



***Alewife Brook Pump Station Rehabilitation  
Design/CA/RE Services  
Contract 7034 – Amendment No. 3***

April 12, 2017



# Alewife Brook Pump Station





# Rehabilitation

## Work to date:

- Installation of flood control measures at exterior openings
- Construction of bypass pumping system discharge vault
  - Will later serve as the Alewife Brook Conduit meter vault
- Installation of bypass pumping system pumps, piping and valves
- Commencement of PCB remediation

## Upcoming work:

- Full bypass, then station rehabilitation

Substantial Completion May 2018



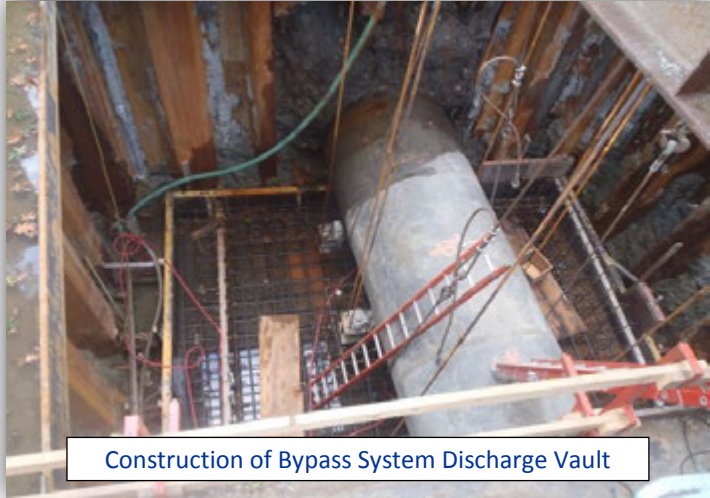
# Work to Date



Bypass Pumping Discharge Lines



# Work to Date



Construction of Bypass System Discharge Vault



Installation of Bypass System Pumps and Suction Lines



Flood Plank Frames Installed at Screen Room Door



## Contract 7034 Amendment No. 3

Additional Contractor Submittal Review Services \$95,266

- Contract quantity of 220 has been reached
- Additional 167 submittals projected to be reviewed
- Cost based on actual incurred for the initial 220 submittals



***Reading Extension Sewer and Metropolitan  
Sewer Rehabilitation  
Contract 7164***

April 12, 2017



## Original Construction circa 1919

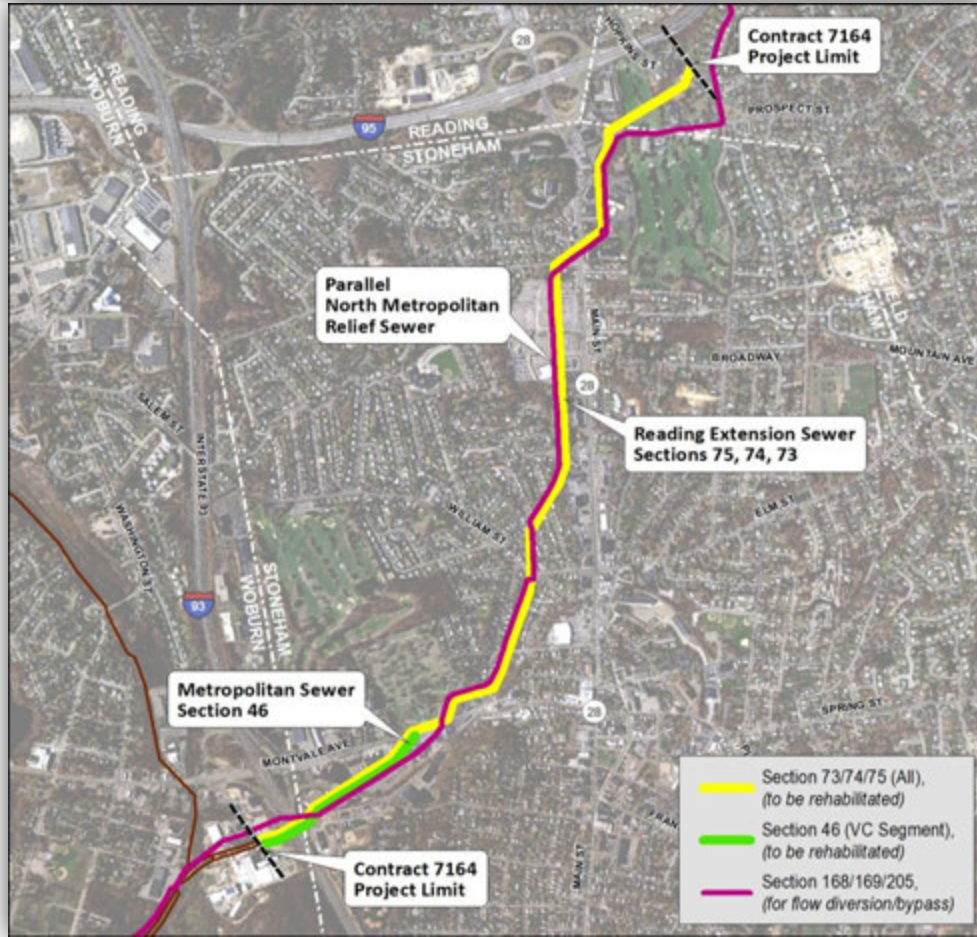


Construction of a Section of the Reading Extension Sewer (circa. 1919)  
along Prospect Street near the Stoneham/Wakefield town line.





# 7164 Project Limits (Stoneham, Woburn and Wakefield)







# 7164 Project Information and Summary

- Rehabilitation of 13,100 ft of pipe utilizing Cured-in-Place Pipe (CIPP) and lining 62 manholes and structures
- Bypass pumping and flow diversions
- Coordination with other projects (MWRA NIH, Eversource Energy and Rail Trail)





# Contract 7164 – Bid Tabulation

- Bids opened on February 23, 2017

<u>Contractor</u>	<u>Bid Amount</u>
<b>Green Mountain Pipeline Services, Inc.</b>	<b>\$2,048,945</b>
Insituform Technologies, LLC	\$2,154,000
Layne Inliner, LLC	\$2,891,160
<i>Engineer's Estimate</i>	<i>\$4,240,000</i>

- Staff recommend to award Contract 7164 to Green Mountain Pipeline Services, Inc.



## 7164 Estimate Differences

- More Aggressive Installation Rate (fewer lining setups):
  - Insertion lengths longer than assumed
  - Lower equipment time/labor hours
  - Reduction in bypass pumping time
  - Less traffic maintenance (Police and devices)
- Lower overhead with lining company General Contractor
- More aggressive bid as a past General Contractor and subcontractor for MWRA
- Close range of bids indicates correct level of effort to successfully complete project



## 7164 Schedule and Award Summary

Contract Award to:	Green Mountain Pipeline Services, Inc.
Contract Bid:	\$2,048,945
Notice to Proceed:	May 2017
Contract Substantial Completion:	August 2018
Contract Duration:	487 calendar days



**Section 80 Repair  
MWRA Contract No. 7532**

**Construction Update  
April 12, 2017**

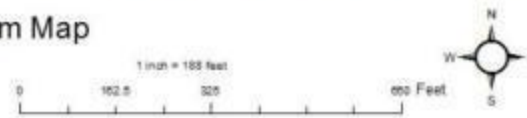


# Section 80 Repair Locus Plan



Date: 1/18/2017  
Security Operational - For MWRA use ONLY

MWRA System Map







***Section 80 Emergency Repair  
MWRA Contract No. OP-352  
Construction Update  
April 2-3, 2017***



# Section 80 Emergency Repair



Date: 4/11/2017  
Security Operational - For MWRA use ONLY

MWRA System Map





## Section 80 Emergency Repair



Cutting pavement in lane  
4/2, 10:15 P.M.

Buried manhole cover found  
4/2, 10:45 P.M.





# Section 80 Emergency Repair



Air Release Valve assembly  
installed on existing pipe  
4/2, 11:55 P.M.

Air Release Valve Assembly  
(mounted on flanged plate)





## Section 80 Emergency Repair



Top of Flange without A.R.V  
4/3, 12:05 A.M.

New Flange Plate installed  
4/3, 12:40 A.M.





# Section 80 Emergency Repair



Prepared Trench  
4/3, 1:20 A.M.

Backfilled with CDF  
4/3, 1:30 A.M.





# Section 80 Emergency Repair



Temporary Trench paving  
4/3, 2:40 A.M.





## Section 80 at Recreation Road, Weston – April 8-9

- Leak at 6:00 on pipe between removed thrust block and coupling







# Excavation and Repair





# Form for Thrust Block



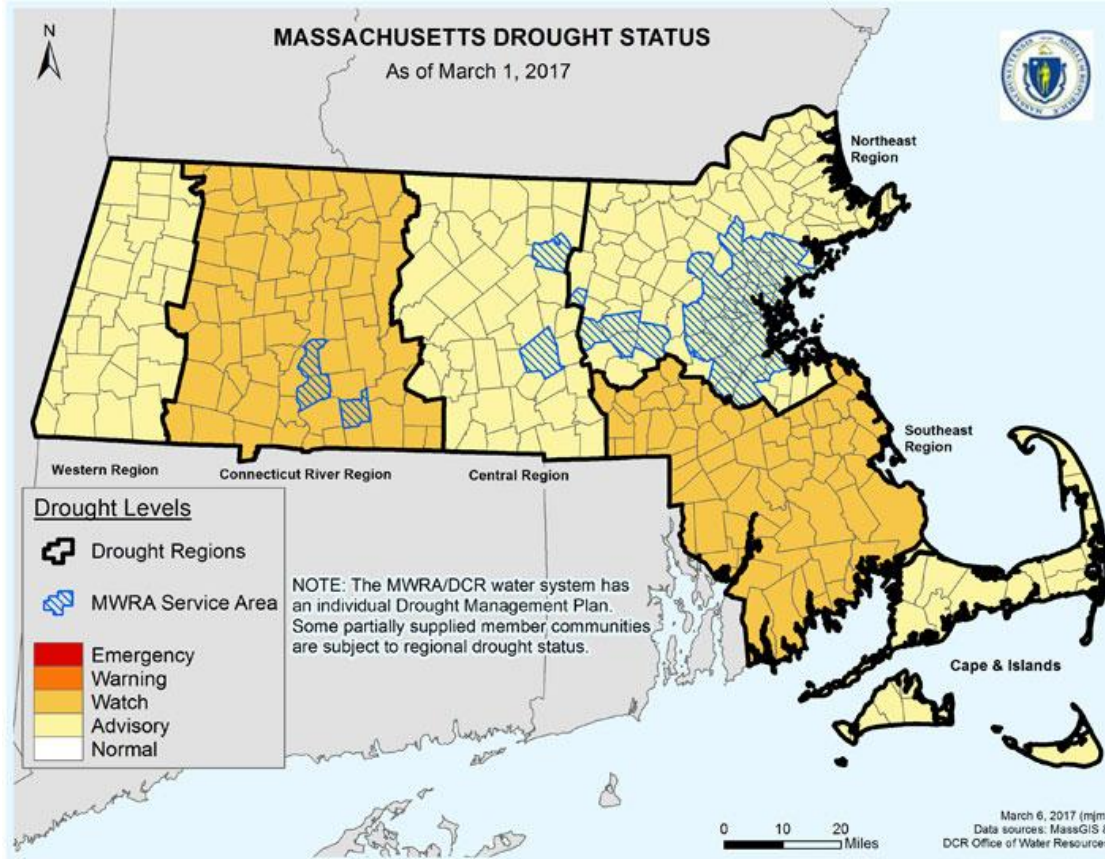


***Quabbin Reservoir and  
Drought Status Update***

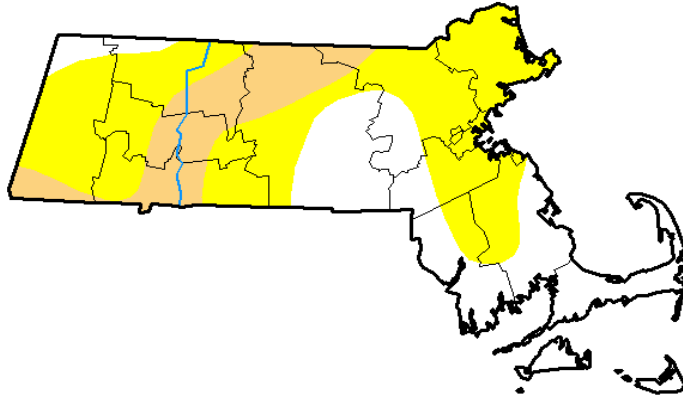
April 12, 2017



# Massachusetts Drought Status March 1, 2017



### U.S. Drought Monitor Massachusetts



**April 4, 2017**

*(Released Thursday, Apr. 6, 2017)*

Valid 8 a.m. EDT

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	33.19	66.81	16.65	0.00	0.00	0.00
<b>Last Week</b> <i>03-28-2017</i>	1.34	98.66	66.79	14.73	0.00	0.00
<b>3 Months Ago</b> <i>01-03-2017</i>	0.70	99.30	98.09	69.13	8.59	0.00
<b>Start of Calendar Year</b> <i>01-03-2017</i>	0.70	99.30	98.09	69.13	8.59	0.00
<b>Start of Water Year</b> <i>09-27-2016</i>	0.00	100.00	98.15	89.95	52.13	0.00
<b>One Year Ago</b> <i>04-05-2016</i>	80.30	19.70	0.00	0.00	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.*

Author:

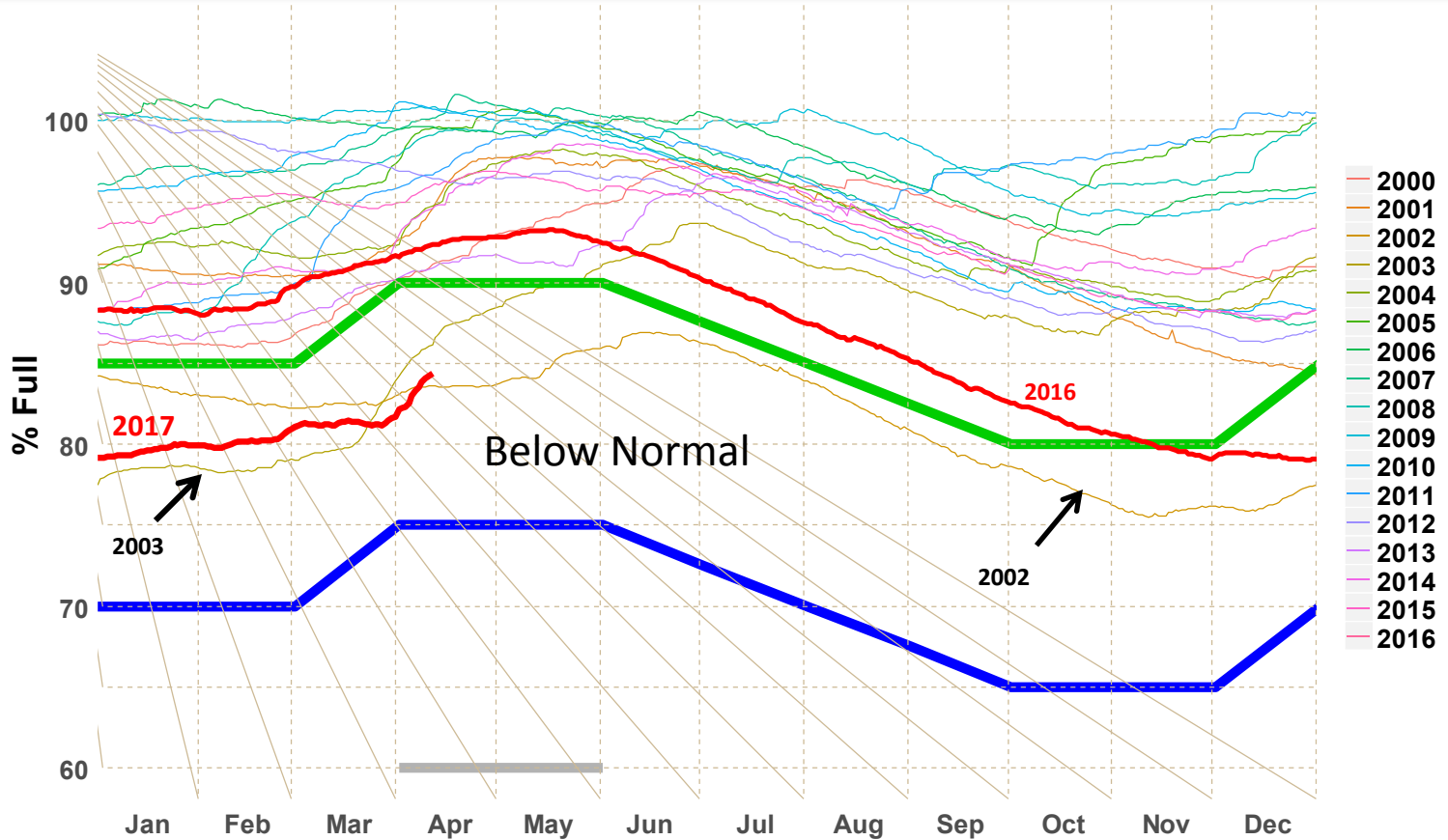
Anthony Artusa  
NOAA/NWS/NCEP/CPC



<http://droughtmonitor.unl.edu/>



# Quabbin Volume 1/1/2000 to 4/11/2017





# Quabbin Has Been Below Normal Since November 12, 2016

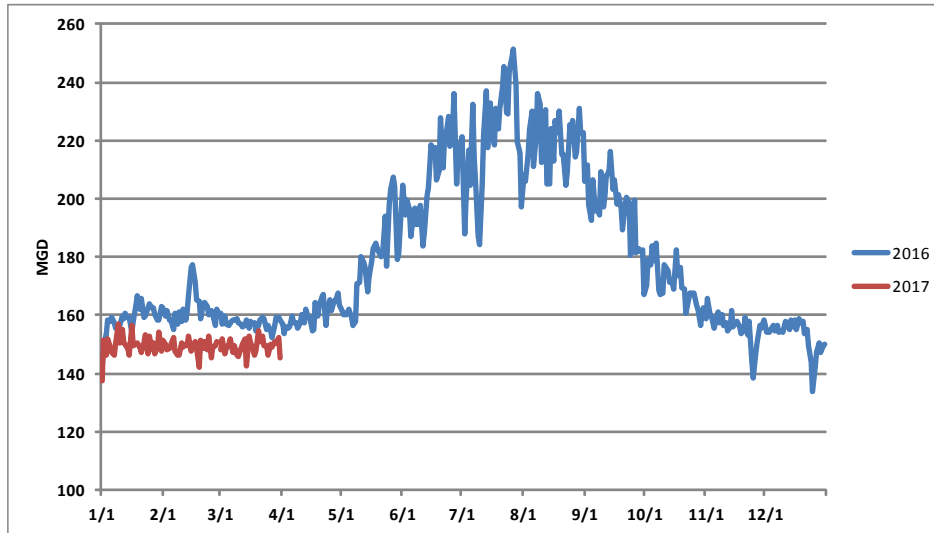
- Staff contacted community elected officials and water superintendents with pointers to water conservation
- MWRA sent out Public Service Announcements asking residents and businesses to conserve water
- MWRA used its website and social media to draw awareness of the need to conserve
- The target is to keep water usage at previous year levels without issuing mandatory restrictions



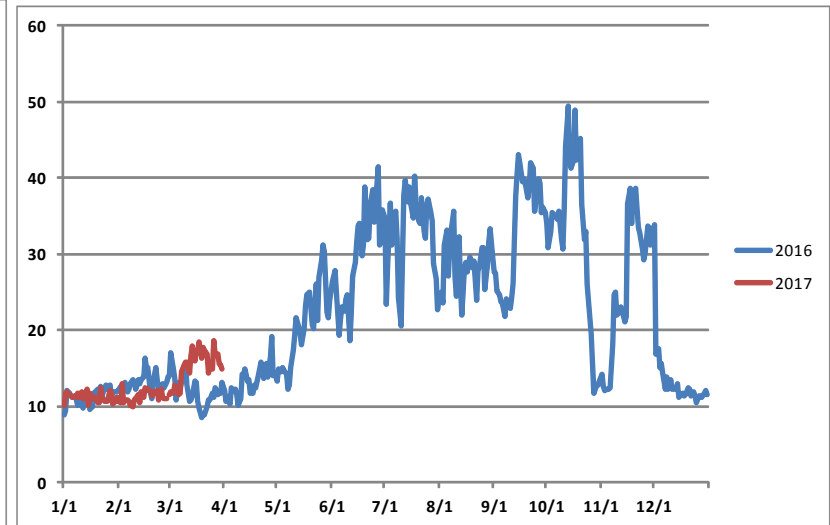


# Overall Demand Tracking Lower Than Last Year

### Fully Supplied Communities



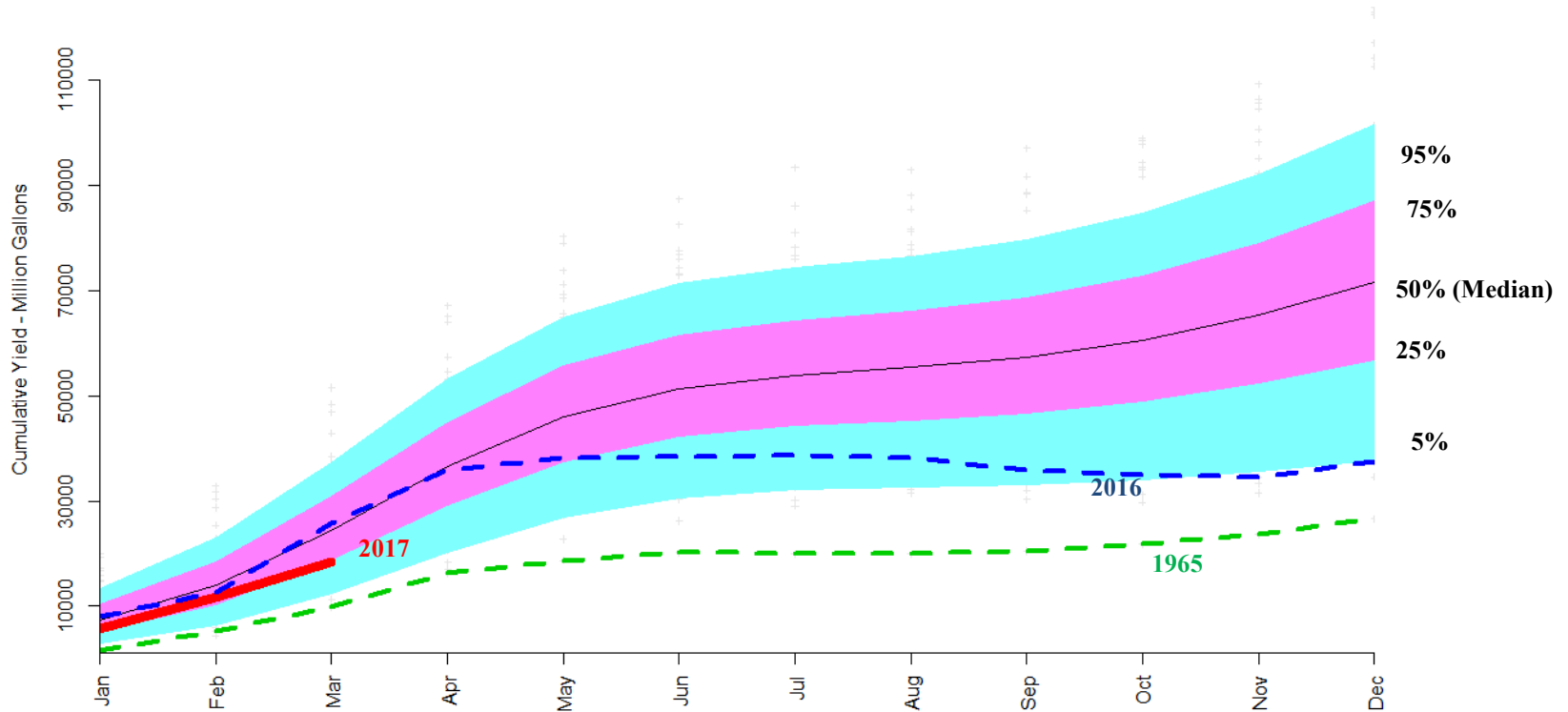
### Partially Supplied Communities







# Quabbin Watershed Yields





# Status Looking Forward from April 1, 2017

	1-Month	3-Months	6-Months	12-Months
Median Yield	<b>Below Normal</b>	<b>Normal</b>	<b>Normal</b>	<b>Normal</b>
Dry (75th Percentile)	<b>Below Normal</b>	<b>Below Normal</b>	<b>Normal</b>	<b>Below Normal</b>
Driest (of Record)	<b>Below Normal</b>	<b>Below Normal</b>	<b>Below Normal</b>	<b>Drought Warning</b>

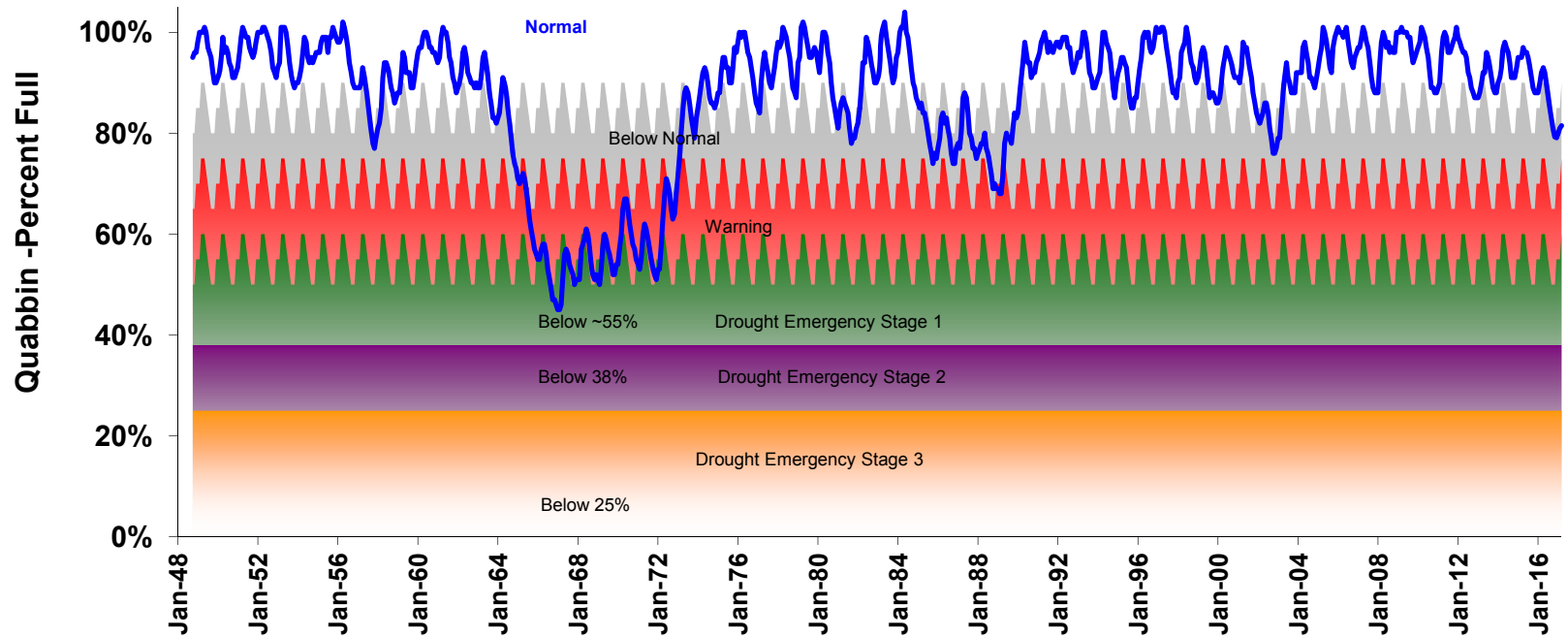


# MWRA Drought Management Stages

<b>Stage</b>	<b>Target Water Use Reduction</b>
Normal Operation Below Normal Drought Warning	0 Previous year's use (Voluntary) 5% (Primarily Voluntary)
Drought Emergency Stage 1 Stage 2 Stage 3	(Mandatory Restrictions) 10% 15% 30%

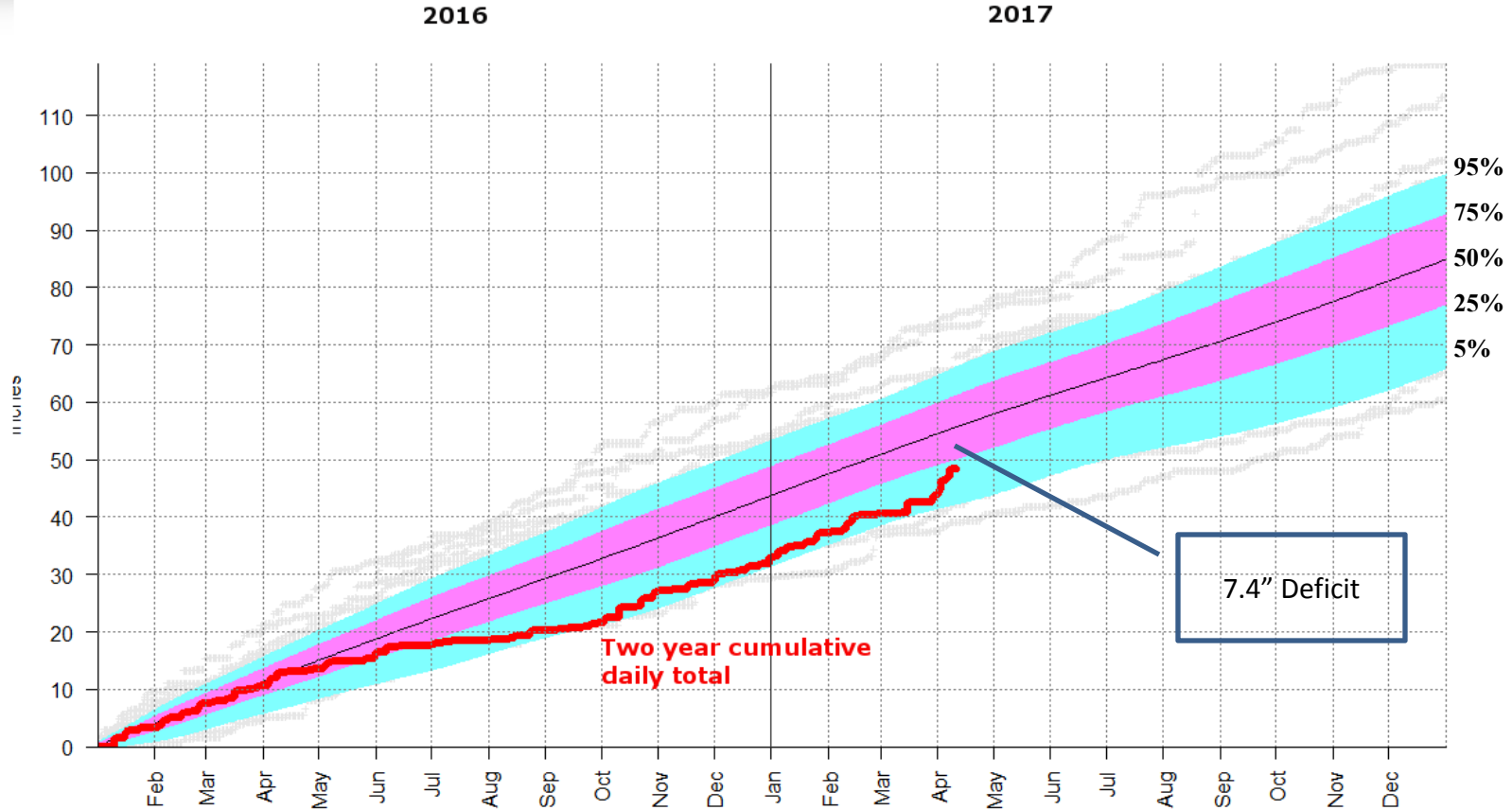


# Quabbin's Long-term Track





# Rainfall Deficit Reducing In The Service Area





# Wachusett Elevation 2017

