Drought Management Task Force Update

07.12.17

John Gregoire, Reservoir Operations
• Current Elevation: 526.72 ft
• Current Volume: 387,000 MG (93.9%)
• At current capacity Quabbin can supply the system’s current demand* for 4.9 years

* Calculated using an average daily demand of 200 MGD
Quabbin Reservoir Levels relative to Drought Stages

Quabbin Reservoir Levels
With Drought Emergency Planning Stages

- Current % Capacity
- Below Normal
- Warning
- Below ~55% Drought Emergency Stage 1
- Below 38% Drought Emergency Stage 2
- Below 25% Drought Emergency Stage 3

Percent Full

Jan-00 Jan-02 Jan-04 Jan-06 Jan-08 Jan-10 Jan-12 Jan-14 Jan-16 Jan-18
Quabbin Reservoir levels have been modeled for the next 12 months (July 2018 – June 2019) given varying yield conditions, and an annual demand of 220 mgd (includes a 10 mgd increase from current annual demand levels). It should be noted that June 2018 was the 40th driest June in the 70-year history of Quabbin yields. The monthly yield for June 2018 was 4,264 MG.

Table 1 below shows the ending drought status for the time period being simulated.

<table>
<thead>
<tr>
<th>Median Yield</th>
<th>1-Month</th>
<th>3-Months</th>
<th>6-Months</th>
<th>12-Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Dry (75th Percentile)</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Driest (of Record)</td>
<td>Normal</td>
<td>Normal</td>
<td>Below Normal</td>
<td>Below Normal</td>
</tr>
</tbody>
</table>

Evaluating a 24-month scenario using the driest conditions, Quabbin Reservoir would end in the bottom of the Below Normal Range (approximately 1% full before dropping into Drought Warning Stage Level).
Wachusett Reservoir Status – Normal operations

- Long Term Average
- Lower Band
- Upper Band
- Winter Band

- 2017
- 2018
- Long Term Average
- Lower Band
- Upper Band
- Winter Band