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
Average Streamflow Conditions March 2017
Average Streamflow Conditions
April 2017

Explanation - Percentile classes

<table>
<thead>
<tr>
<th>Explanation</th>
<th>&lt;10</th>
<th>10-24</th>
<th>25-75</th>
<th>76-90</th>
<th>&gt;90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
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<td>Much below normal</td>
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USGS science for a changing world
Average Streamflow Conditions
May 2017

Explanatory - Percentile classes

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Map showing distribution of streamflow conditions across Rhode Island in May 2017.
Less effect, as occurred when ET is low.
Groundwater Conditions
September 2016
Groundwater Conditions
March 2017

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

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Wells: Real-Time
Continuous
Periodic Measurements
Springs:
Groundwater Conditions April 2017
Groundwater Conditions
May 2017
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 Peeptoad 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