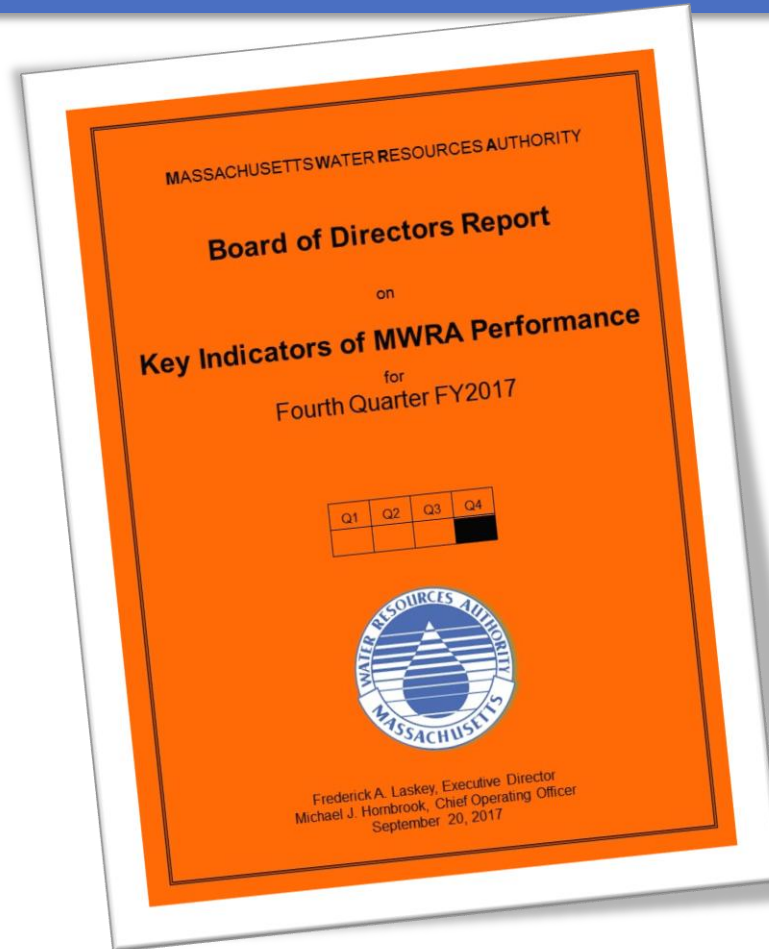




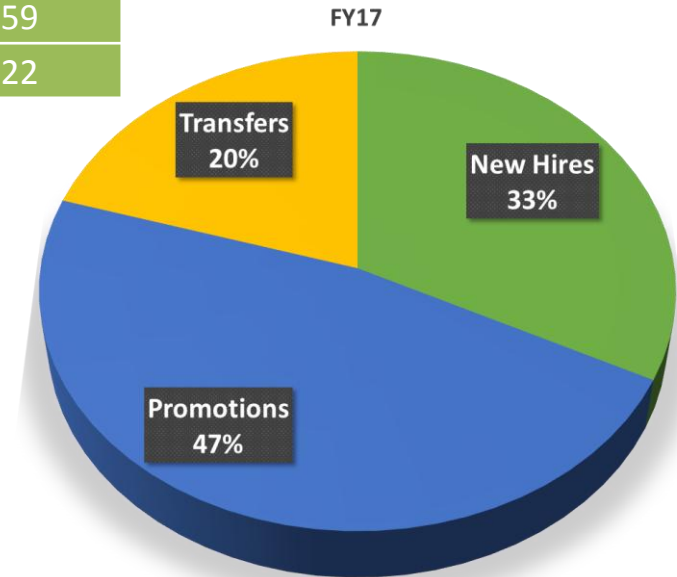
# Massachusetts Water Resources Authority





# Summary of Hiring Processes

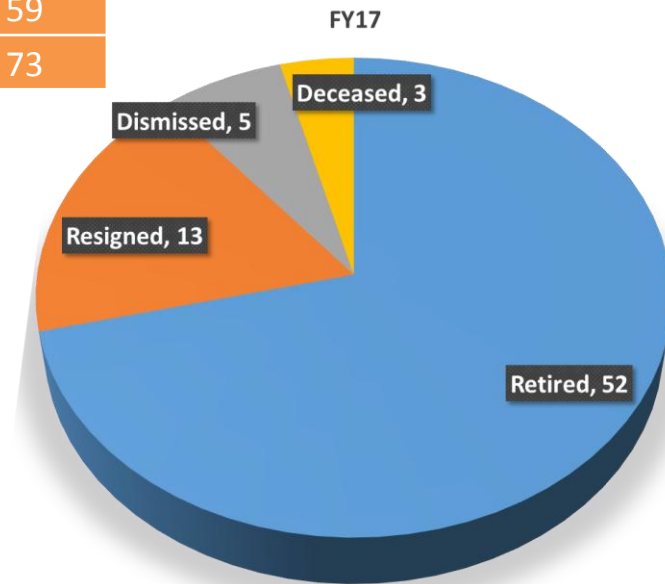
|      | New Hires | Promotions | Transfers | Total |
|------|-----------|------------|-----------|-------|
| FY12 | 26        | 19         | 22        | 67    |
| FY13 | 47        | 58         | 24        | 129   |
| FY14 | 57        | 73         | 38        | 168   |
| FY15 | 65        | 85         | 48        | 198   |
| FY16 | 60        | 65         | 34        | 159   |
| FY17 | 72        | 105        | 45        | 222   |





# Turnover

|      | Retired | Resigned | Dismissed | Deceased | Total |
|------|---------|----------|-----------|----------|-------|
| FY12 | 23      | 15       | 3         | 2        | 43    |
| FY13 | 43      | 6        | 1         | 1        | 51    |
| FY14 | 41      | 15       | 3         | 3        | 62    |
| FY15 | 40      | 11       | 8         | 8        | 67    |
| FY16 | 37      | 16       | 2         | 4        | 59    |
| FY17 | 52      | 13       | 5         | 3        | 73    |





# Keeping Up With The Turnover

Over the past four years, the MWRA has hired and trained critical entry level employees:

- **40** OMC Laborers were hired
  - **15** were subsequently promoted
- **23** Buildings & Grounds Workers were hired
  - **8** were subsequently promoted (4 additional anticipated this month)
- **18** Senior Lab Technicians were hired
  - **12** were subsequently promoted
- **10** Staff Engineers were hired
  - **3** were subsequently promoted



# Training to Address Turnover

The MWRA has developed and provided training aimed at promoting employees:

- **21** employees participated in the Operator shadow program
  - **14** were subsequently promoted to an operator vacancy
- **12** employees participated in the M&O Specialist shadow program
  - **8** have been promoted to M&O Specialist vacancy
- **20** employees participated in the IMI Mechanical Certification program to ready them for promotion
  - **10** have been promoted
- **30** employees participated in the preparatory training to obtain a CDL License
  - **28** employees have obtained their licenses



# Critical Operations License Training

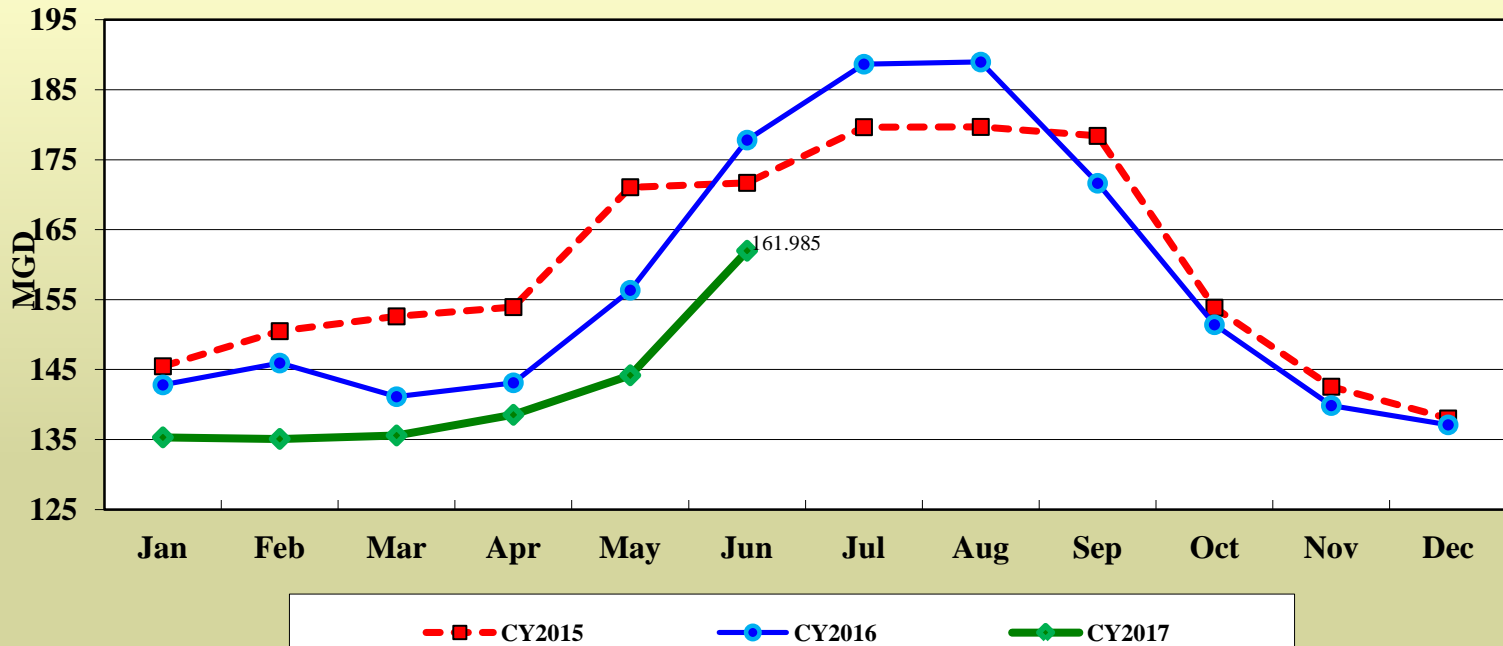
- **109** employees participated in the wastewater collections systems preparatory programs
- **120** employees participated in the basic or intermediate wastewater operator license preparatory programs
- **52** employees participated in the advance wastewater operator license preparatory programs



# Water Use

## Total Water Use: MWRA Core Communities

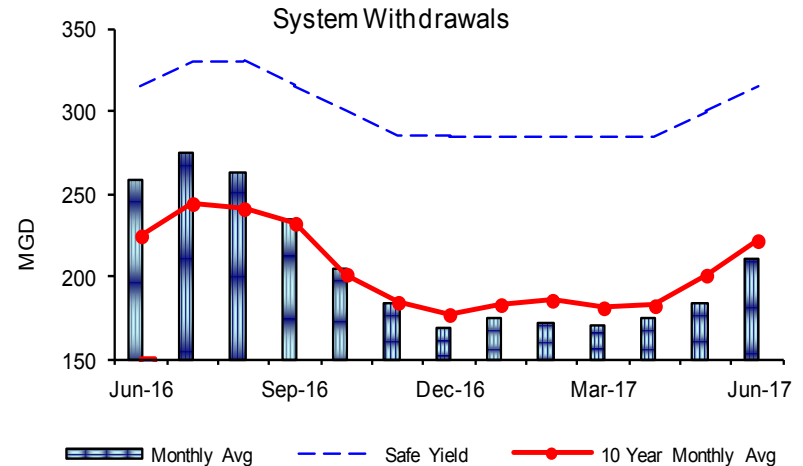
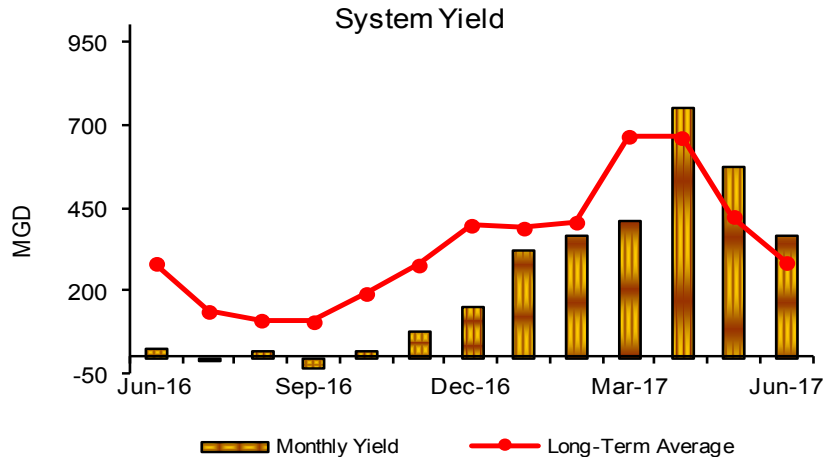
Arlington, Belmont, BWSC, Brookline, Chelsea, Everett, Framingham, Lexington, Malden, Medford, Melrose, Milton, Newton, Norwood, Quincy, Reading, Revere, Somerville, Stoneham, Waltham, Watertown, Winthrop





# Water System Withdrawals

- Yield and precipitation for the quarter were above the quarterly long-term averages. System withdrawal for the quarter was below the 10-year monthly average.

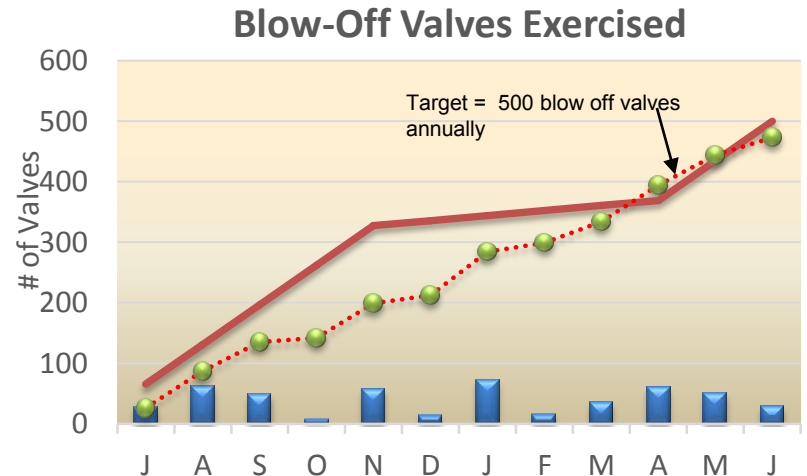
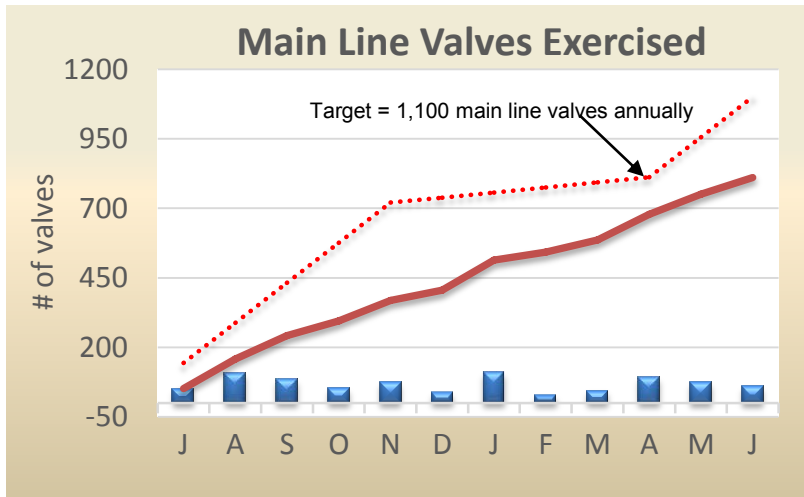






# Water Distribution System Valves

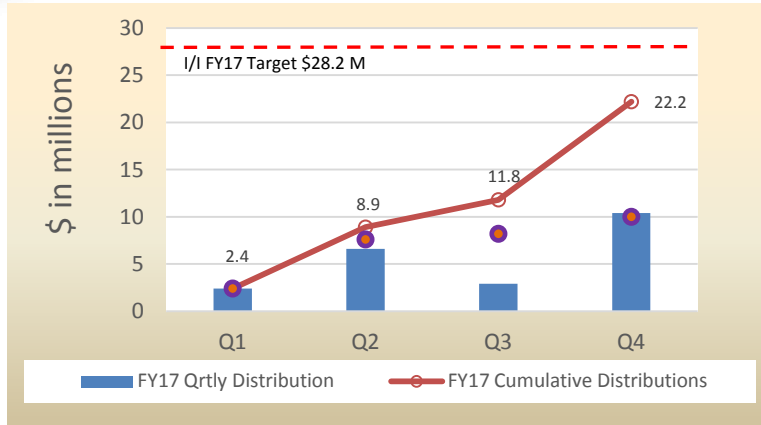
| Type of Valve      | Inventory # | Operable Percentage |              |
|--------------------|-------------|---------------------|--------------|
|                    |             | FY17 to Date        | FY17 Targets |
| Main Line Valves   | 2,159       | 95.7%               | 95%          |
| Blow-Off Valves    | 1,317       | 97.4%               | 95%          |
| Air Release Valves | 1,380       | 94.6%               | 95%          |
| Control Valves     | 49          | 100.0%              | 95%          |



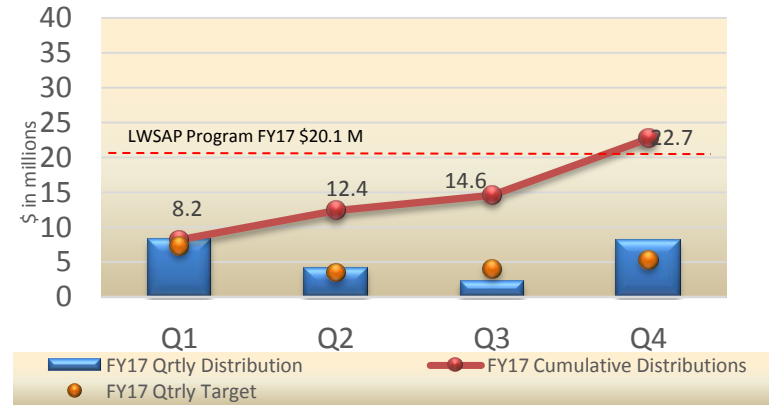


# Community Support Programs

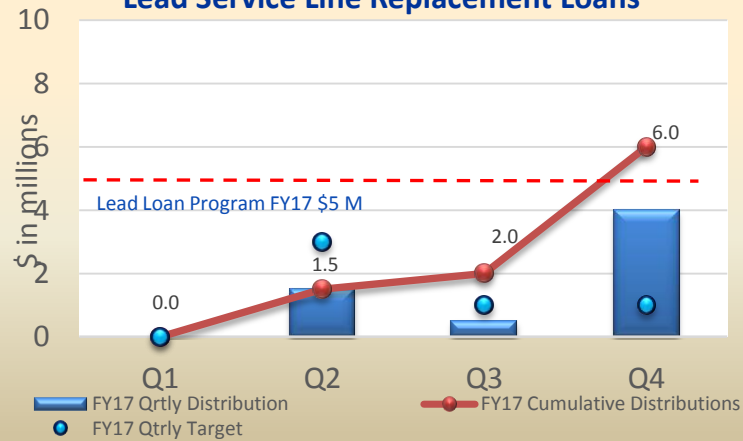
## Inflow/Infiltration



## Local Water System Assistance Program



## Lead Service Line Replacement Loans





***Wachusett Aqueduct Pumping Station  
BHD/BEC JV 15, A Joint Venture  
Contract 7157, Change Order 21***

September 20, 2017



# Construction Update: Front Entrance Modifications





# Construction Update: Front Entrance







# Construction Update: Pump Station





# Construction Update: Pump Station







# Construction Update: Pump Station

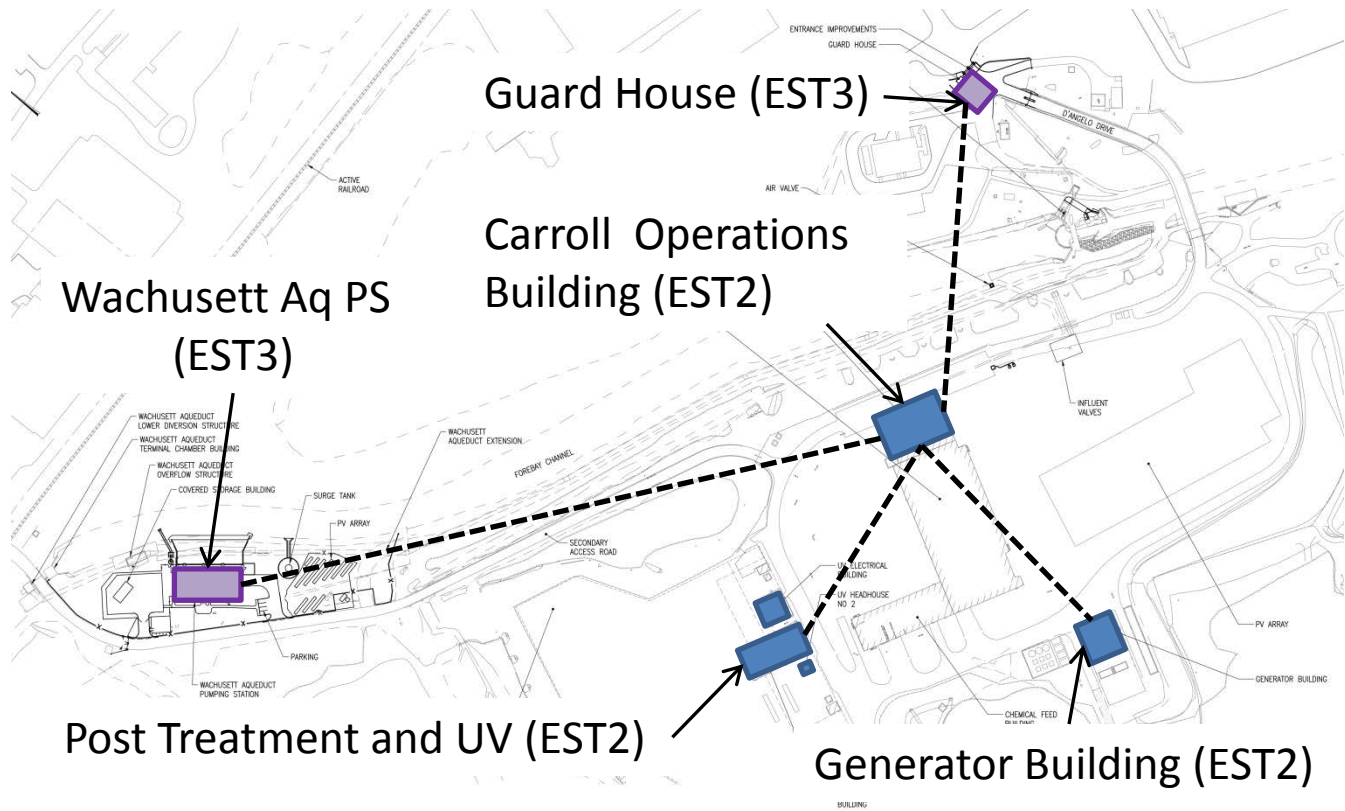






# Change Order 21: Carroll Fire Alarm System Upgrade

- Carroll Operations monitors all Fire Alarm Systems
- Systems must be compatible



JOHN J. CARROLL WATER  
TREATMENT PLANT SITE



## Change Order 21: Carroll Fire Alarm System Upgrade

- Existing Edwards EST2 discontinued
- Support and parts availability ends on 9/30/2017
- EST 2 does not communicate with EST 3
- Replacement is required to integrate CWTP Campus



# Change Order 21: Carroll Fire Alarm System Upgrade

- Change Order Amount - \$285,385
- Work on this contract is 62% complete



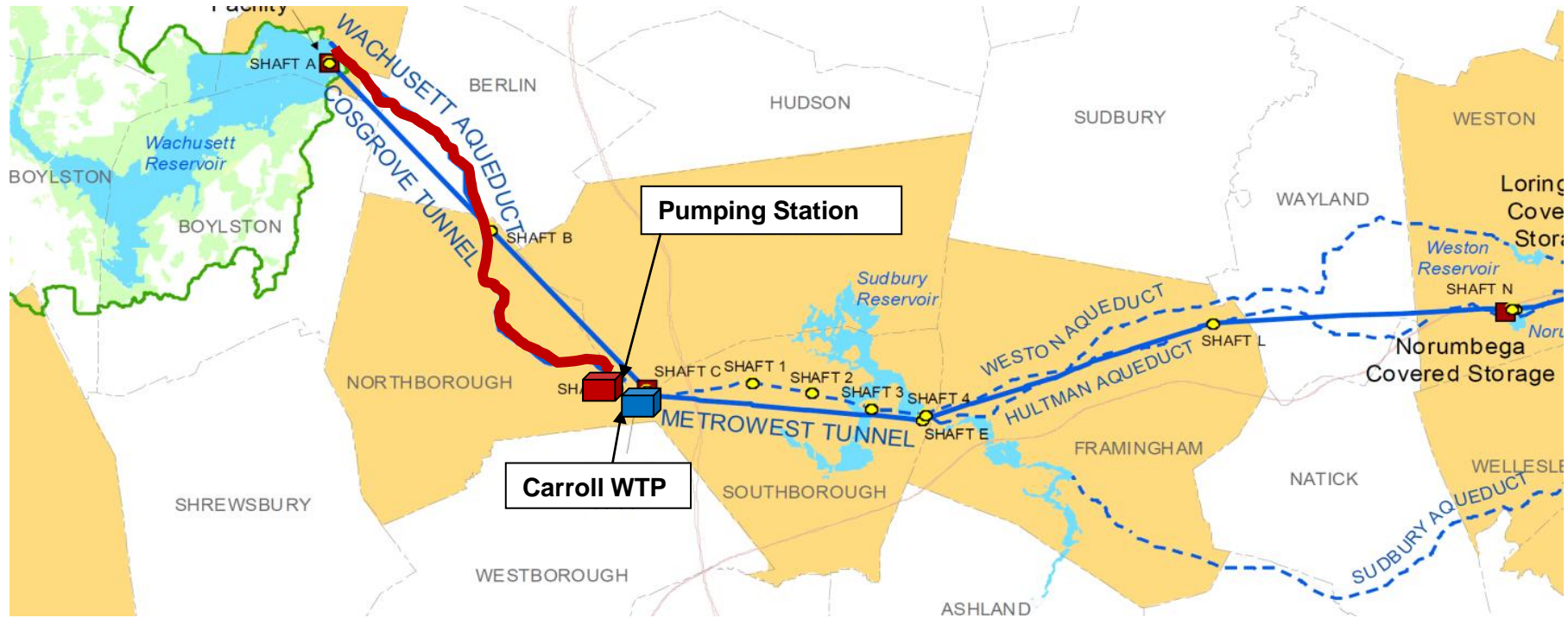


***Wachusett Aqueduct Pumping Station Design,  
Construction Administration and Resident  
Inspection Services  
Contract 7156, Amendment 4***

September 20, 2017



# Wachusett Aqueduct Pumping Station Location Plan





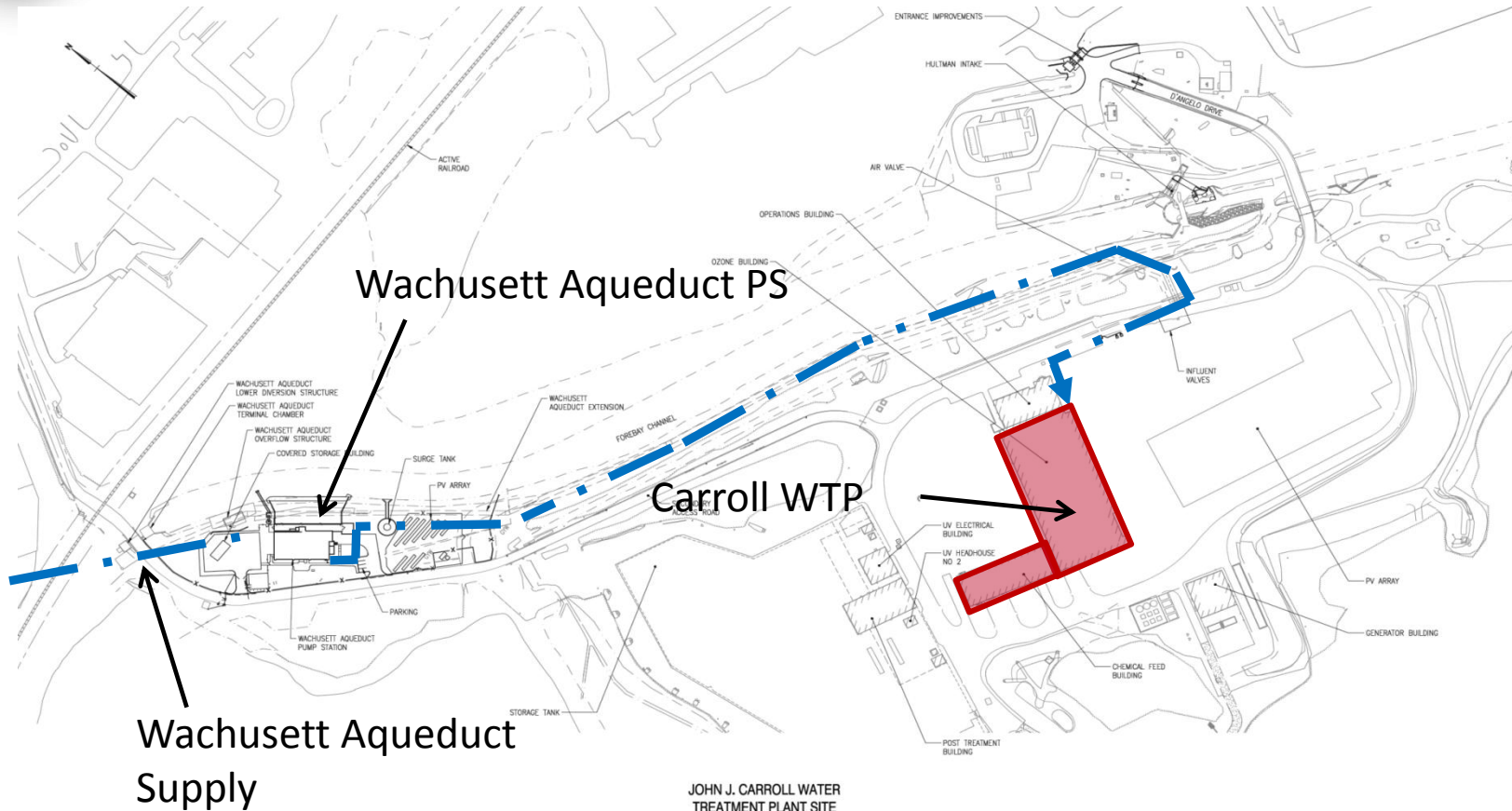


# Wachusett Aqueduct Pumping Station





# Wachusett Aqueduct Pumping Station Site Plan





## Amendment 4: Engineering Work Summary

|   |           |
|---|-----------|
| Additional Shop Drawings                                    | \$289,257 |
| Additional Change Order Assistance                          | \$115,507 |
| Geotechnical Investigation and Surge Tank Foundation Design | \$79,826  |
| Correction of Computational Error                           | \$50,576  |
| Design of Power Fluctuation Ride-Through                    | \$34,028  |
| Services for the Fire Alarm System                          | \$32,064  |
| Seven Other Items   | \$110,359 |
| Total   | \$711,617 |





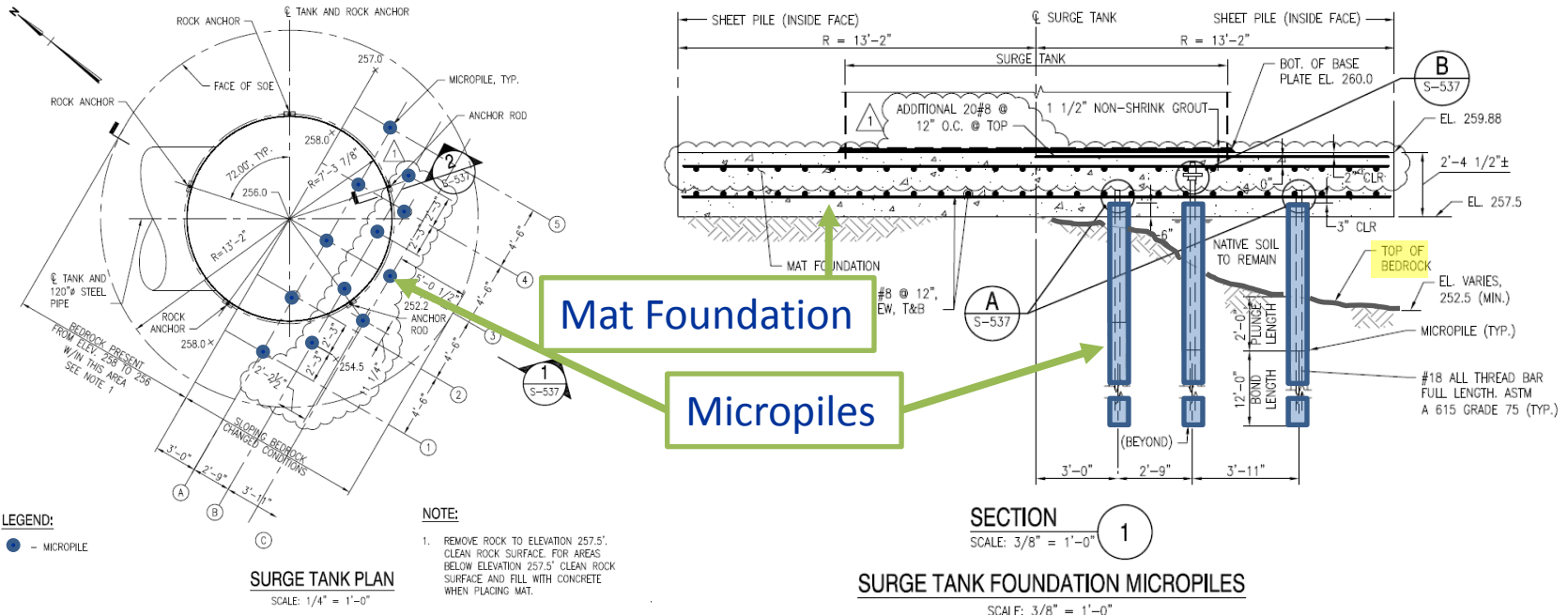
# Wachusett Aqueduct Pumping Station: Surge Tank Construction





# Amendment 4 Work

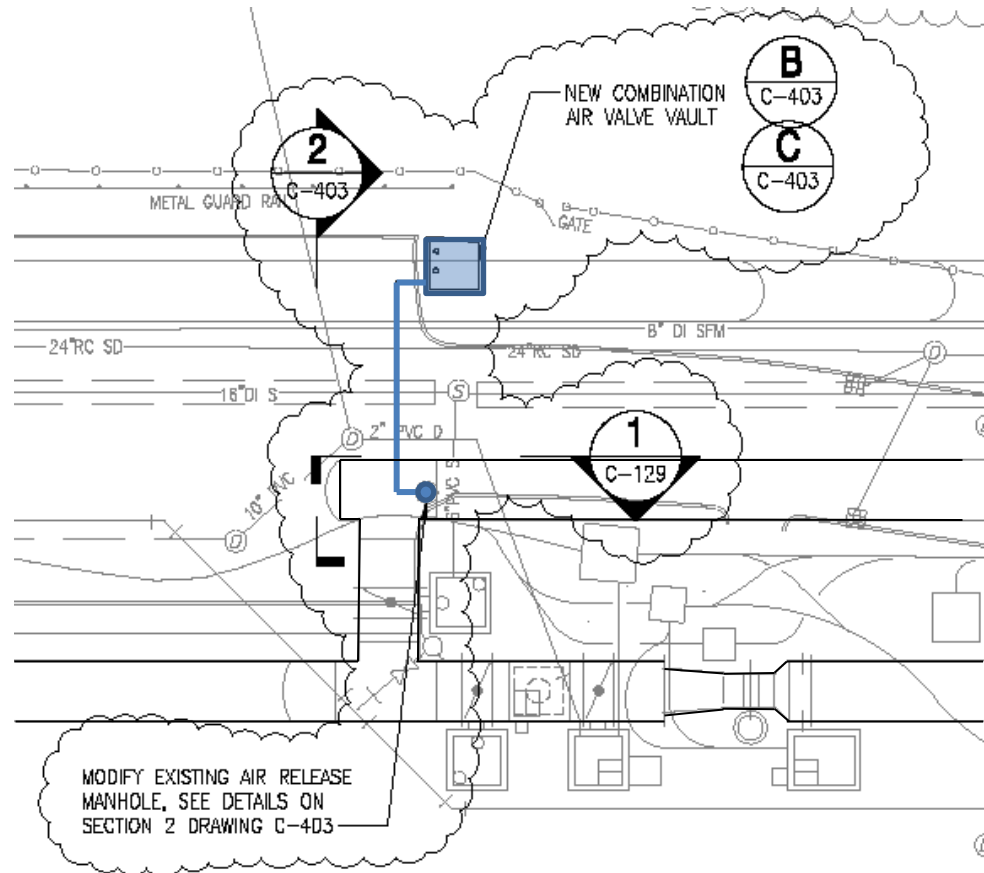
- Additional geotechnical investigation and surge tank foundation design





# Amendment 4 Work

- Redesign of air/vacuum valves





***Alewife Brook Pump Station Rehabilitation  
Barletta Engineering Corporation  
Contract 6797, Change Order 2***

September 20, 2017



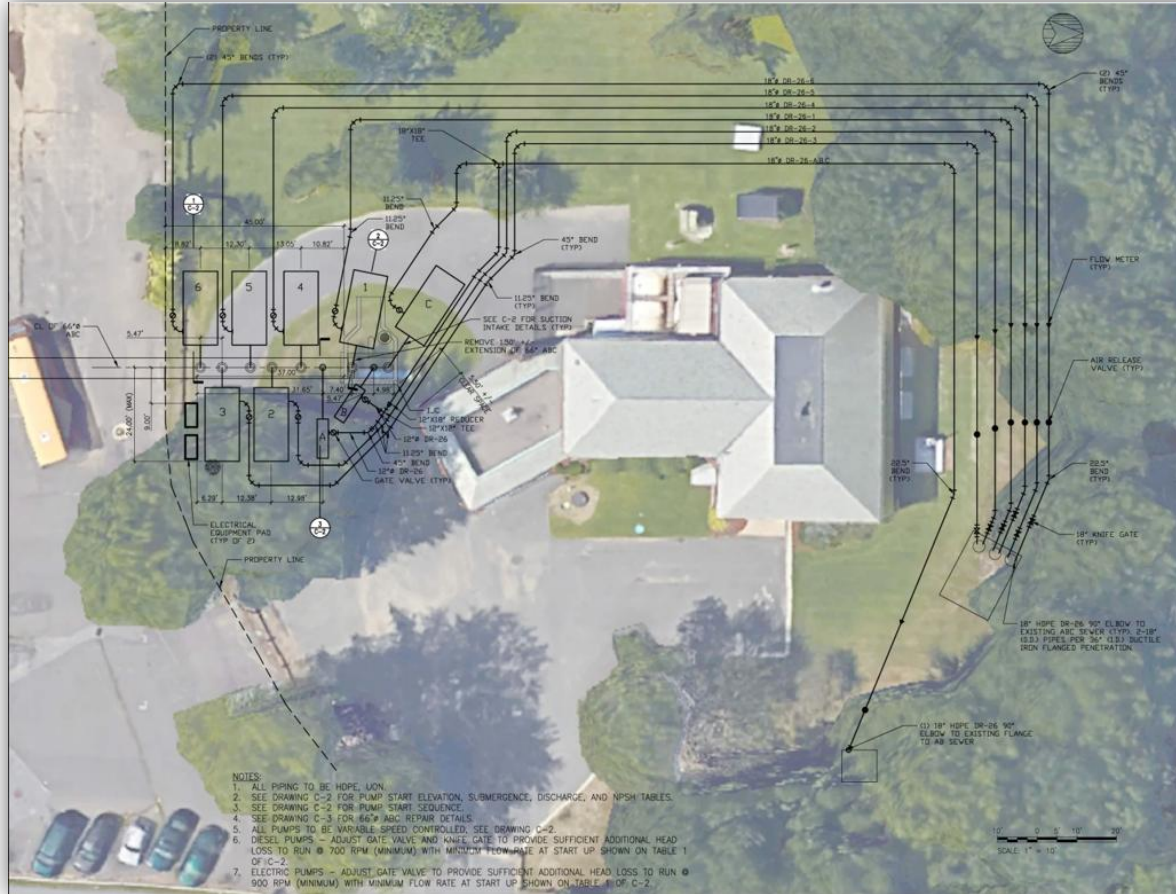


# Alewife Pump Station Original Bypass Pumping Arrangement





# Barletta Proposed Bypass Pumping Arrangement







# CONGRATULATIONS!

## CHAIRMAN'S AWARD \* CHAIRMAN'S AWARD \* CHAIRMAN'S AWARD



### Henry Vitale

Executive Director, Boston Water and Sewer Commission (BWSC)

Occasionally the Shattuck Awards Committee selects a public official at the department head level for prudent management and inspired leadership. The recipient of the Shattuck Chairman's Award for 2017 is Henry Vitale, Executive Director of the Boston Water and Sewer Commission (BWSC).

Henry Vitale takes pride in those who serve New England's oldest and largest water, sewer and storm water systems. He makes certain each employee feels appreciated, and is well trained for the complex duties of providing water and sewer services to more than one million people per day.

The Water and Sewer Commission's services are crucial to the growth and safety of the City. In recognition of this, Henry implemented programs that assure citizens easy access for reporting difficulties, asking questions or learning more about the Commission's services. He also regularly attends community meetings to bring transparency and understanding to BWSC operations.

Another example of Henry's commitment to citizens is the implementation of the water trailer. The trailer, a tool for educating residents on water conservation and pollution prevention, also supplies the community with clean, free water at city events.

Since his 2014 arrival at the Water and Sewer Commission, Henry has been a respected leader who stands with his team during times of crisis and works for their benefit and safety. Many view Henry's unending efforts to create unity and support among the five departments of BWSC as the major contributor to the Commission's increased excellence.

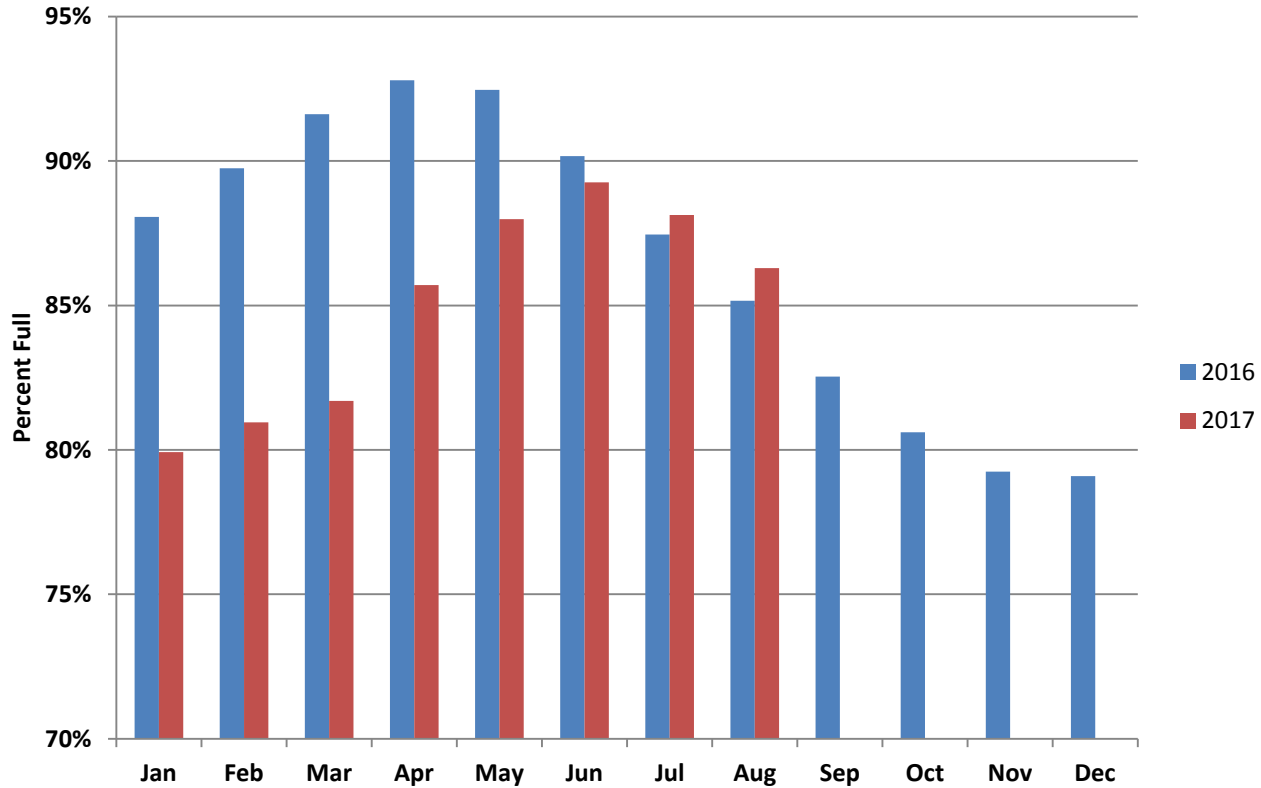
Henry's initiation of the All-Star program, through which employees nominate and vote on the Star of the Month, builds morale and promotes appreciation of fellow workers. The annual Christmas party he hosts is another unity builder, and his reaching out to staff who have lost a loved one demonstrates his deep concern for BWSC employees.

One measure of Henry's influence is that the BWSC with its large customer base receives little, if any, negative press regarding difficulties with water and sewer services. Under Henry's leadership, BWSC has become a distinguished and deeply appreciated organization that has received awards for consistent performance of excellence. The Massachusetts Department of Environmental Protection acknowledged the Commission with its Regional Recognition for Outstanding Performance and Achievement and for consistency in delivering safe drinking water. The American Water Works Association listed the Commission in its "Best of the Best" Tap Water category.

Thank you, Henry Vitale for your outstanding commitment to Boston, and congratulations on receiving the 2017 Shattuck Chairman's Award.



# Quabbin End of Month Storage







# Quabbin Reservoir Daily Storage

