Northeast River Forecast Center’s Spring Flood Outlook

A Tale of Two Distinctly Different Winters!

David R. Vallee
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NOAA/NWS/Northeast River Forecast Center
Winter Highlights

90-day Precipitation
Wetter North

Winter Precipitation
Much Wetter than Fall

Season Snowfall
Mainly just below to
Much below normal
2015 vs. 2016 Snow Water
Snow limited to far northern NH & interior ME
One Widespread Flood Event
Feb 22-27 2016

22 locations exceeded flood stage
*4 locations experienced ice jams

Widespread 2-3.5 inch rainfall
Included a line of severe thunderstorms!
USGS Streamflow Conditions
March 28th, 2016

WaterWatch Streamflow Map
Choose a region and then click "GO" to view a regional map
(Warning: It may take several minutes to process)

<table>
<thead>
<tr>
<th>Map type</th>
<th>United States</th>
<th>Water Res. Region</th>
<th>GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>7-day flow</td>
<td></td>
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</tbody>
</table>

Explanation - Percentile classes

- Low
  - <10: Much below normal
  - 10-24: Below normal
  - 25-75: Normal
  - 76-90: Above normal
  - >90: Much above normal
  - High
New York City’s Water Supply System
March 25, 2016

Total Storage (% of Capacity)
Current: 93.3
Normal: 93.0

Consumption (billion gallons)
03/24/16 0.91

Average Precipitation (inches)
Actual Historical
January: 1.75 3.11
February: 4.49 2.59
March: 0.70 2.73

Scituate Reservoir Elevation (feet) 281.45 (93.6% of Capacity)
Plant Influent (mgd) 52,093.375 (50.6 CFs)
Cumulative Reservoir Evap. (gal) -41,986
Downstream Discharge (mgd) 9.70 (15.4 CFs)

March 1, 2016

Reservoir Levels: The Quabbin Reservoir, the largest water supply source for 47 communities in the Metro Boston area, is currently at 89.9% of its 412 billion-gallon maximum capacity. The 65 billion-gallon Wachusett Reservoir is 91.9% full.

Detailed Data and Archives

Conditions Status: According to the MWRA’s Drought Management Plan, the water system is currently listed in a Normal Operations Status (see table below).

<table>
<thead>
<tr>
<th>Quabbin Level</th>
<th>Normal Operations</th>
<th>Below Normal</th>
<th>Drought Warning</th>
<th>Drought Emergency 1</th>
<th>Drought Emergency 2</th>
<th>Drought Emergency 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% - 80%</td>
<td>80% - 65%</td>
<td>65% - 50%</td>
<td>50% - 30%</td>
<td>38% - 25%</td>
<td>25% - 0%</td>
<td></td>
</tr>
</tbody>
</table>

Lake Champlain Extremes & Level

Click and drag in plot area to zoom in
Short-range Ensemble River Forecasts
CPC Outlooks

6 to 10 day outlooks

8 to 14 day outlooks
Spring Flood Potential Outlook

Outlook Issued 3/16/2016; Valid 3/16/2016 - 3/31/2016; updated biweekly

This product does not address the potential for flooding due to ice jams

Flood Potential
- Much Above
- Above
- Normal
- Below
- Much Below

Map produced by the Northeast River Forecast Center
Concerning the Weakening of ENSO

Spring can be very wet in parts of the Northeast

- Three most intense ENSO Events did produce a period of every wet weather
- Increased river flood potential
- 3-month rainfall departures of 5-10 inches above normal
- Small sample size – and certainly not the only forcing mechanism
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Building a Weather-Ready Nation