



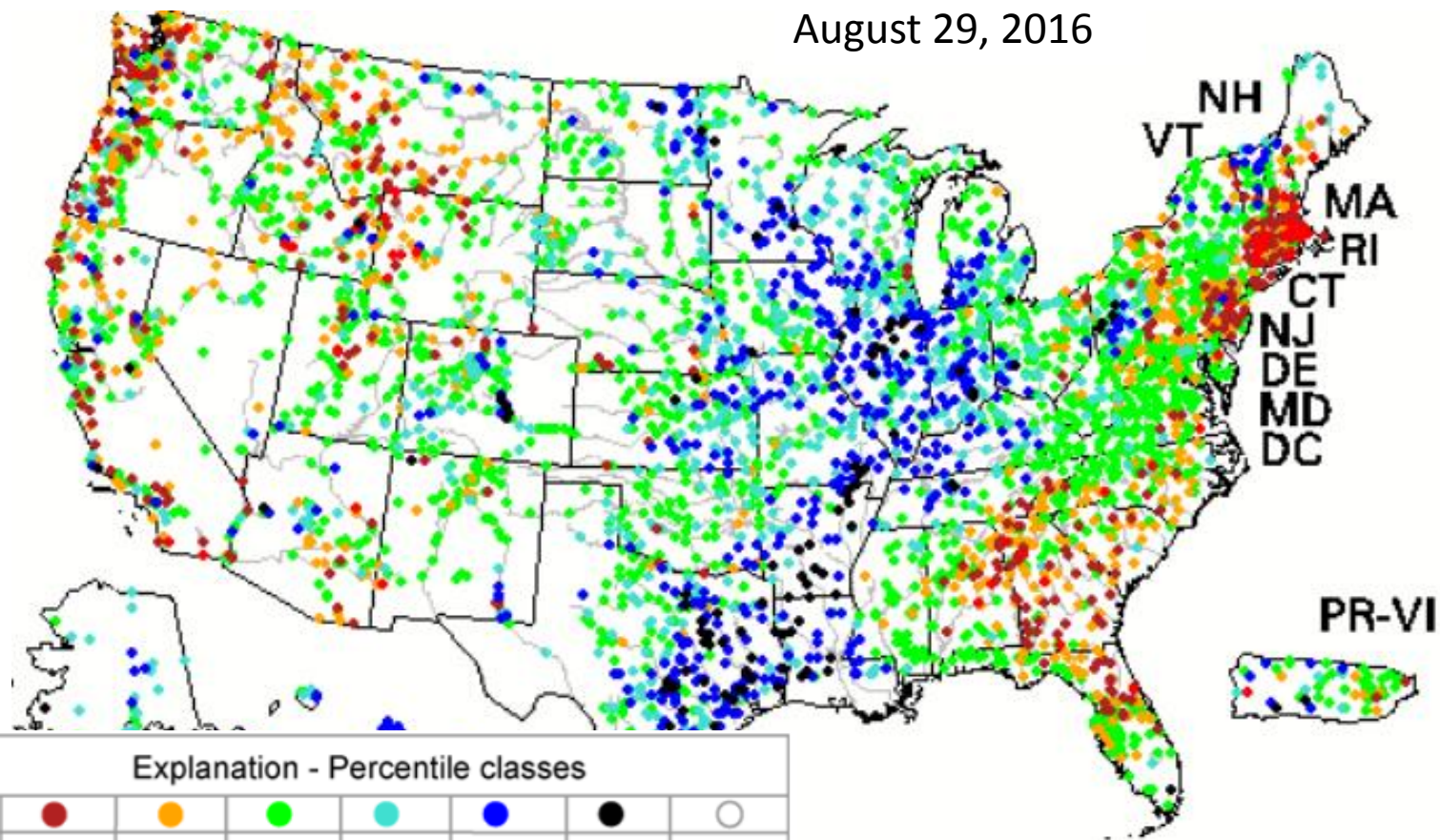
**Northeast U.S.  
Drought Conditions  
August 30, 2016**

**Streamflow and  
Groundwater Levels**

William Coon, Hydrologist

# Daily Streamflow – Compared to Historical Streamflow

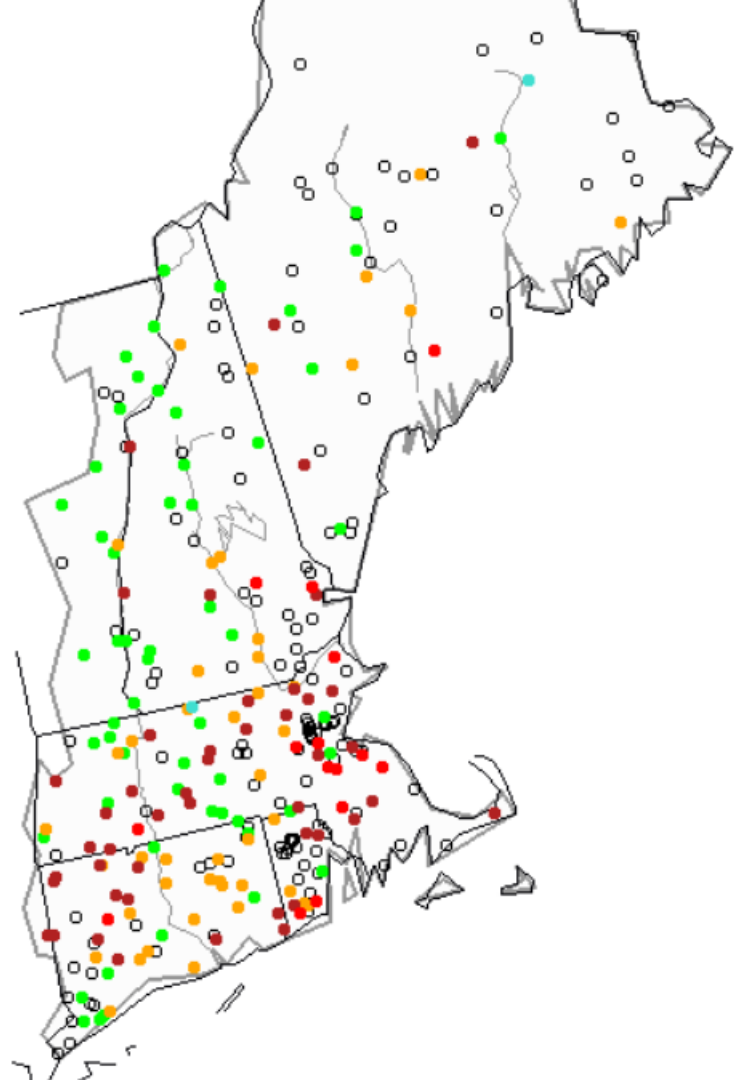
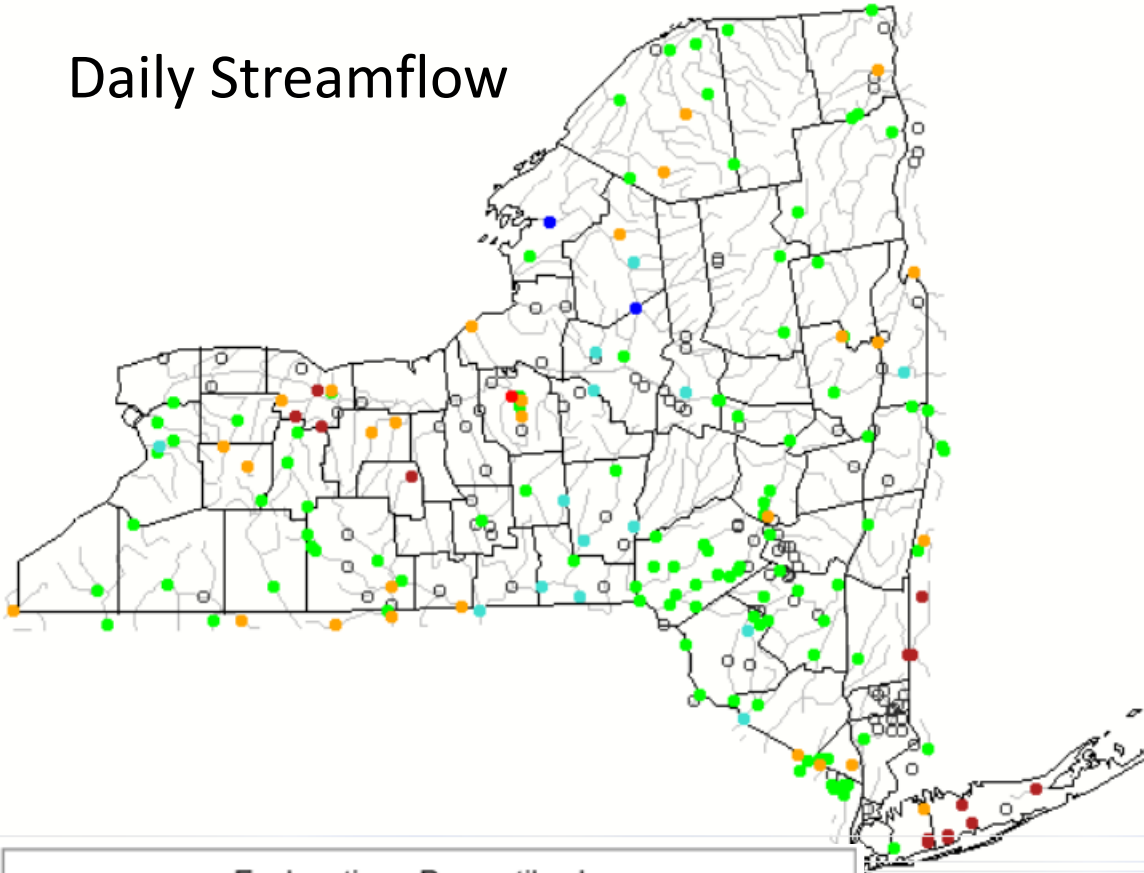
August 29, 2016











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		

# Daily Streamflow



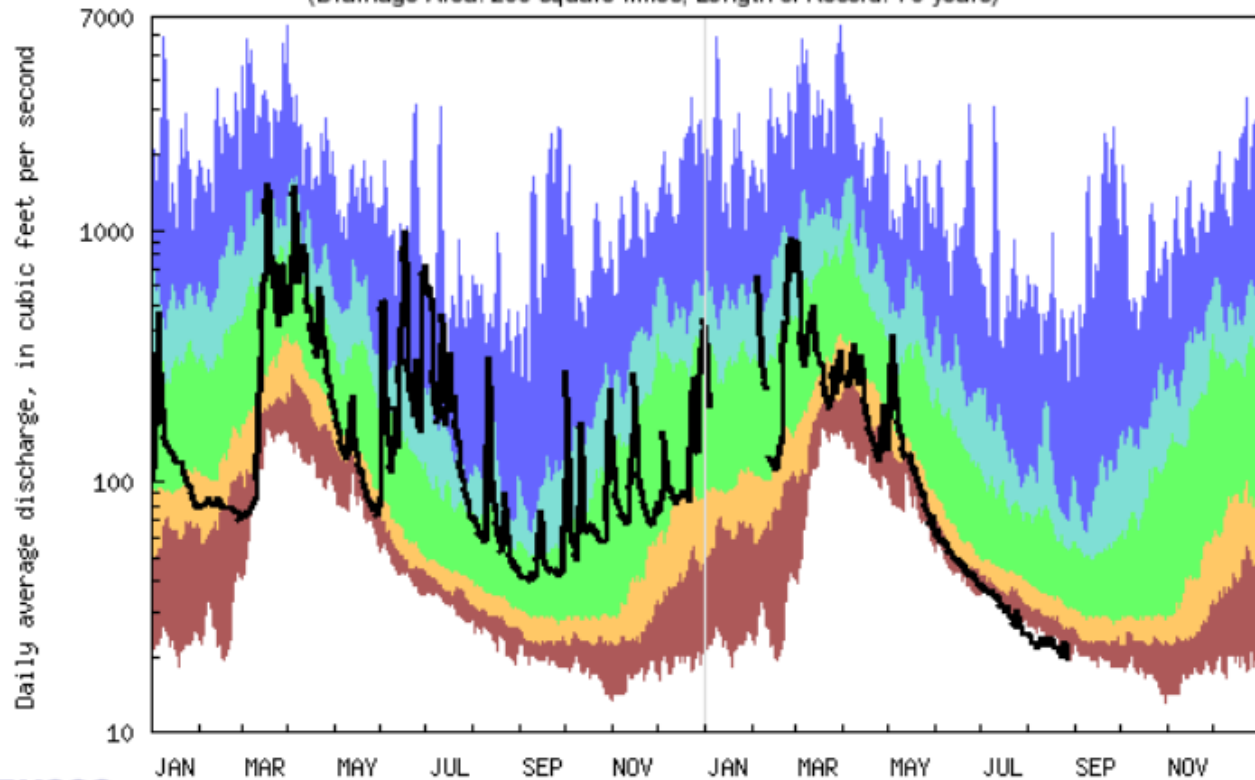
Explanation - Percentile classes

							
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
	Much below normal	Below normal	Normal	Above normal	Much above normal		



# Oatka Creek at Garbutt, NY – 70 years of record

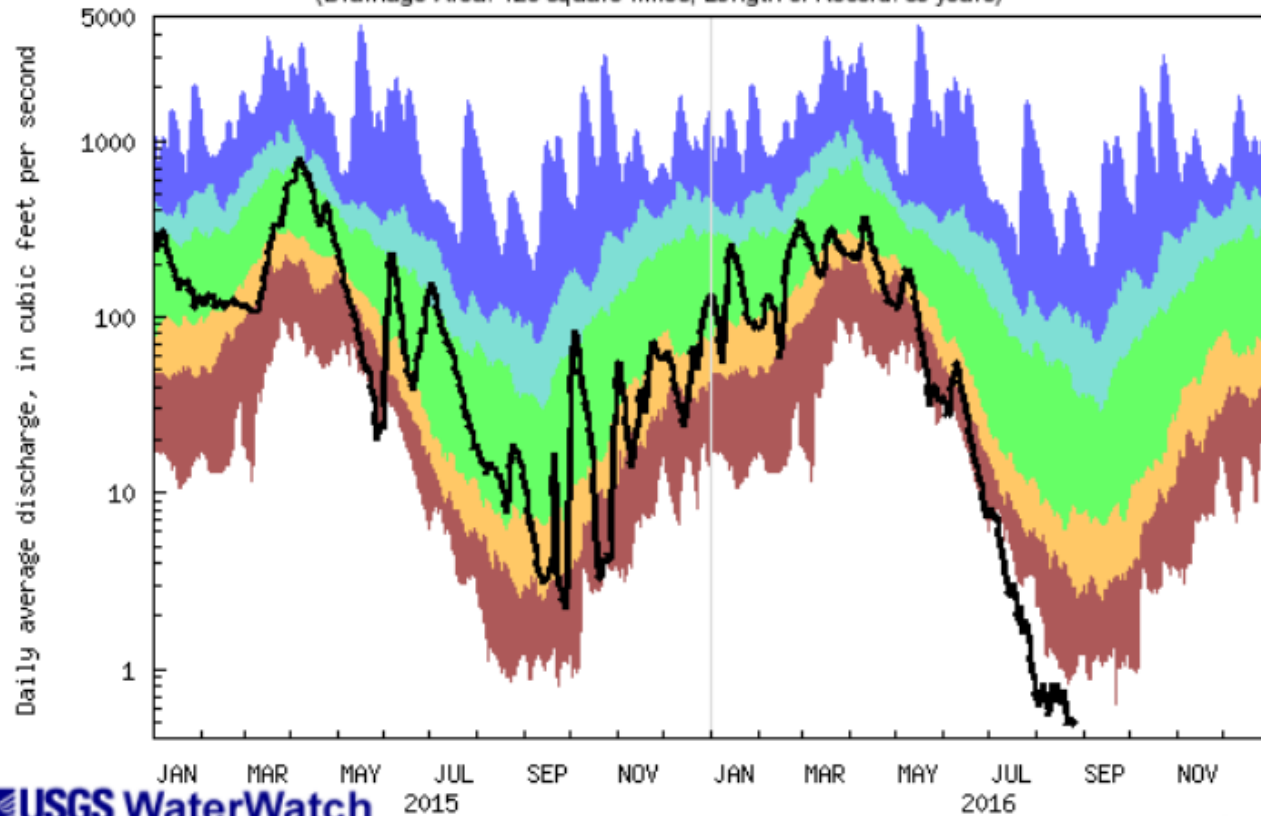
USGS 04230500 OATKA CREEK AT GARBUTT NY  
(Drainage Area: 200 square miles, Length of Record: 70 years)



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

# Ipswich River near Ipswich, MA – 85 years of record (affected by withdrawals and regulation)

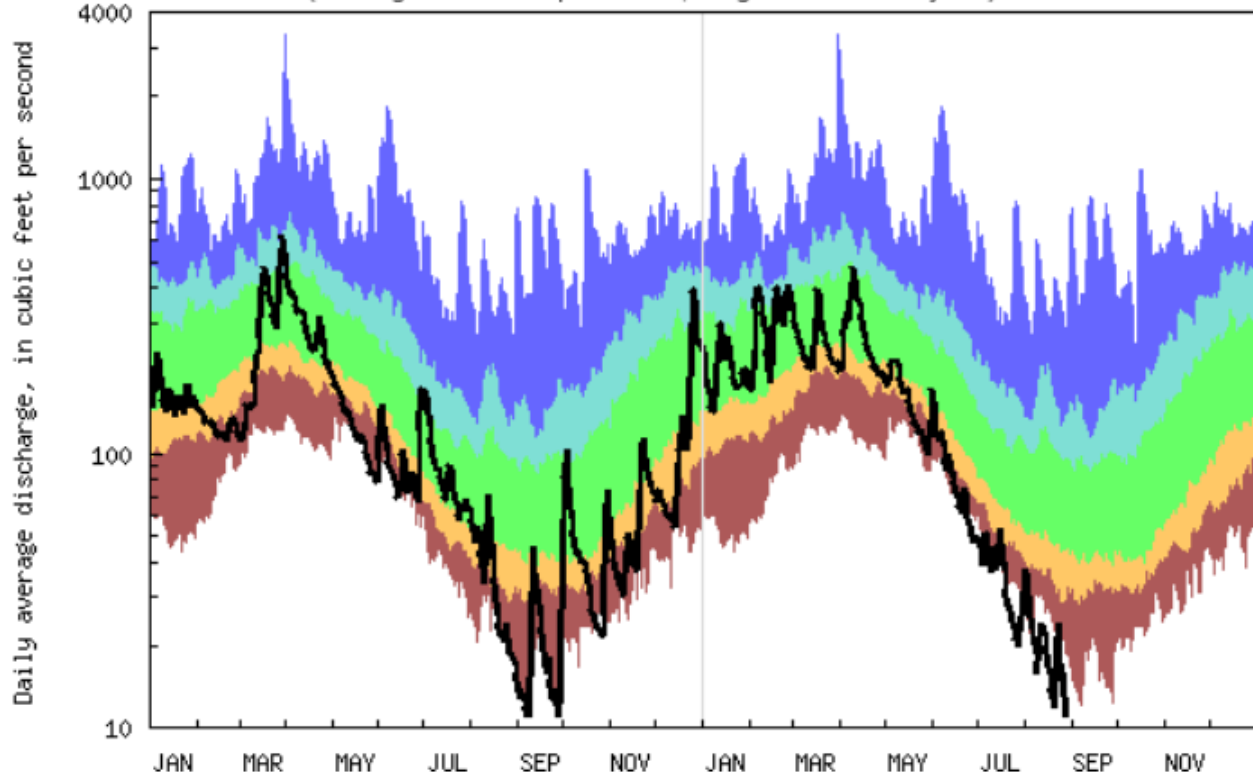
USGS 01102000 IPSWICH RIVER NEAR IPSWICH, MA  
(Drainage Area: 125 square miles, Length of Record: 85 years)



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

# Pawcatuck River at Wood River Junction, RI – 75 years of record

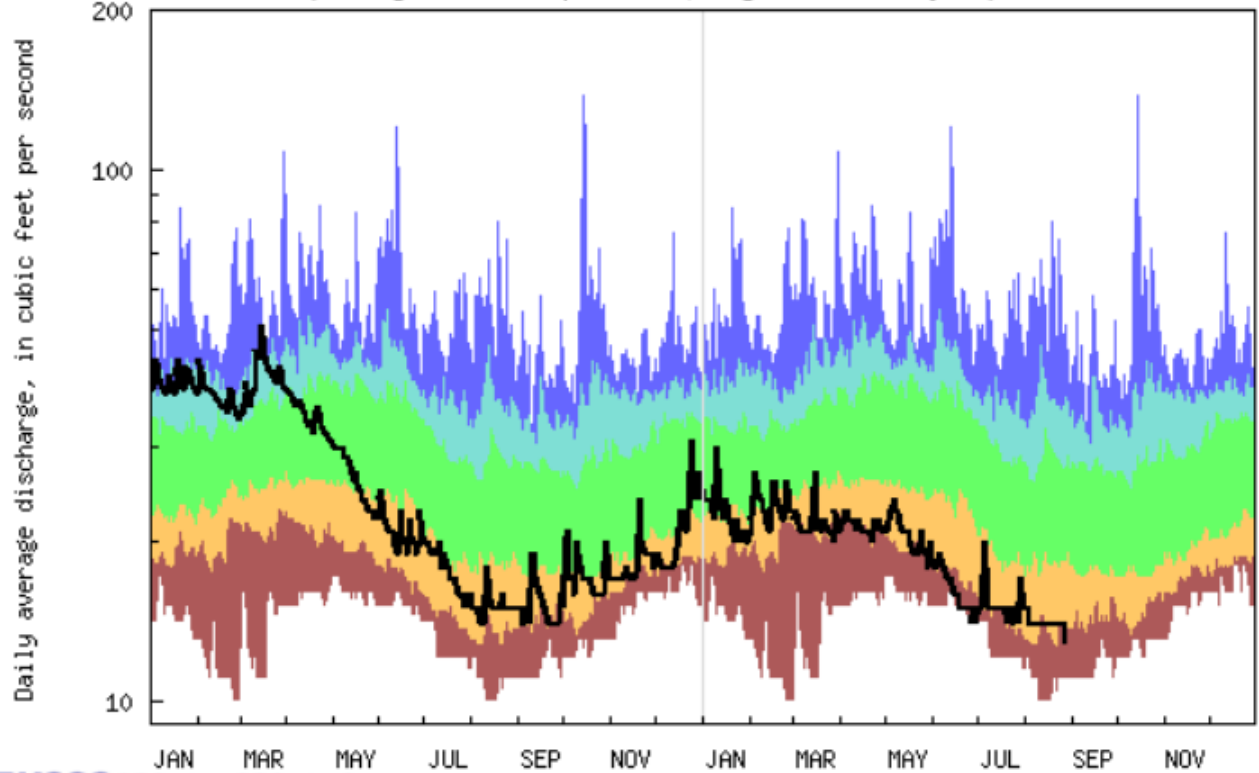
USGS 01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI  
(Drainage Area: 100 square miles, Length of Record: 75 years)



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

# Connetquot Brook near Central Islip, NY – 36 years of record

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



Explanation - Percentile classes

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

# Groundwater Climate Response Network

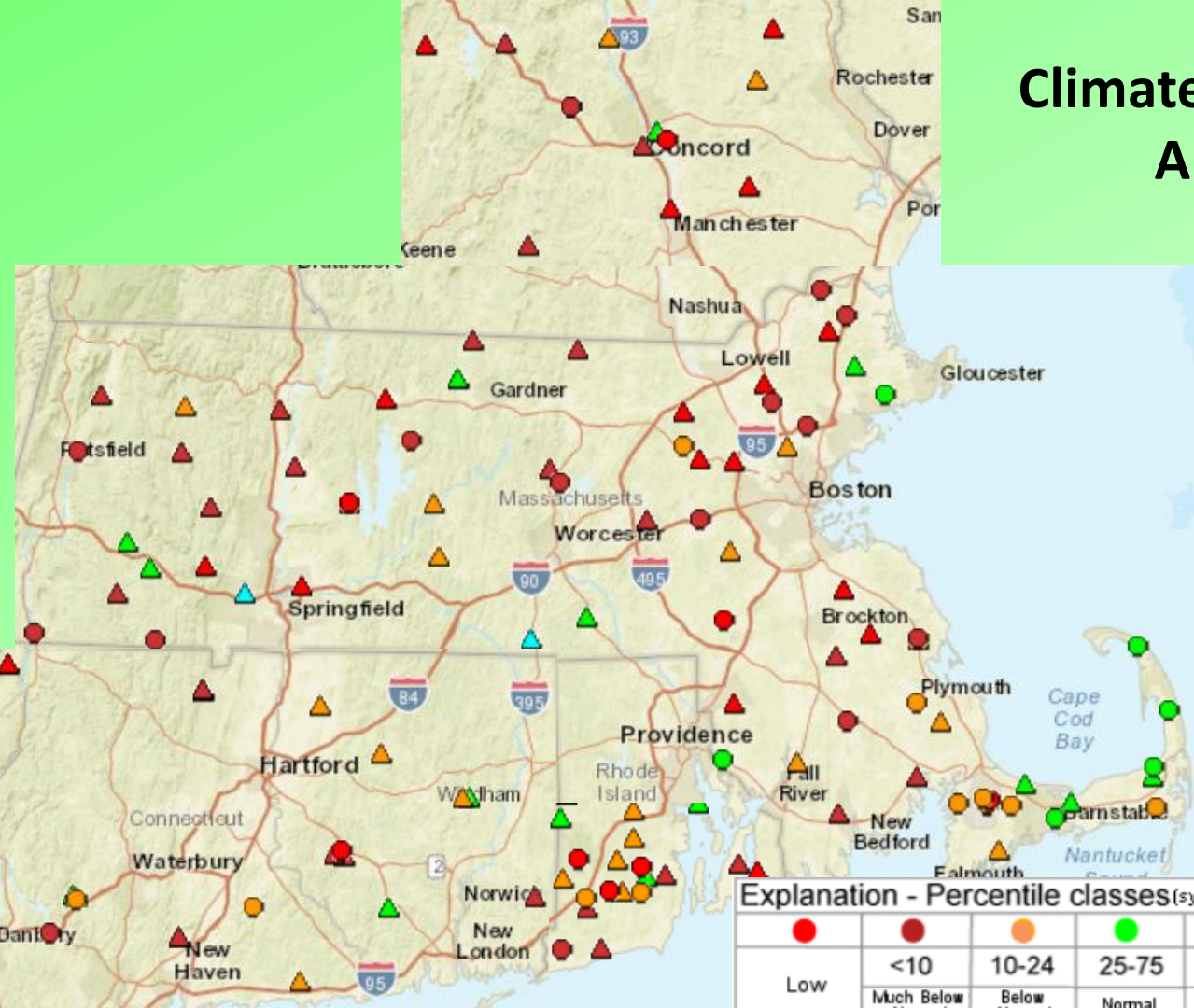
Includes wells:

- Located in aquifers that respond to climatic fluctuations
- Minimally affected by pumpage
- Essentially unaffected by sources of artificial recharge (from irrigation, canals, etc.)
- Have never gone dry or are not susceptible to going dry



# Climate Response Network

## August 29, 2016



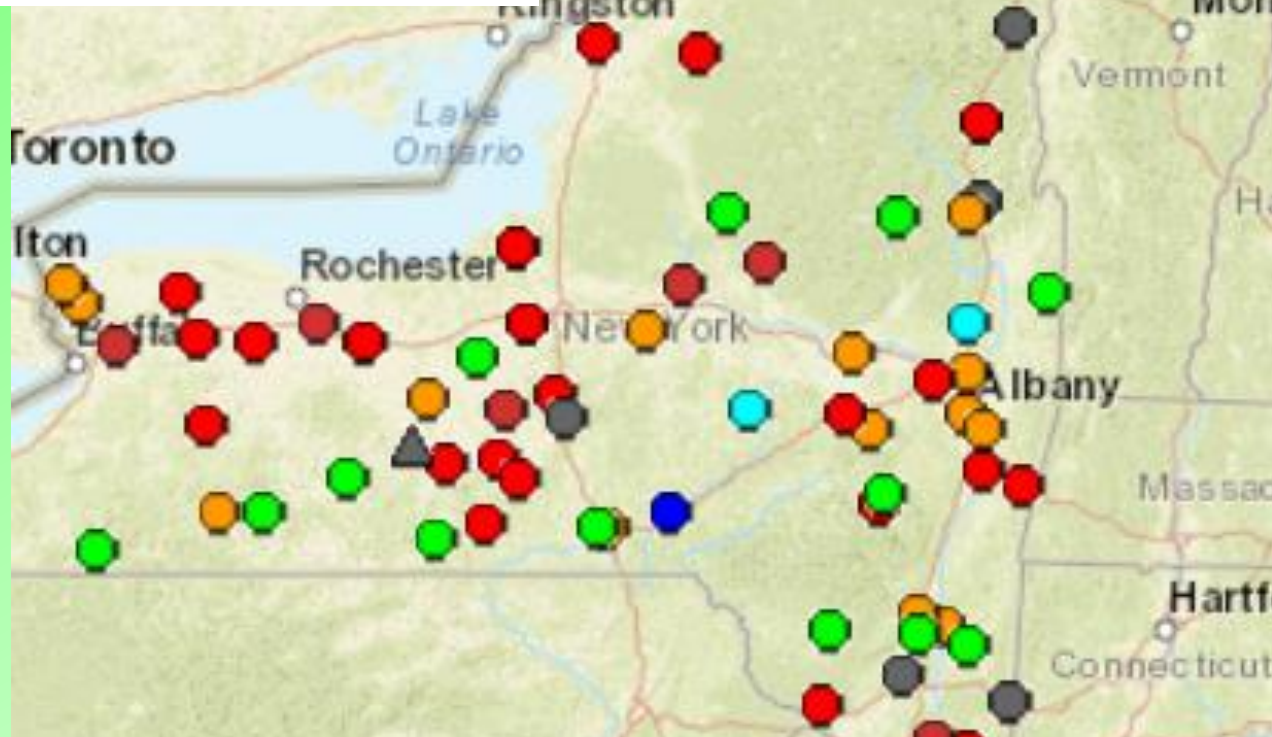
**Explanation - Percentile classes** (symbol color based on most recent measurement)

<span style="color: red;">●</span>	<span style="color: red;">●</span>	<span style="color: orange;">●</span>	<span style="color: green;">●</span>	<span style="color: cyan;">●</span>	<span style="color: blue;">●</span>	<span style="color: black;">●</span>	<span style="color: gray;">●</span>
Low	<10	10-24	25-75	76-90	>90	High	Not Ranked
	Much Below	Below	Normal	Above	Much Above		

Wells	Springs
○ Real-Time	■
□ Continuous	▣
△ Periodic Measurements	▤

# Climate Response Network

## August 29, 2016



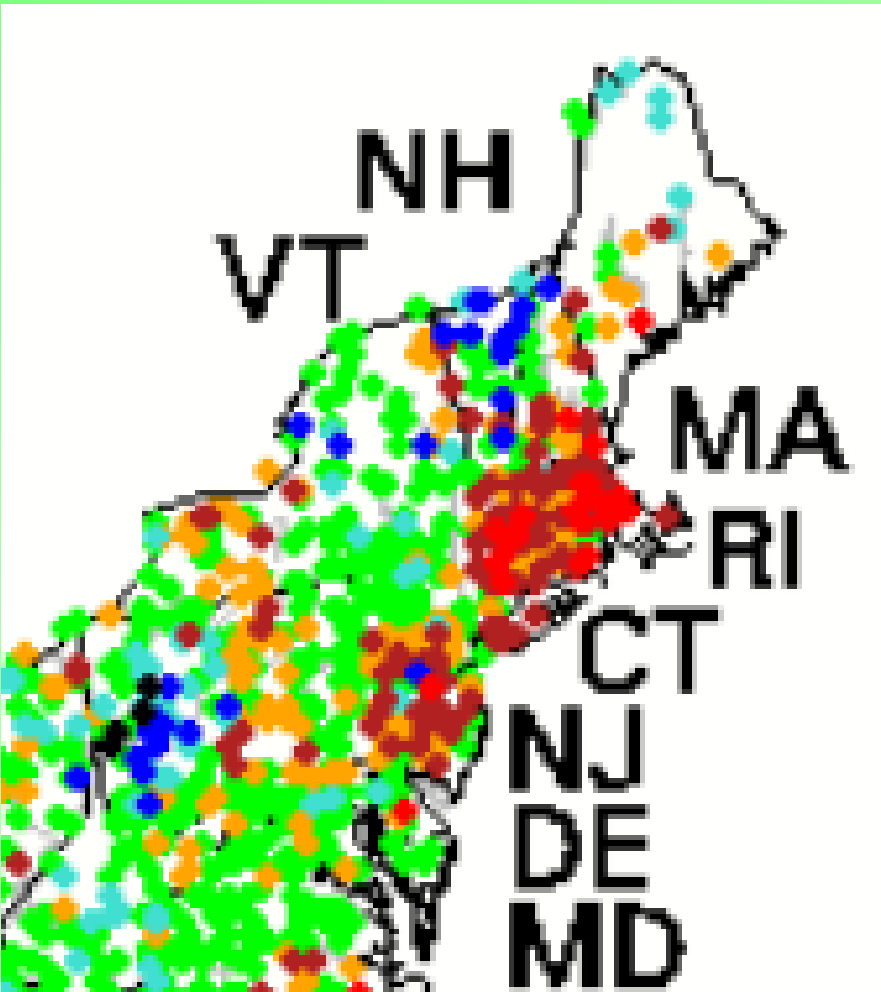
Explanation - Percentile classes (symbol color based on most recent measurement)

Low	<10	10-24	25-75	76-90	>90	High	Not Ranked
	Much Below Normal	Below Normal	Normal	Above Normal	Much Above Normal		

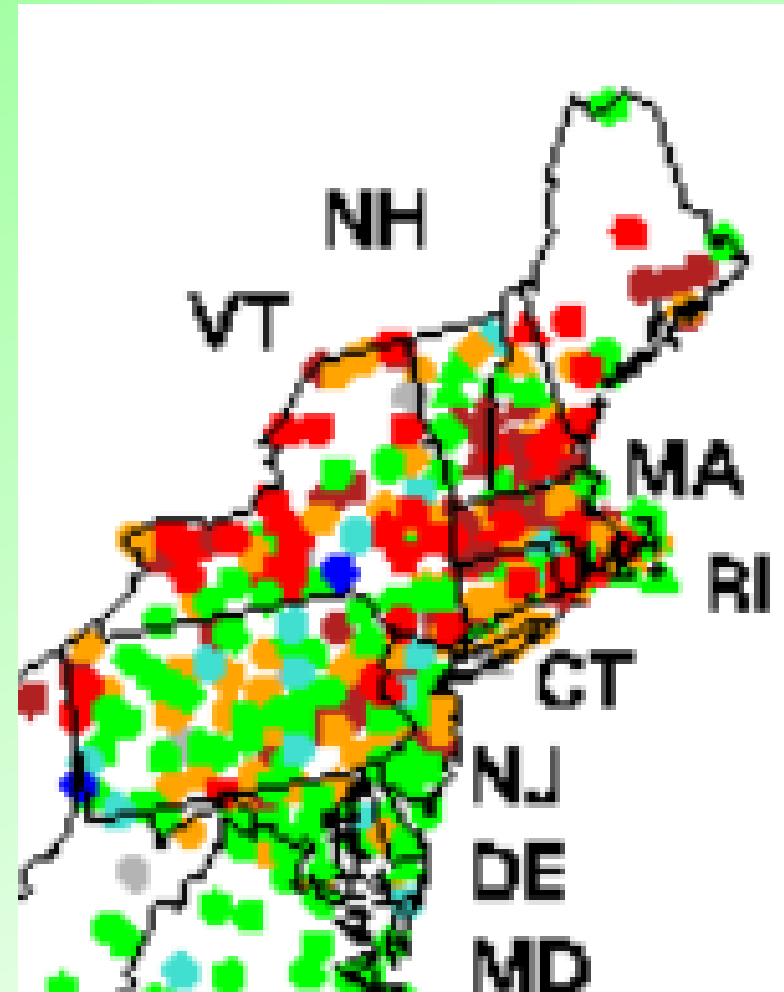
Wells Springs

	Real-Time		
	Continuous		
	Periodic Measurements		

## Streamflow



## Groundwater Levels



# Massachusetts Reservoirs

(August 1, 2016)

Quabbin Reservoir

– 87.4% of capacity

Wachusett Reservoir

– 91.1 % of capacity

“Normal”



<http://geology.com/state-map/maps/massachusetts-rivers-map.gif>

Source: Massachusetts Water Resources Authority

# New York City Reservoirs

(August 26, 2016)



West of Hudson Reservoirs  
(collectively)

Current storage – 81.6%

Normal storage – 81.2 %

Source: New York City Environmental Protection

<http://www.dos.ny.gov/watershed/images/lgmap.jpg>





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