Streamflow and Groundwater Conditions in Massachusetts

Richard Verdi
U.S. Geological Survey
New England Water Science Center
Massachusetts – Rhode Island Office
National Streamflow Conditions During May 1 – Aug. 9, 2016

Discharge Measurements are Made at Streamgages to Check or Adjust Stage-Discharge Ratings at Various Flow Rates

--- Provisional Data Subject to Revision ---

△ Median daily statistic (65 years) ★ Measured discharge
--- Discharge

--- Provisional Data Subject to Revision ---

△ Median daily statistic (90 years) ★ Measured discharge
--- Discharge

--- Provisional Data Subject to Revision ---

△ Median daily statistic (75 years) ★ Measured discharge
--- Discharge

--- Provisional Data Subject to Revision ---

△ Median daily statistic (101 years) ★ Measured discharge
--- Discharge
Monthly Streamflow Conditions at Selected USGS Streamgages in Massachusetts October 2014 to July 2016
7-day average streamflow conditions in Massachusetts
Aug. 3-9, 2016

Click map to obtain more detailed drought information for the state

<table>
<thead>
<tr>
<th>Explanation - Percentile classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
</tr>
<tr>
<td>&lt;=5</td>
</tr>
<tr>
<td>6-9</td>
</tr>
<tr>
<td>10-24</td>
</tr>
<tr>
<td>Insufficient data for a hydrologic region</td>
</tr>
</tbody>
</table>

- Extreme hydrologic drought
- Severe hydrologic drought
- Moderate hydrologic drought
- Below normal
Below normal average monthly streamflow in Massachusetts
July 2016
Massachusetts Groundwater Conditions During May, June, and July 2016

**May 2016**

**June 2016**

**July 2016**

**Explanation - Percentile classes**

- Red: Real Time
- Orange: Continuous
- Green: Periodic
- Blue: Percentile

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>Red</td>
<td>Much Below Normal</td>
</tr>
<tr>
<td>10-24</td>
<td>Orange</td>
<td>Below Normal</td>
</tr>
<tr>
<td>25-75</td>
<td>Green</td>
<td>Normal</td>
</tr>
<tr>
<td>76-90</td>
<td>Blue</td>
<td>Above Normal</td>
</tr>
<tr>
<td>&gt;90</td>
<td>Black</td>
<td>Much Above Normal</td>
</tr>
<tr>
<td>New High</td>
<td>Euro</td>
<td>High</td>
</tr>
<tr>
<td>Net Ranked</td>
<td>Diamond</td>
<td>Ranked</td>
</tr>
</tbody>
</table>

**USGS**

science for a changing world
Monthly Groundwater Levels at Selected USGS Observation Wells in Massachusetts
October 2014 to July 2016

GROUNDWATER LEVELS IN SELECTED USGS OBSERVATION WELLS, 2015 AND 2016 WATER YEARS

A. MA-XMW 78 Wilmington, MA, (1951-2016)

B. MA-PWW 22 Plymouth, MA, (1956-2016)

C. MA-XNW 13 Winchendon, MA, (1939-2016)

D. MA-PTW 51 Pittsfield, MA, (1963-2016)

- Monthly median groundwater level for period of well record
- Monthly well measurement during 2015 and 2016 water years
- Unshaded area shows range between highest and lowest monthly median groundwater level for period of well record
National Groundwater Conditions, August 10, 2016

Climate Response Network

Wednesday, August 10, 2016

[Map of the United States with various symbols indicating groundwater conditions]

Explanation - Percentile classes:
- Red: <10 (Much Below Normal)
- Orange: 10-24 (Below Normal)
- Green: 25-75 (Normal)
- Cyan: 76-90 (Above Normal)
- Blue: >90 (Much Above Normal)
- Black: High
- Gray: Not Ranked

Climate Response Network Well Count: 590

Map generated 8/10/2016 9:06:59 AM
Questions??