
Streamflow and Groundwater Conditions in Rhode Island

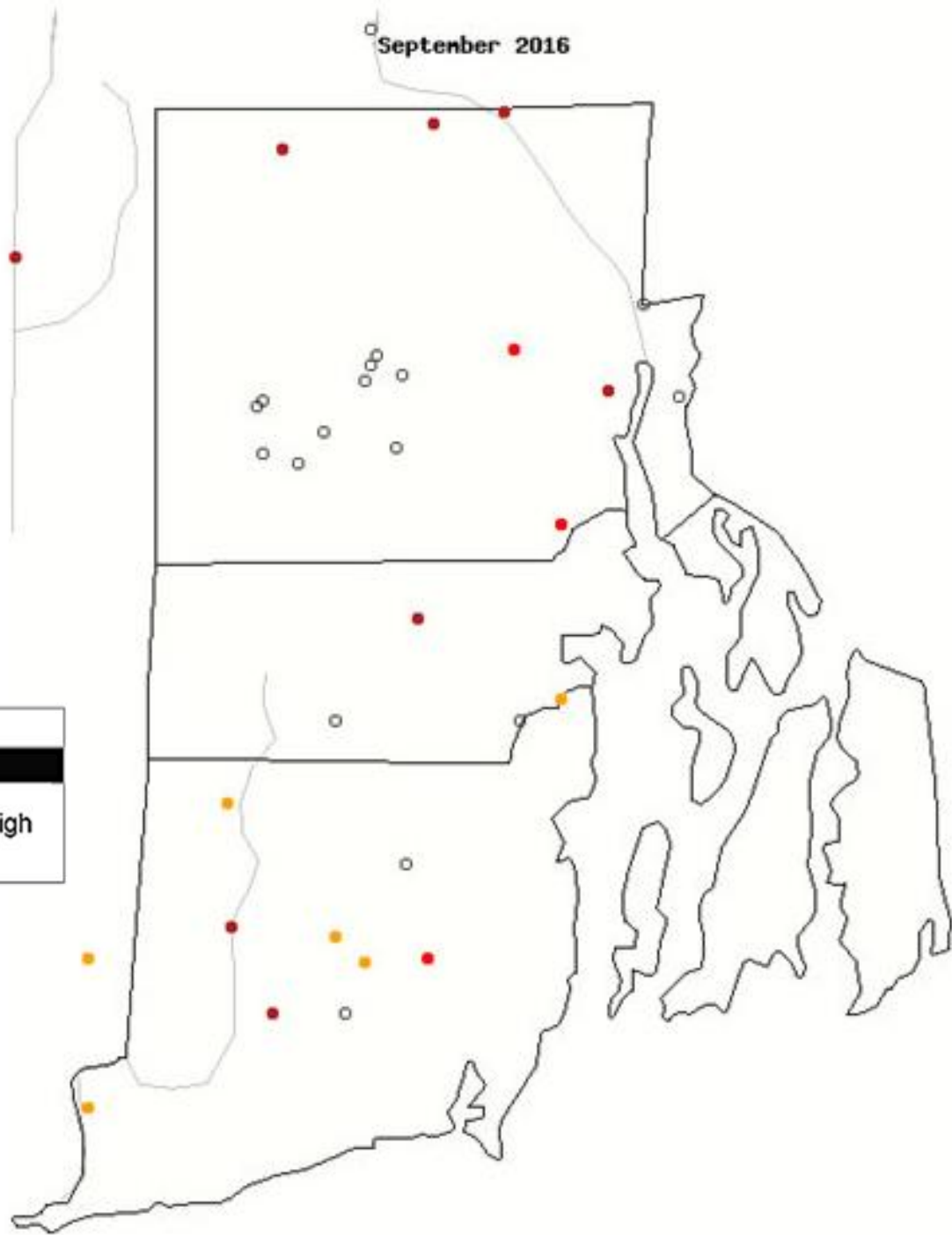
Gardner Bent
U.S. Geological Survey
New England Water Science Center

June 7, 2017










Average Streamflow Conditions September 2016

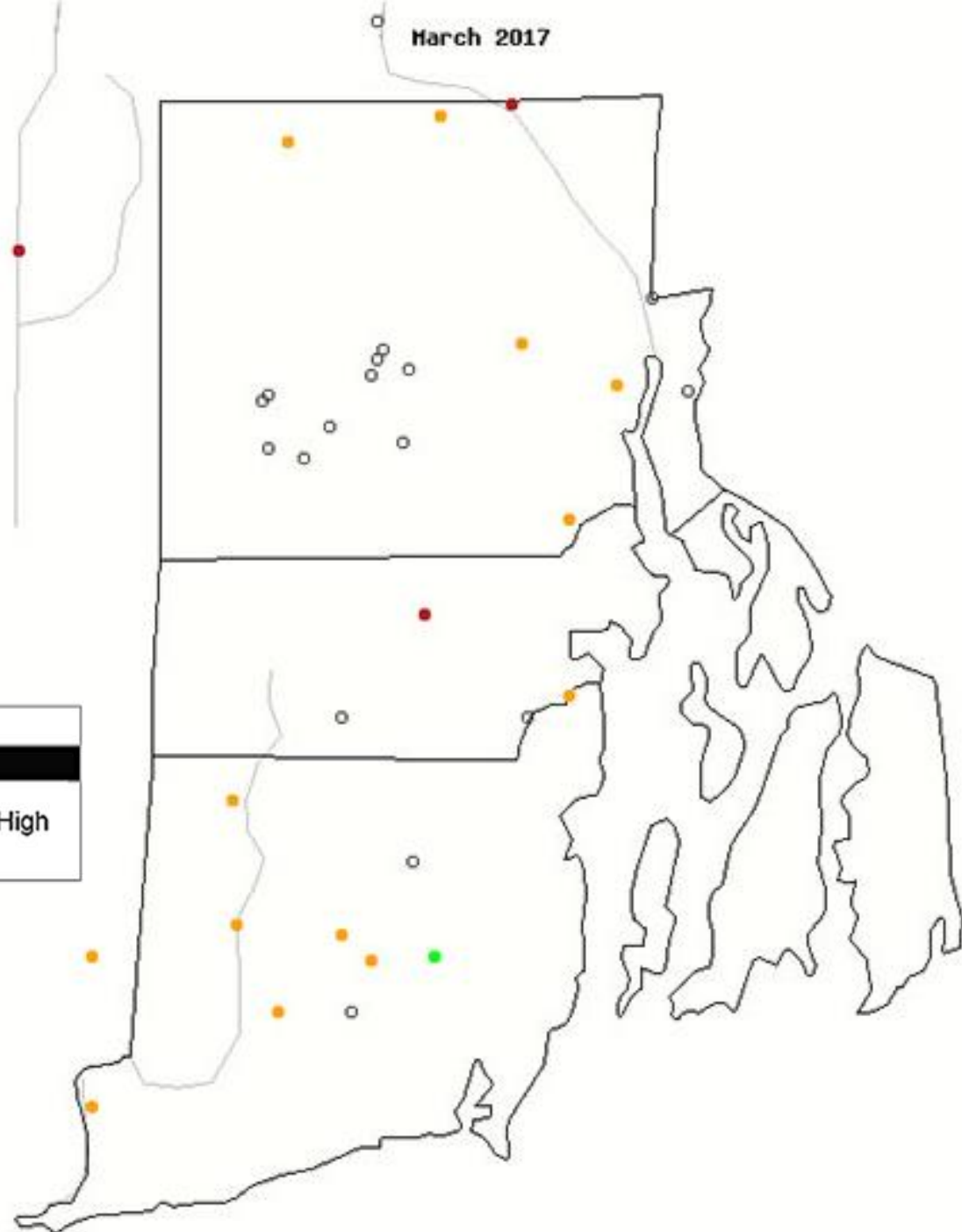
September 2016



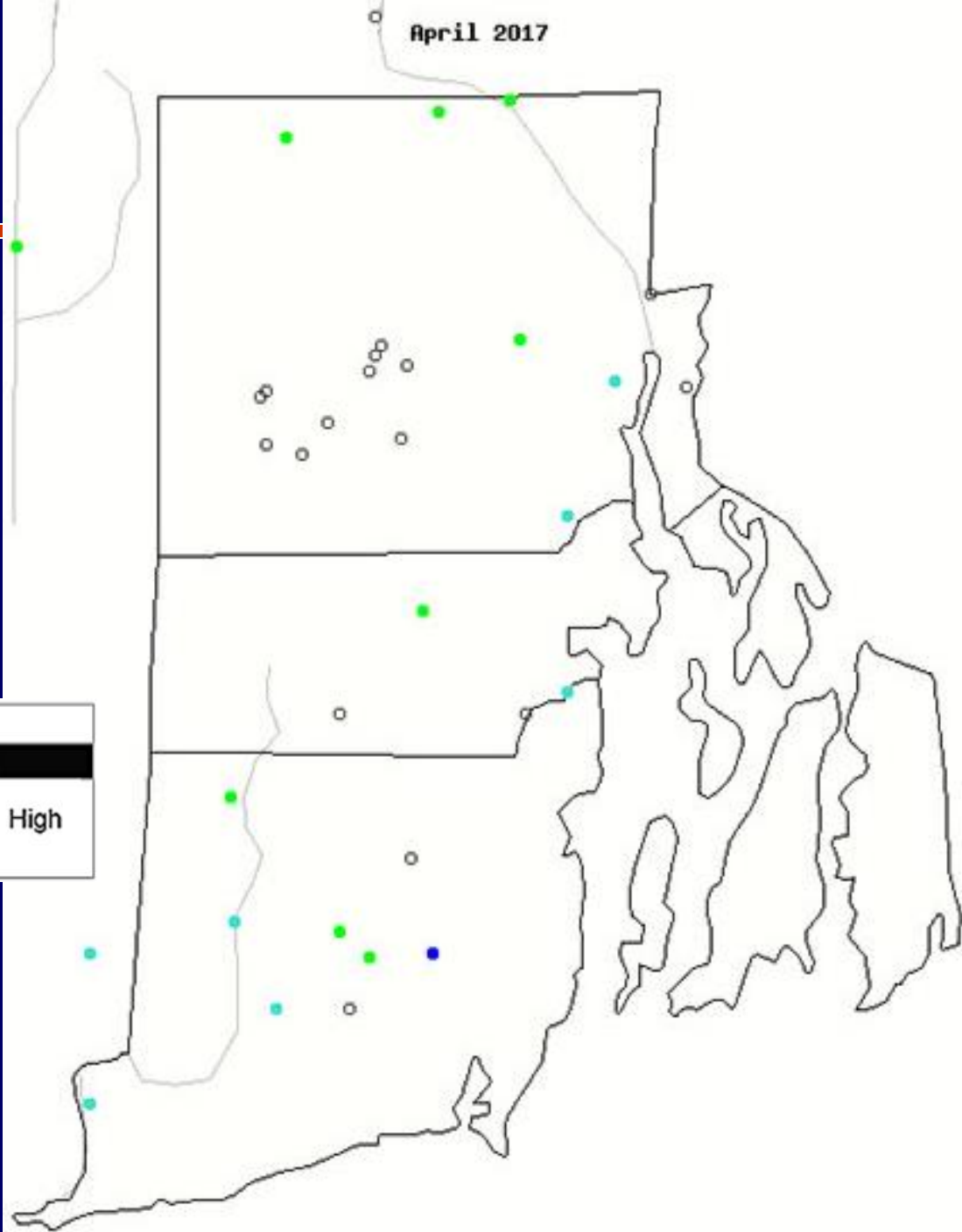
Explanation - Percentile classes

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

Average Streamflow Conditions March 2017



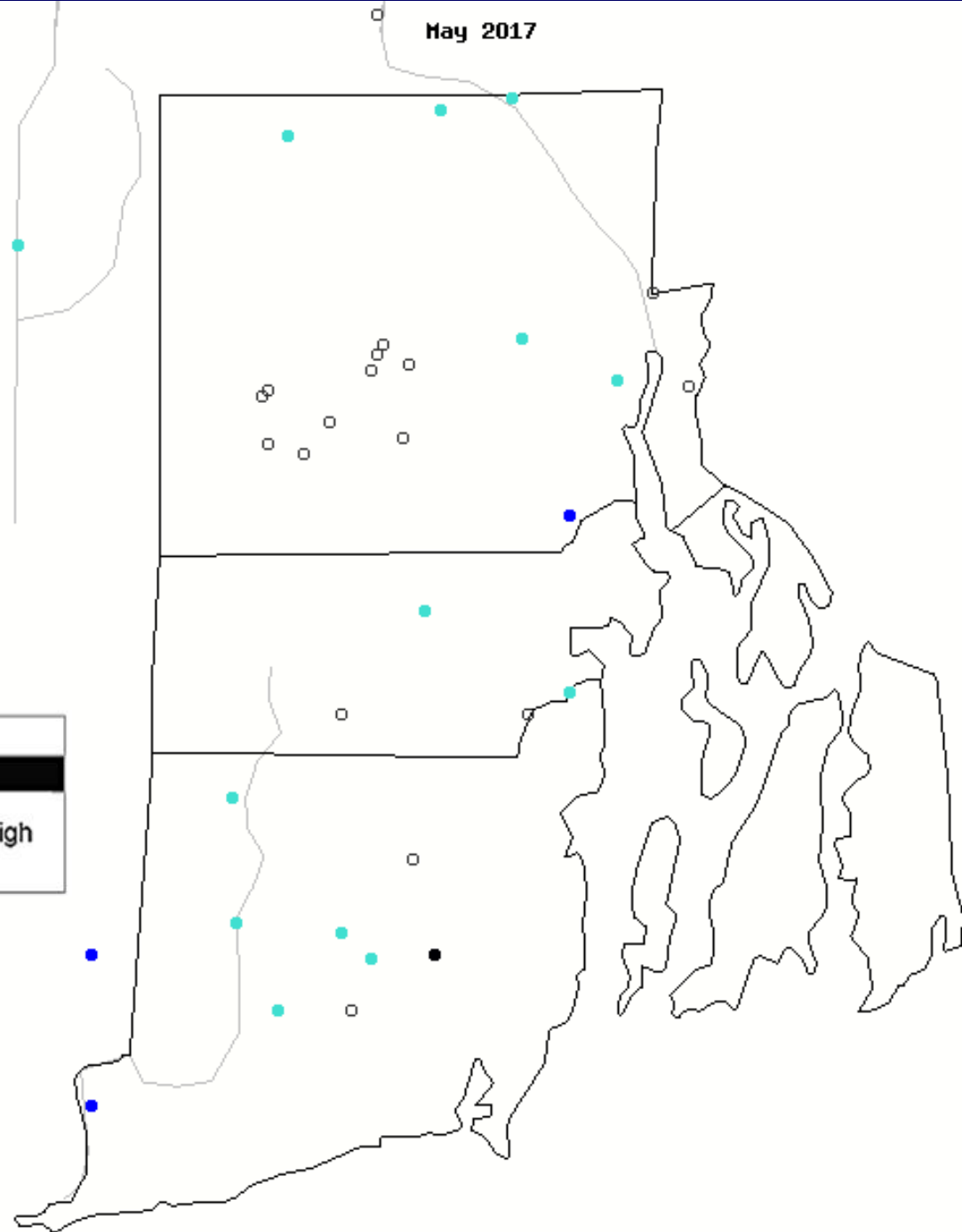
Average Streamflow Conditions April 2017



Explanation - Percentile classes

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

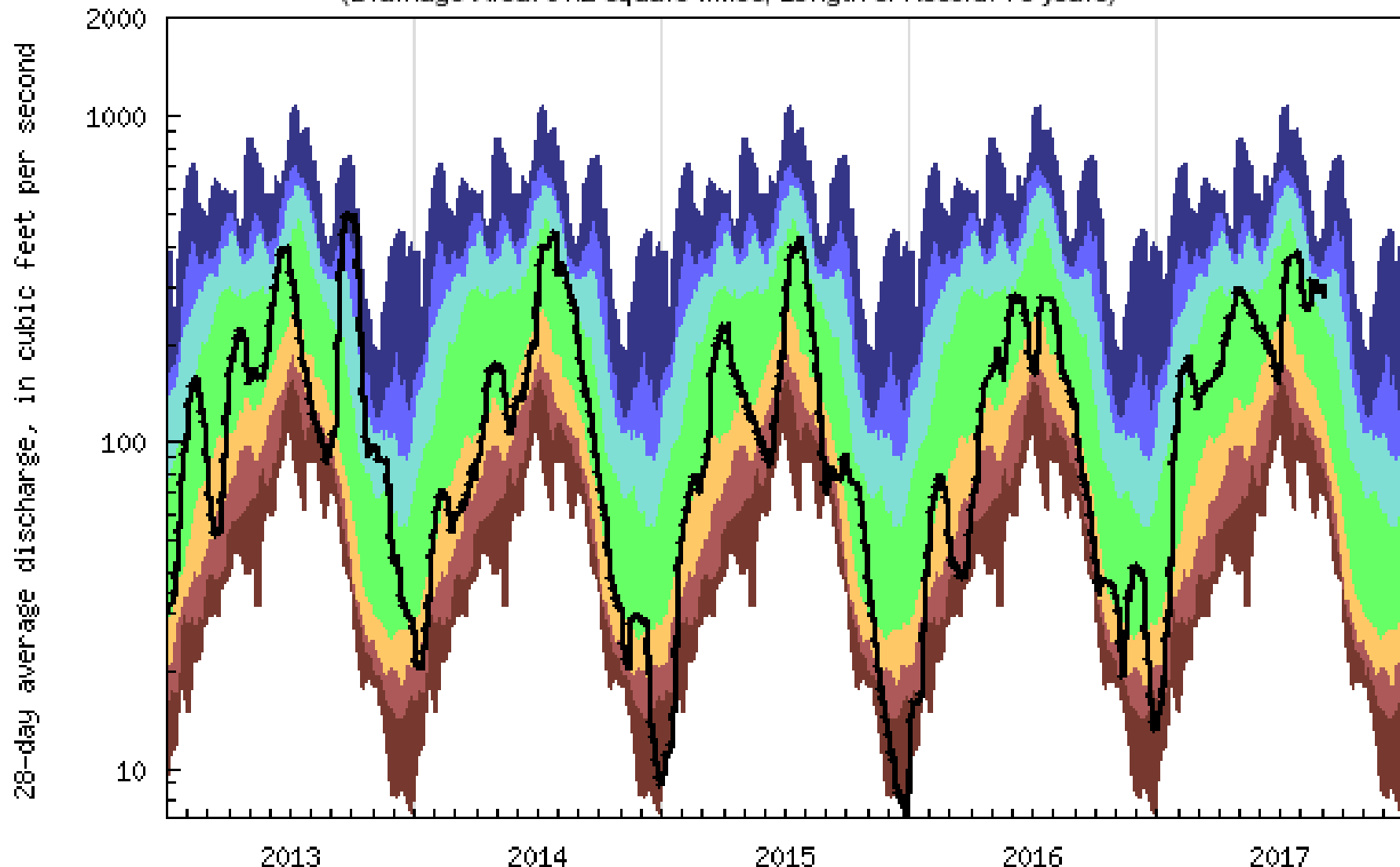
Average Streamflow Conditions May 2017



Explanation - Percentile classes

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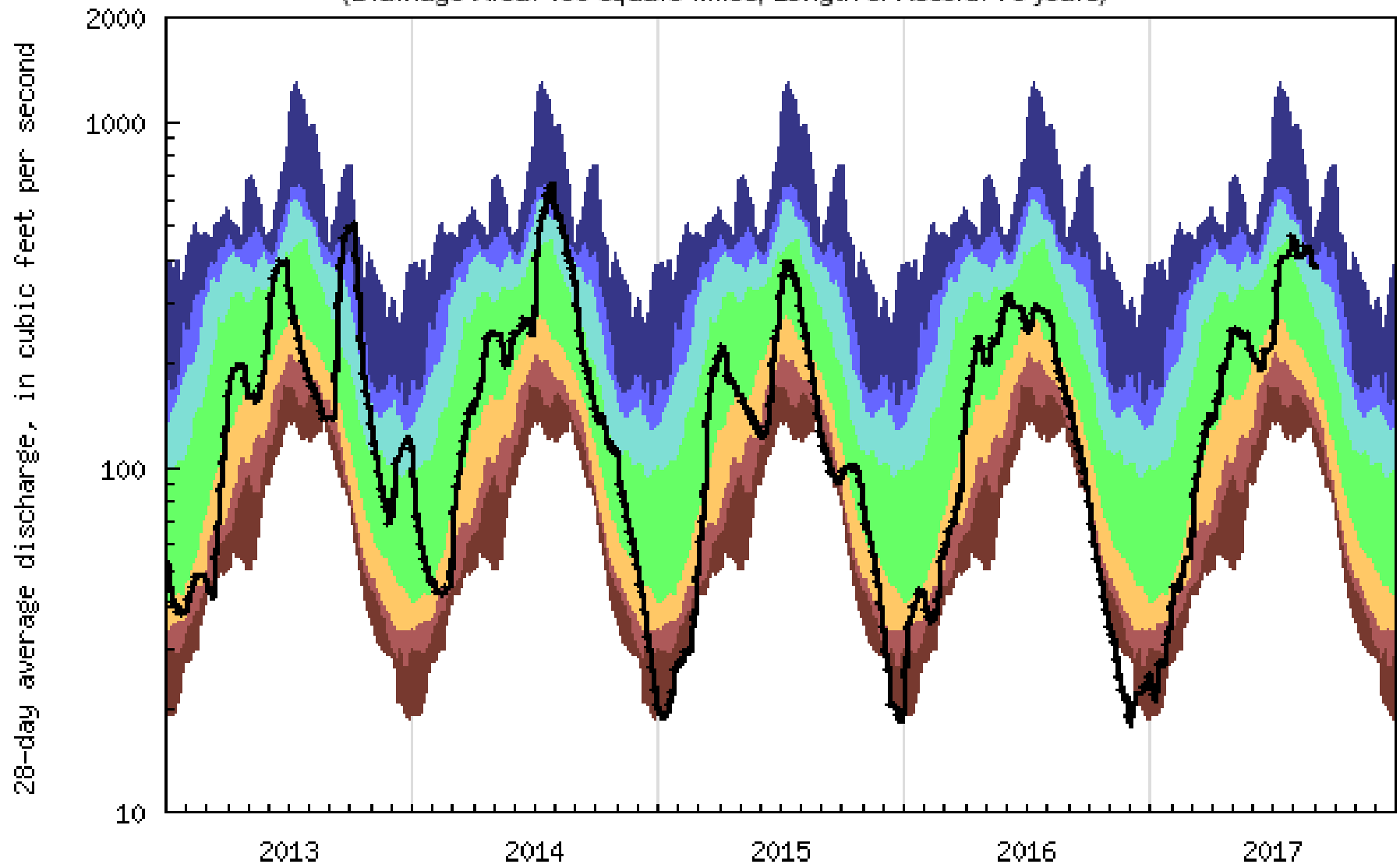
USGS 01111500 BRANCH RIVER AT FORESTDAL, RI
 (Drainage Area: 91.2 square miles, Length of Record: 75 years)



USGS WaterWatch

Explanation - Percentile classes							Flow
lowest-5th percentile	6-9	10-24	25-75	76-90	91-94	95th percentile-highest	
Severe hydrologic drought	Moderate hydrologic drought	Below normal	Normal	Above normal	Much above normal		

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

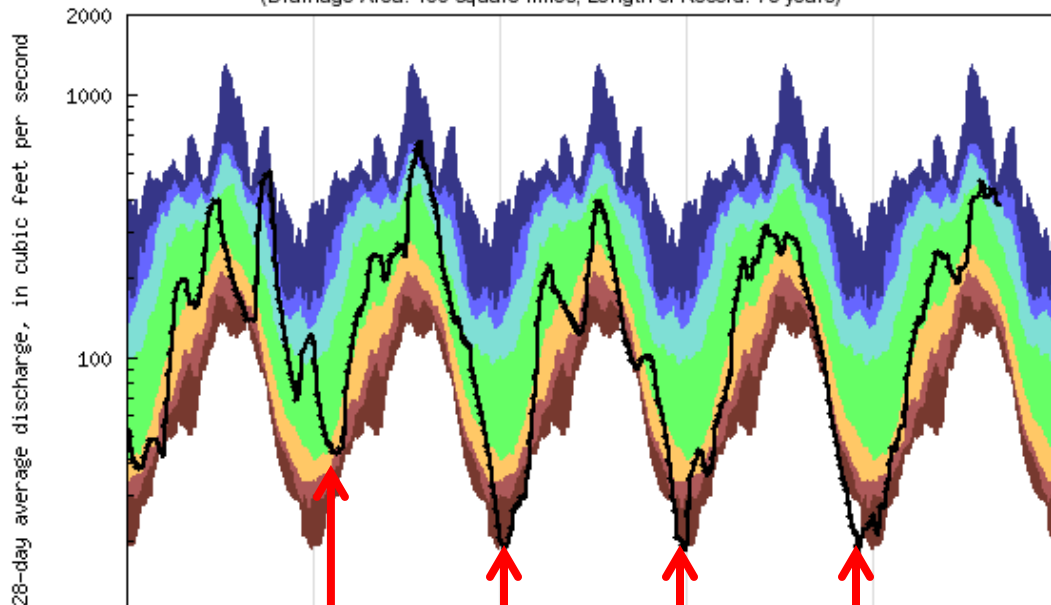


USGS WaterWatch

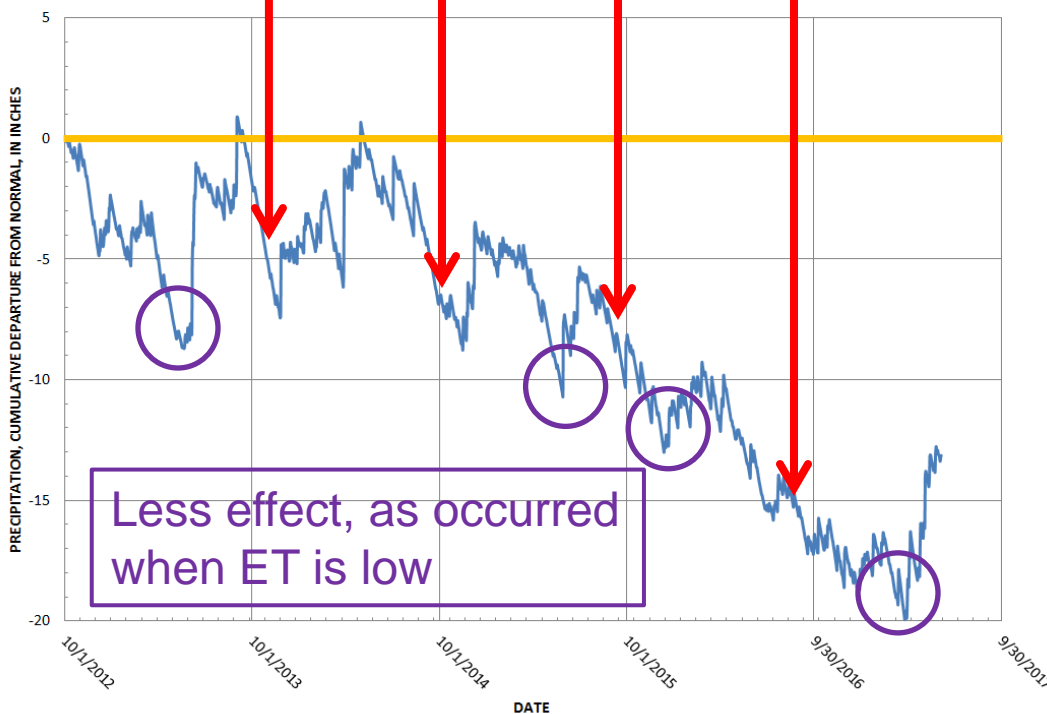
Explanation - Percentile classes

lowest-5th percentile	6-9	10-24	25-75	76-90	91-94	95th percentile -highest	Flow
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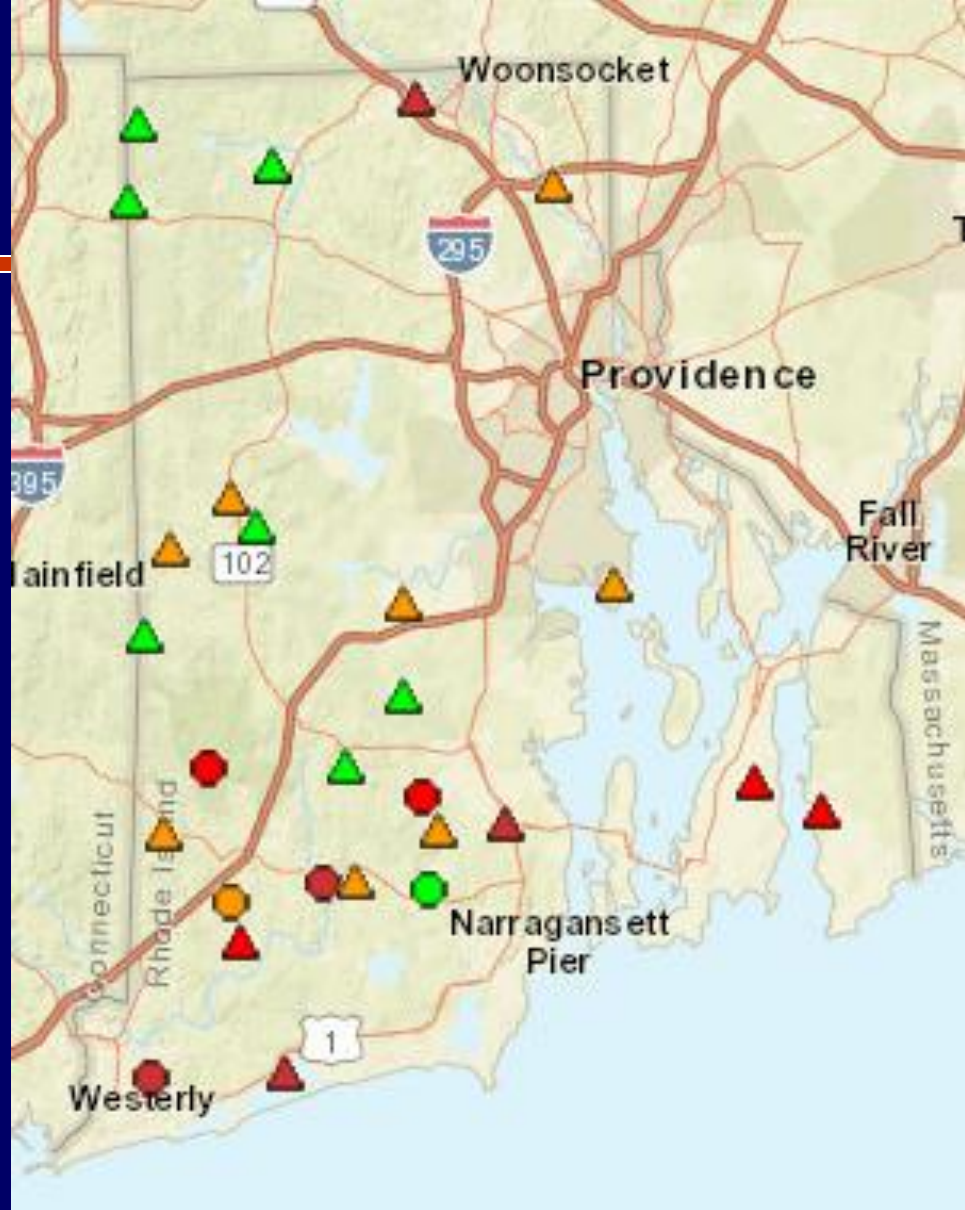
USGS 01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI
 (Drainage Area: 100 square miles, Length of Record: 75 years)



T.F. Green Airport - Precipitation - Cumulative Departure from Normal



Groundwater Conditions September 2016

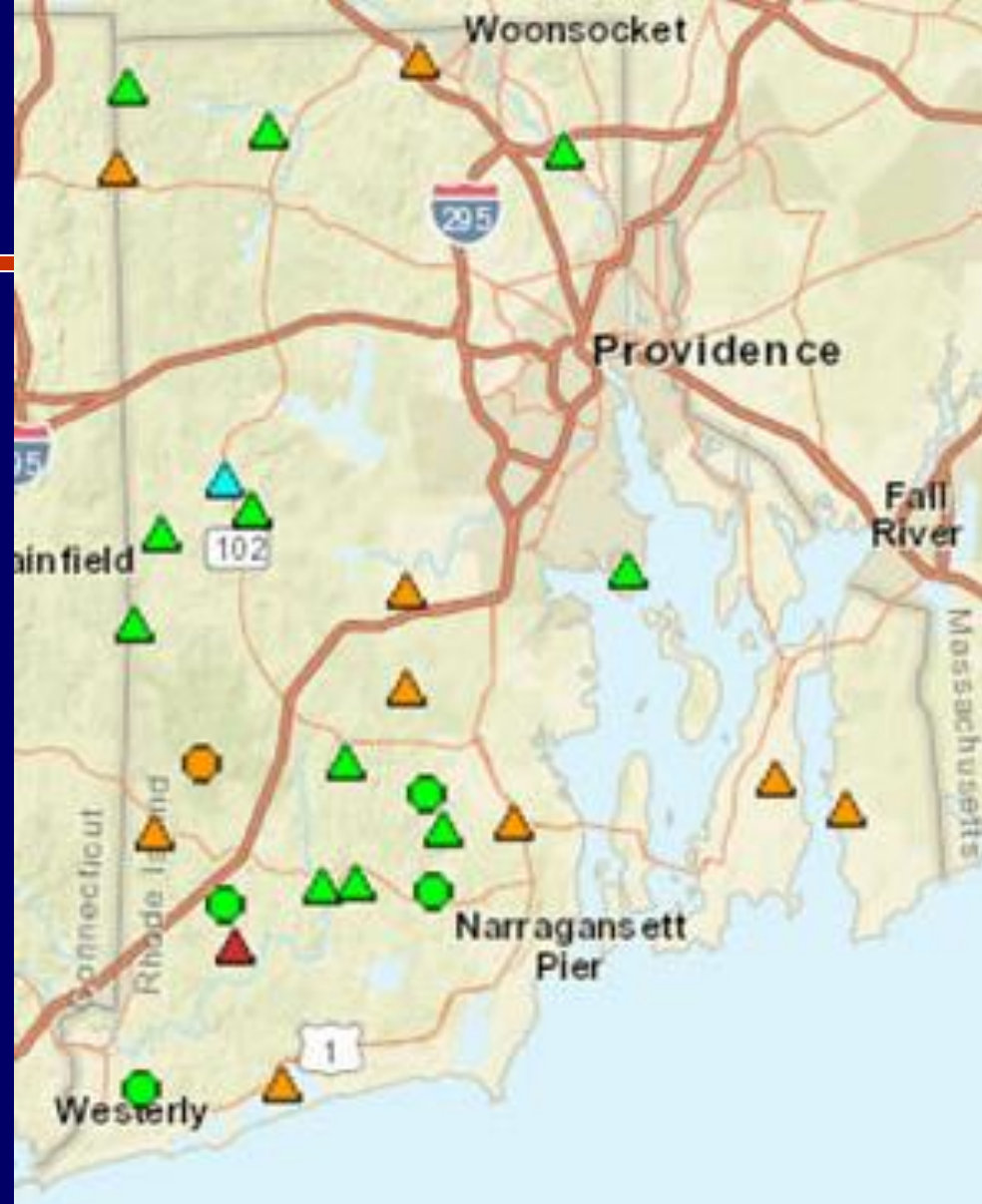


Explanation - Percentile classes (symbol color based on most recent measurement)

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	<input checked="" type="checkbox"/>
Continuous	<input checked="" type="checkbox"/>
Periodic Measurements	<input checked="" type="checkbox"/>

Groundwater Conditions March 2017



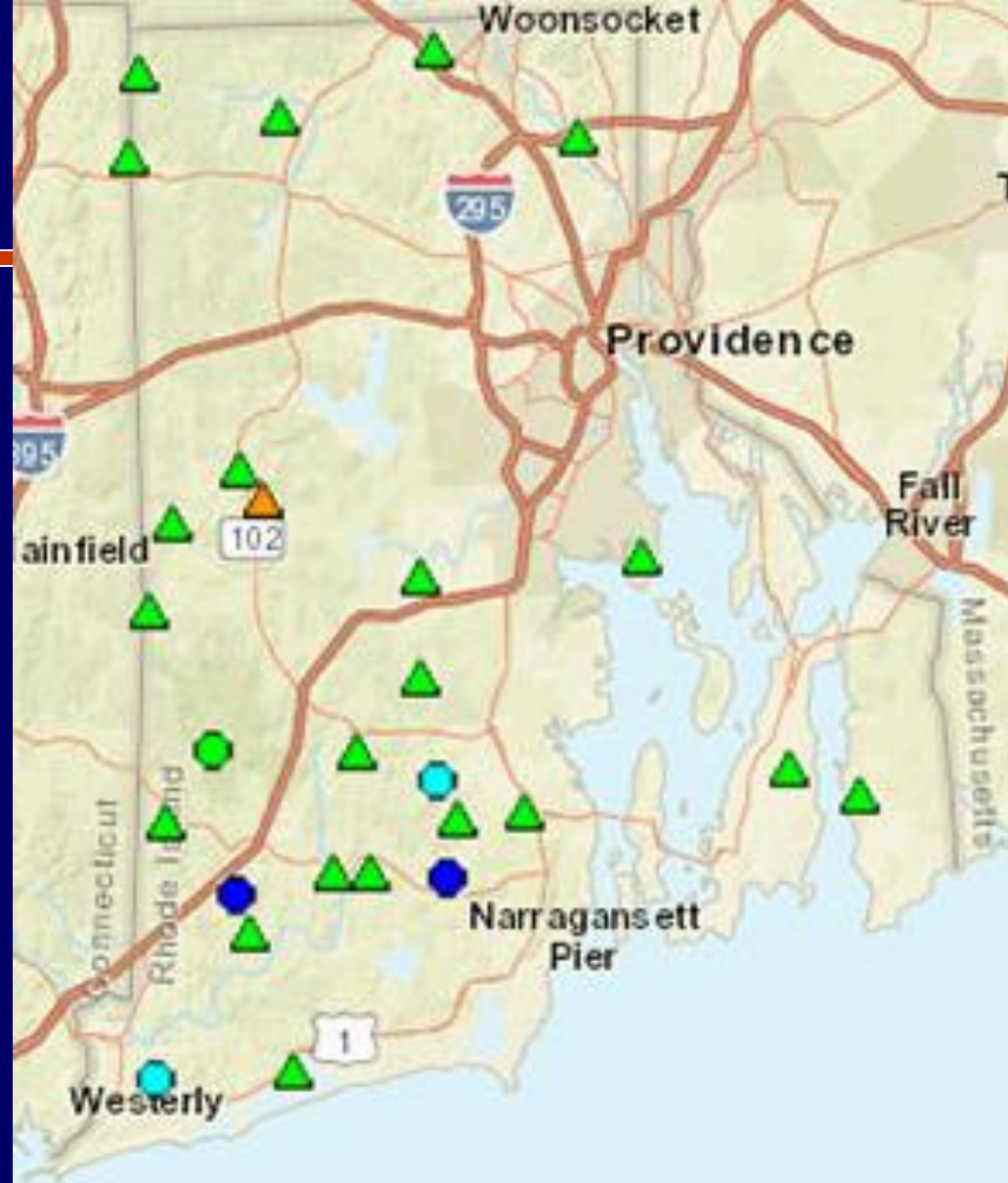
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Wells Springs

	Real-Time		
	Continuous		
	Periodic Measurements		

Groundwater Conditions April 2017

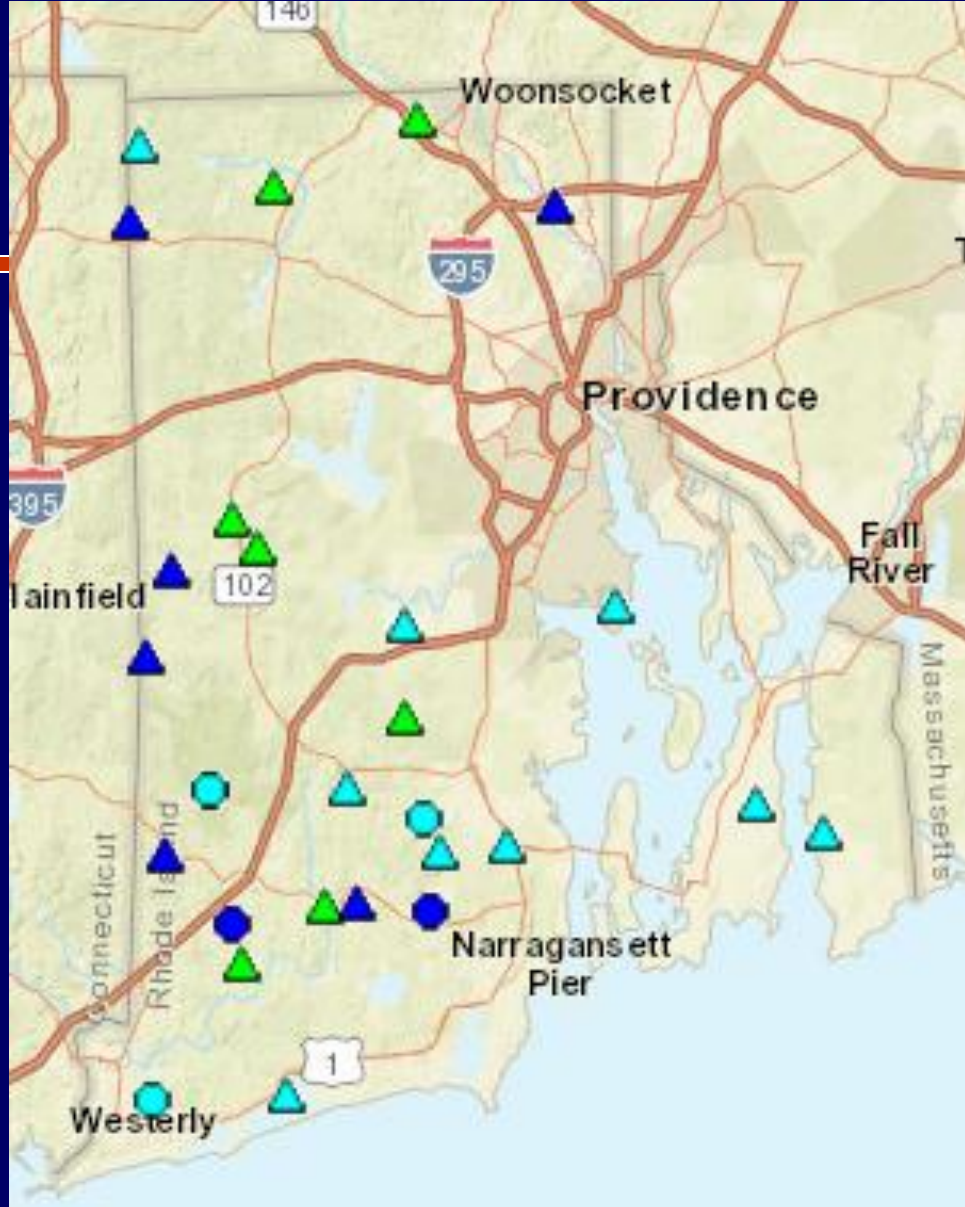


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Groundwater Conditions May 2017



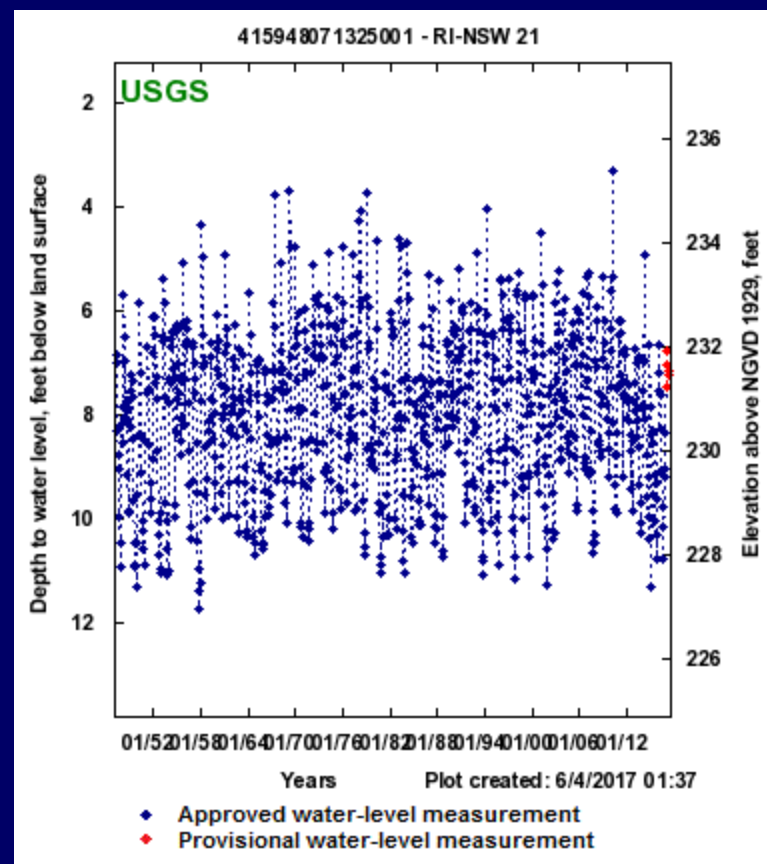
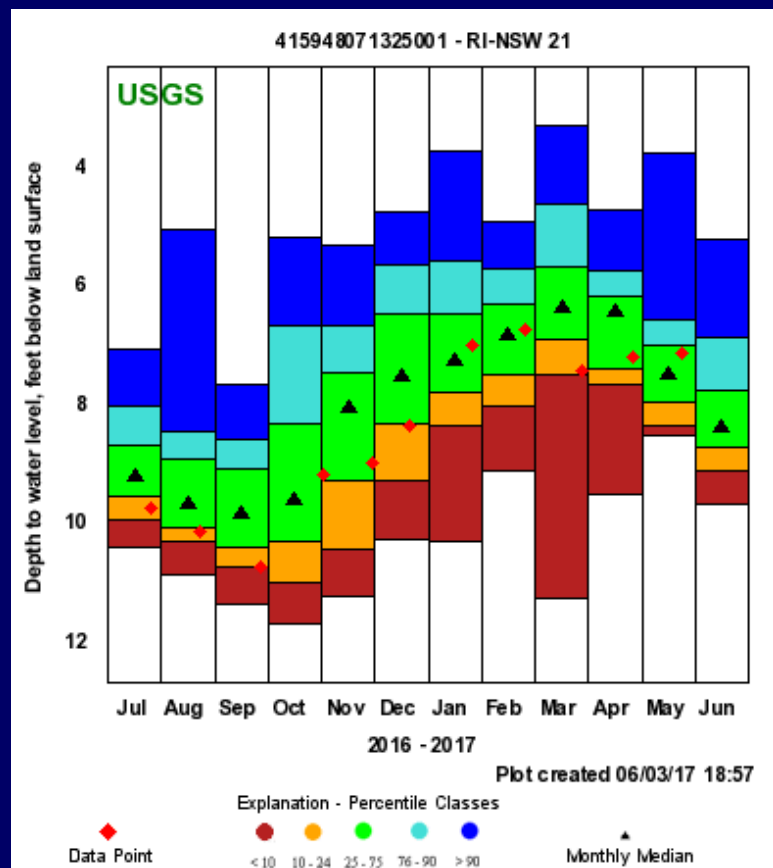
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GW Levels – NSW-21 – North Smithfield

Thin sand and gravel deposits

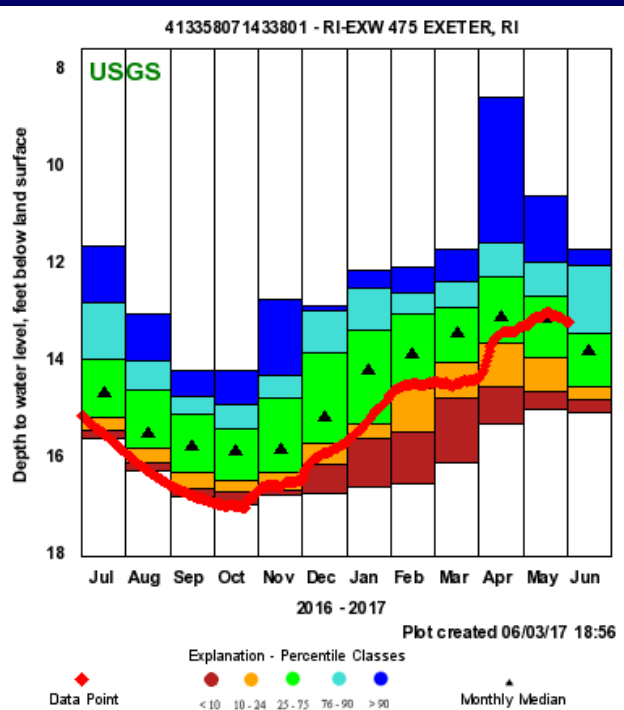


1-year

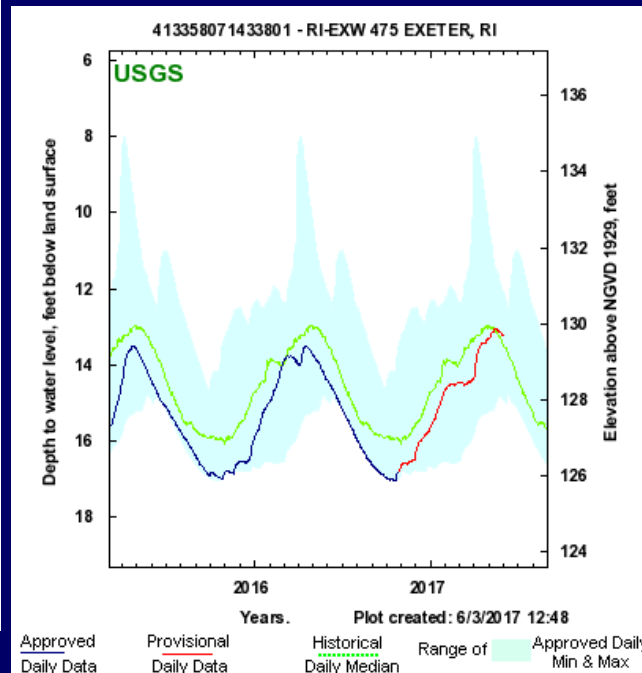
Period of record

GW Levels – EXW-475 – Exeter

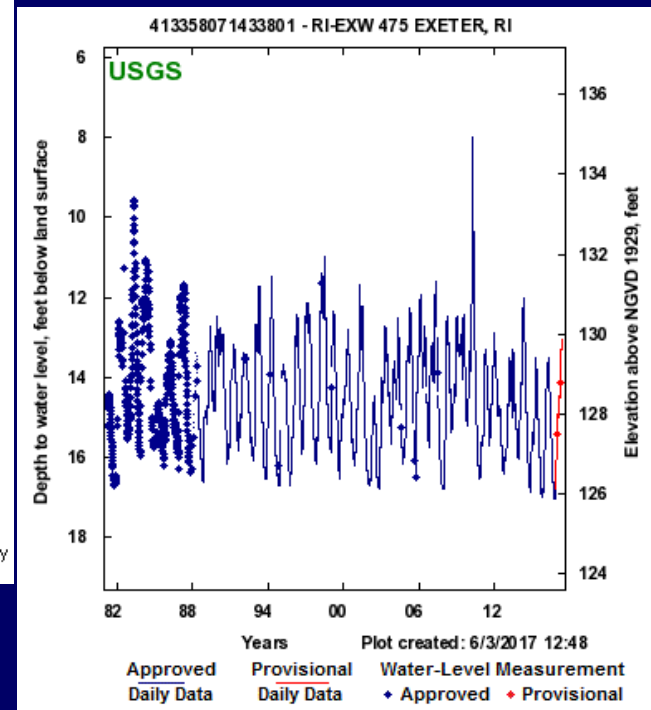
Moderate thickness of sand and gravel deposits



1-year



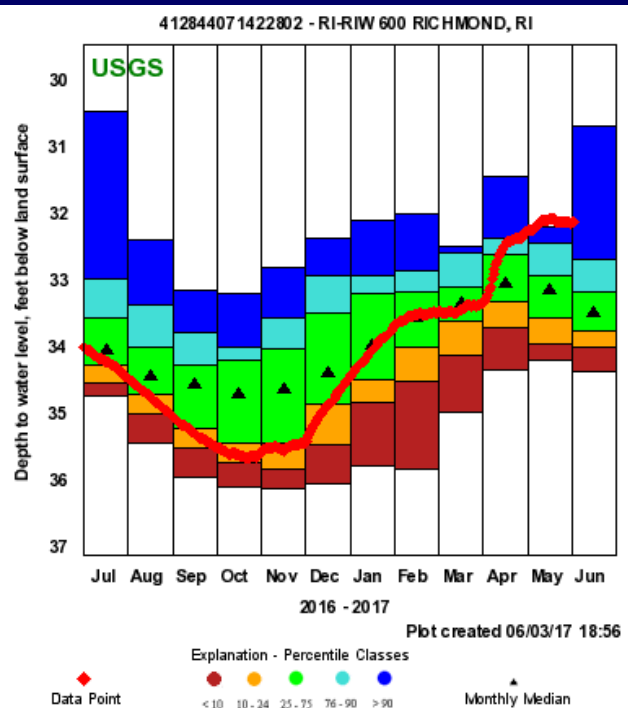
2-year



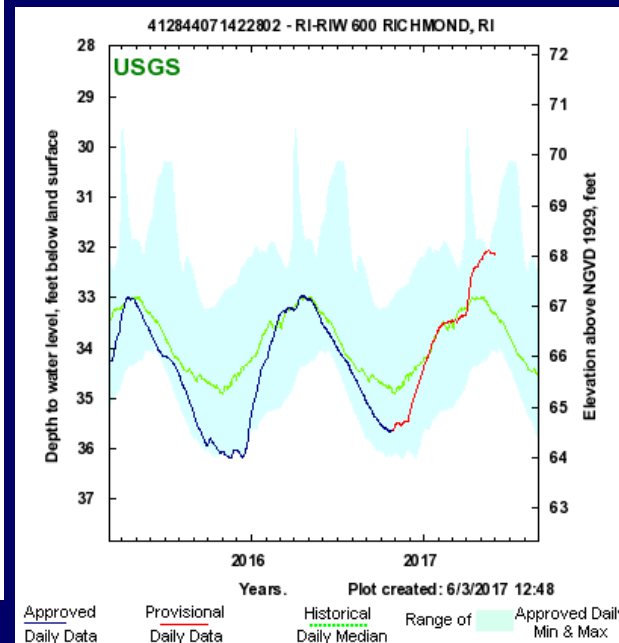
Period of record

GW Levels – RIW-600 – Richmond

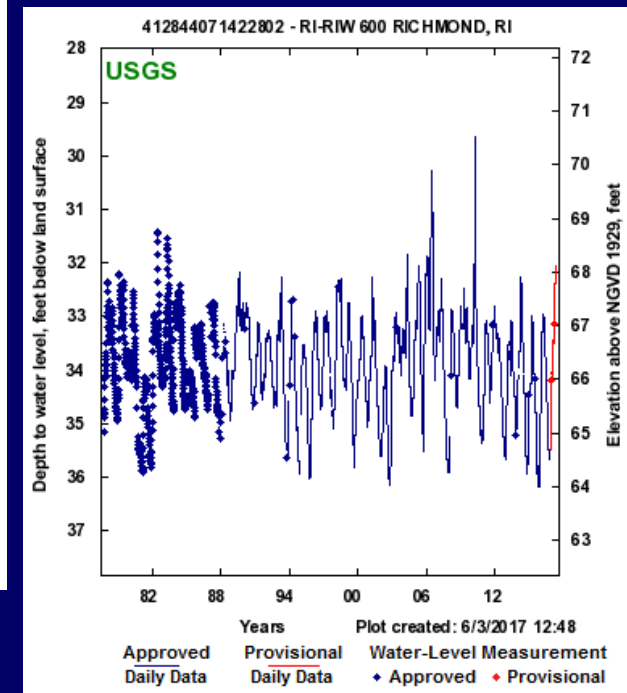
Thick sand and gravel deposits



1-year



2-year



Period of record

News in other States

- Massachusetts is working on updating their Drought Management Plan

Some general goals for improvement:

- *Early warning of onset of drought*
 - *Clear indication of the end of drought*
 - *Characterize severity of drought conditions*
 - *Accurate and comprehensive*
 - *Clear nomenclature to end users and public*
 - *Messaging to end users and public*
- Connecticut is also updating their DMP

Questions ?

01115098 Peepload Brook at Elmdale Rd. near North Scituate , RI



Sept. 21, 2016 at 10:45 am
0.24 cfs



May 3, 2017 at 09:20 am
13.6 cfs