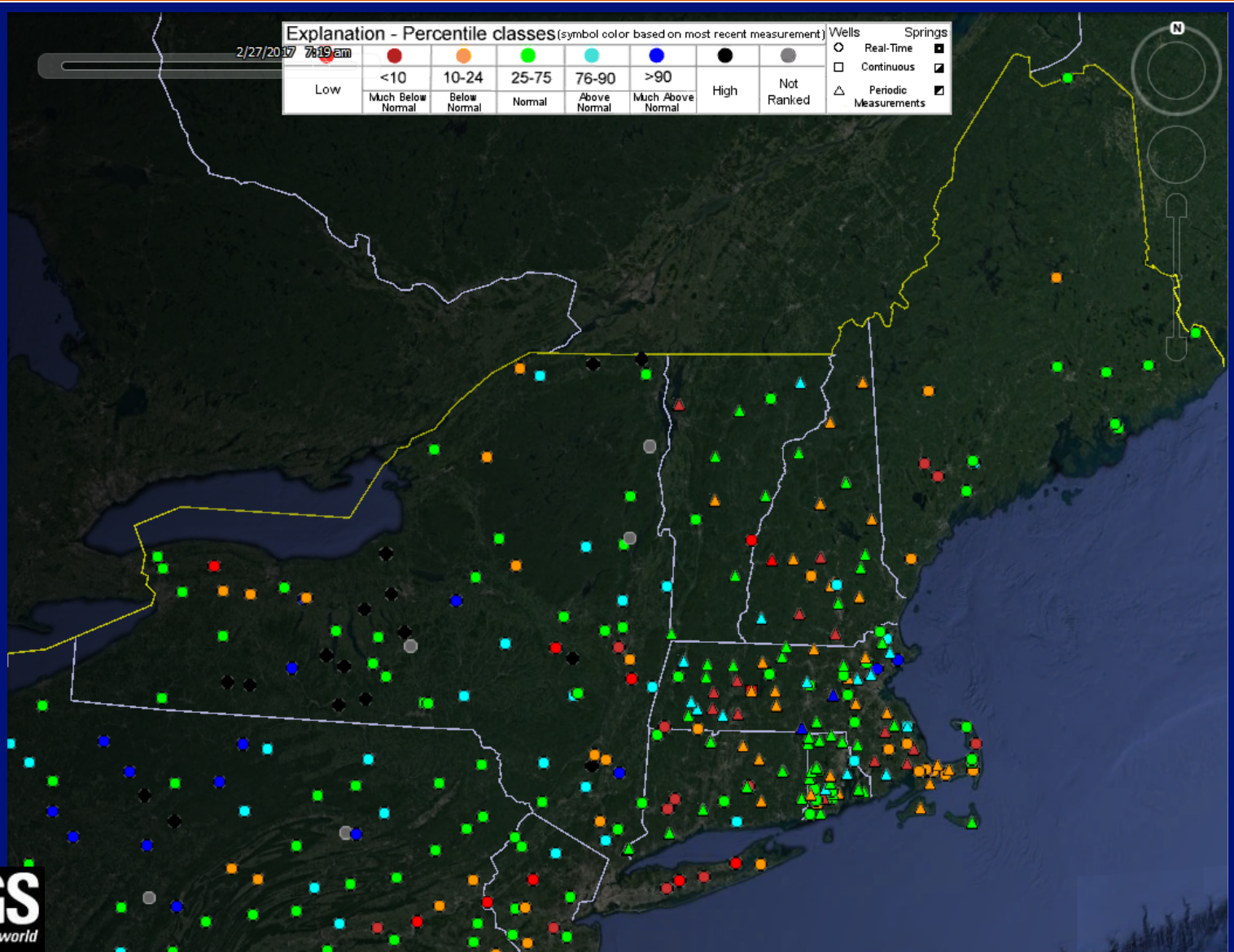
Groundwater Conditions (CRN) – Feb. 27, 2017



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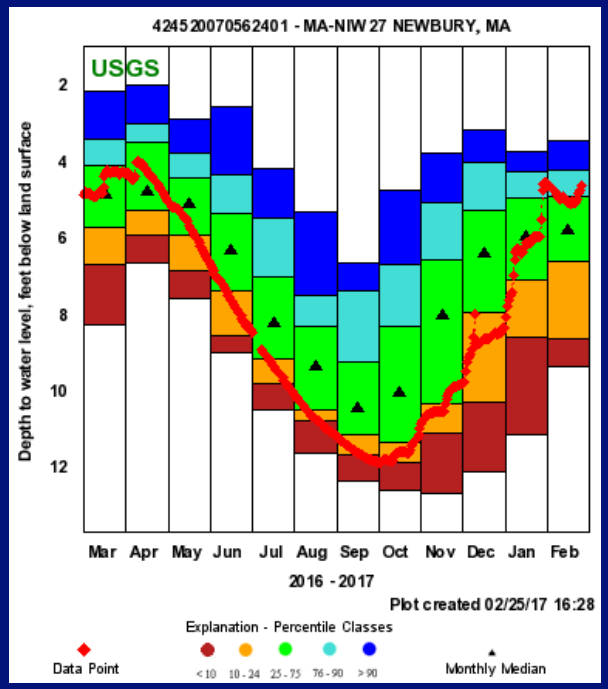
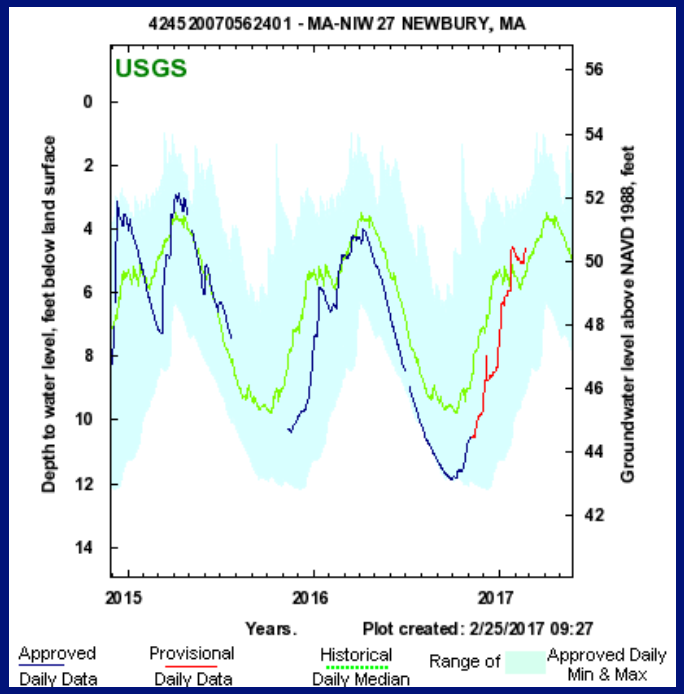
GW Levels – Newbury, northeastern MA

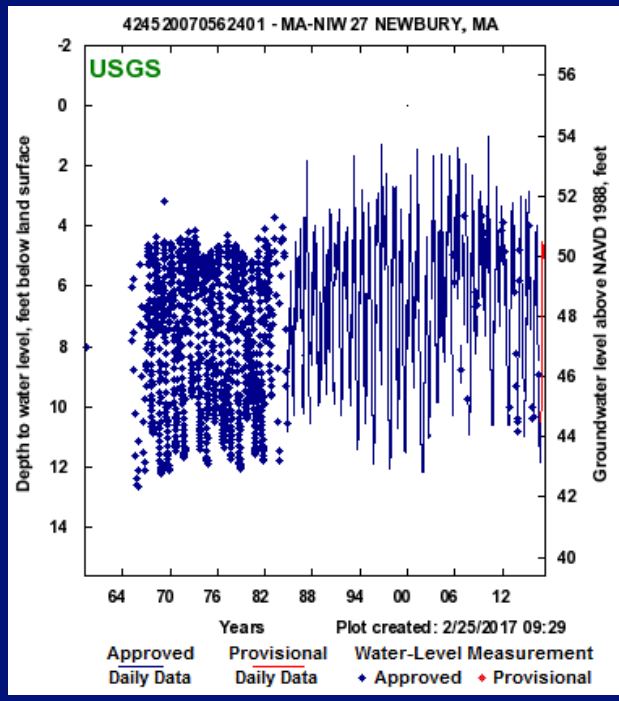
Thin till deposits



1-year



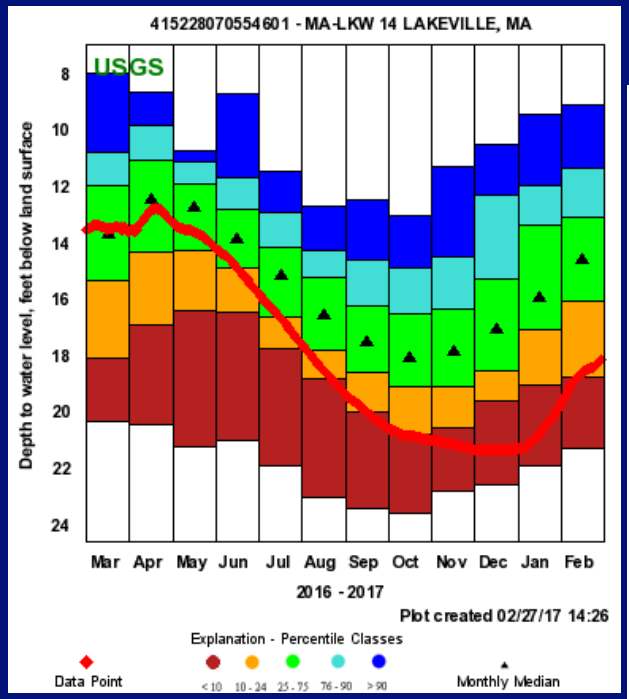
2-year



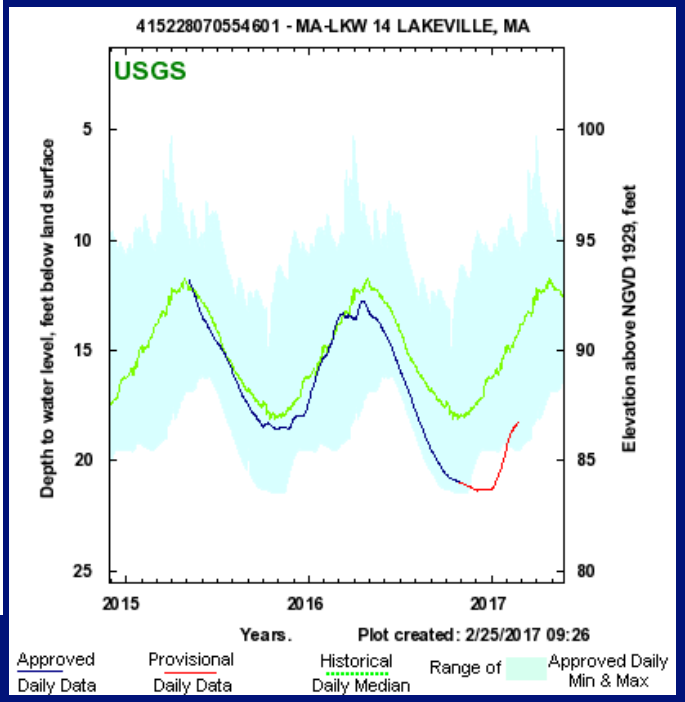
Period of record

GW Levels – Lakeville, southeastern MA

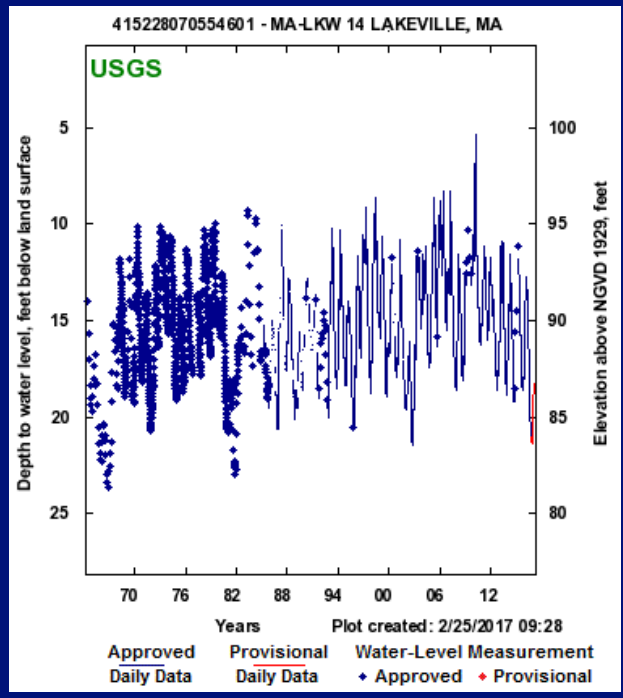
Thick sand and gravel deposits



1-year



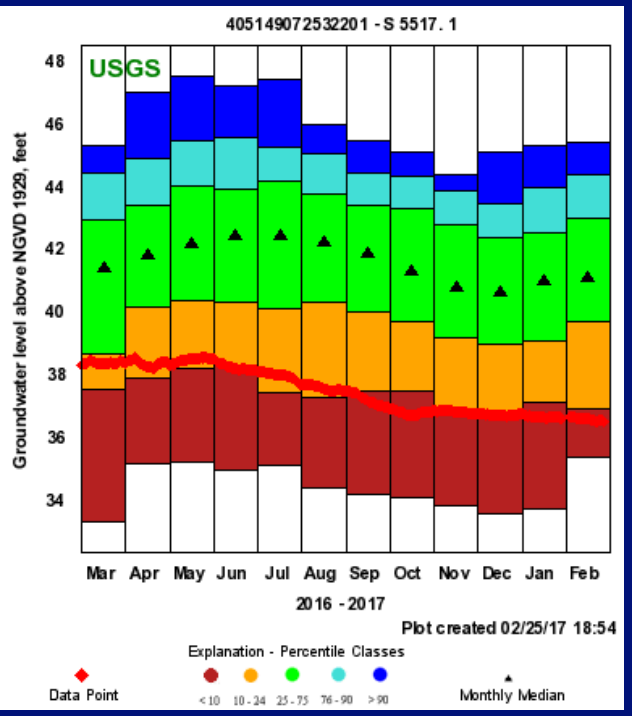
2-year



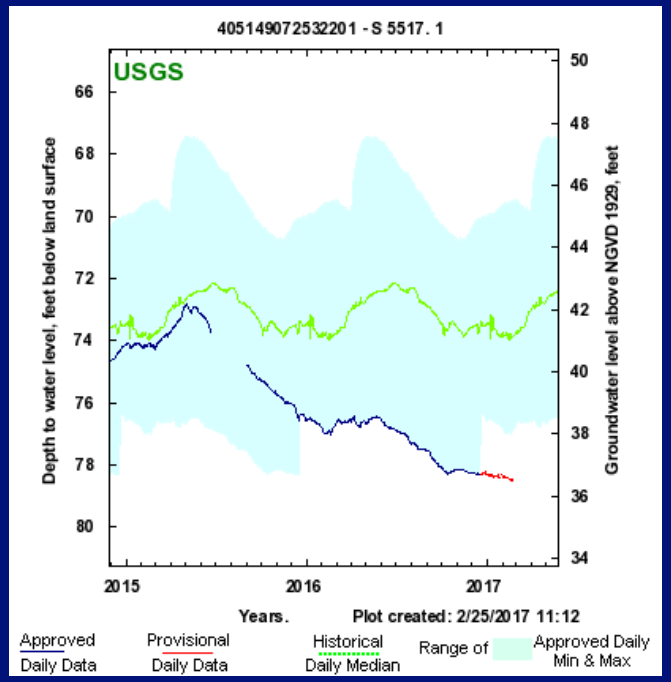
Period of record

GW Levels – Long Island, NY

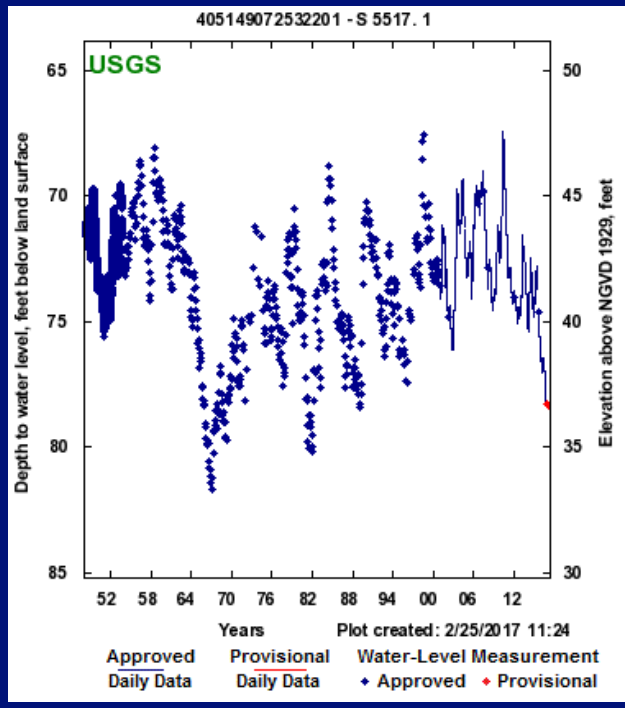
Thick sand and gravel deposits



1-year



2-year



Period of record

Summary

- Streamflow conditions across most the Northeast are currently normal or above normal.
- The exceptions are Long Island and Plymouth-Carver Aquifer and Cape Cod, which are GW dominant system (most streamflow is GW discharge).
- In general, GW levels in low storage aquifers, such as till and bedrock, in the Northeast are more “normal”. Whereas levels in higher storage, sand and gravel aquifers may be “below normal”.
- A dry spring or early summer could quickly return SW and GW conditions to drought.