

Hampton Select Board Meeting

January 14, 2019



AQUARION
Water Company

**John Herlihy, Vice-President, Water Quality & Environmental
Management**

Dan Lawrence, Director Engineering & Planning

Carl McMorran, Operations Manager

Agenda

- **PFAS Update**
 - **Monitoring**
 - **Treatment Evaluation**
- **Treatment Improvements**
- **Well 22 Large Groundwater Withdrawal Permit**
- **Main Replacement along Route 101**

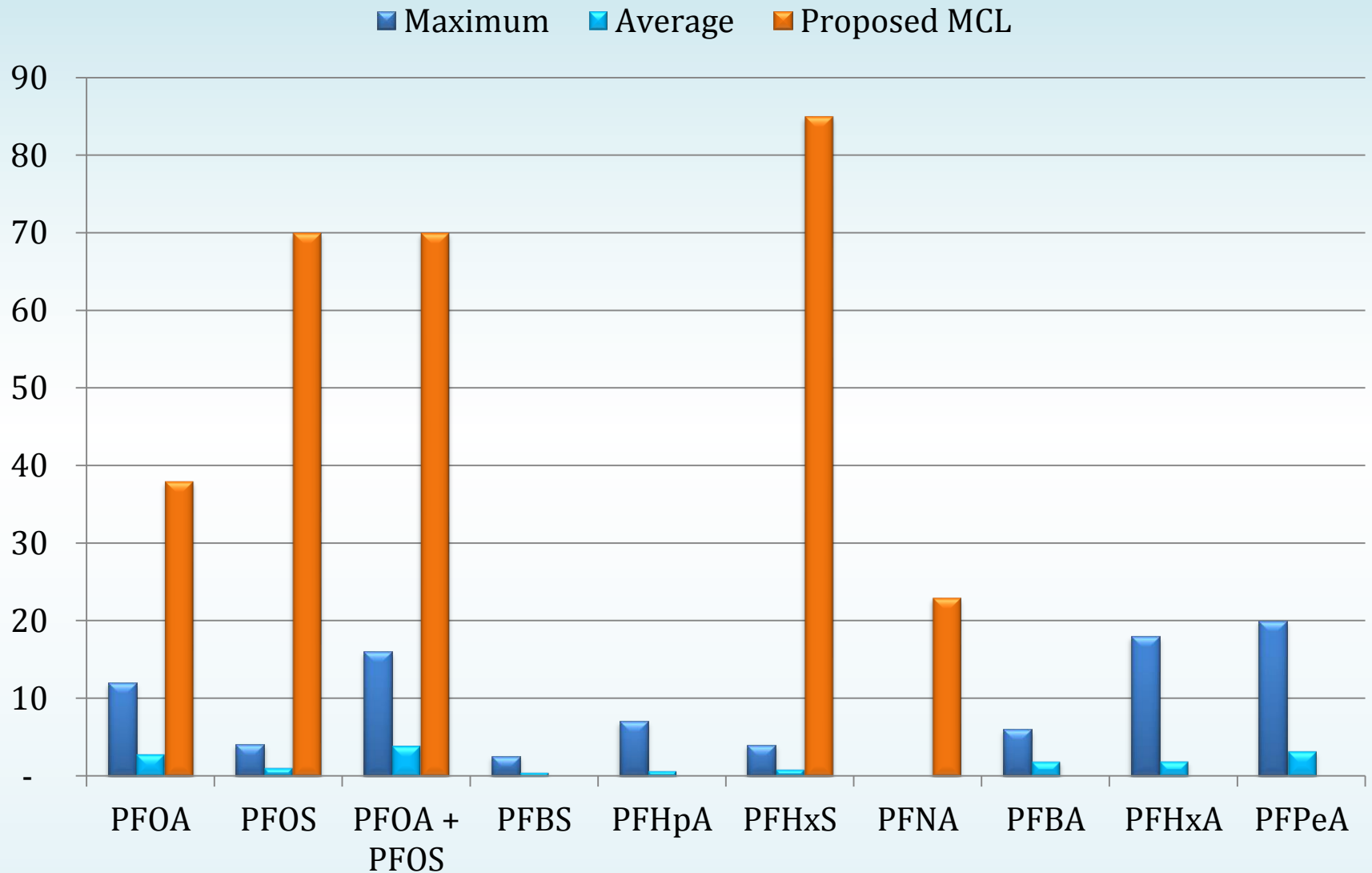


PROGRESS on PFAS in 2018

- **Minimized use of Well 6**
- **Continued monitoring raw and distribution system water**
- **Completed private well testing with NHDES**
- **Continued the PFAS treatment evaluation**
- **Development of a new source of supply (Well 22)**
- **Installed sentinel wells along Mill Road**
- **NHDES eliminated PFAS discharge from the carwash**
- **Monitored regulation development process**
- **Communicated regularly with town and state officials**



PFAS Levels in Tap Water



Current PFAS Concentrations compared to Proposed Maximum Contaminant Levels



2019 PFAS Management Plan

- **Minimize use of Well 6**
- **Continue PFAS testing of wells and tap water**
- **Initiate PFAS testing at sentinel wells**
- **Continue PFAS treatment evaluation**
- **Obtain DES approval of Well 22**
- **Continue to monitor the regulatory process**
- **Continue communication with town and state officials**



Mill Road Treatment Analysis Update

- **Alternatives**
 - **Source Selection**
 - **Treatment: Removal by Filtration**
 - **Granular Activated Carbon (GAC)**
 - **Ion Exchange**
- **Testing**
 - **Bench Scale at North Carolina State University**
 - **Pilot Scale at Well 6**



Pilot Testing



Mill Road Treatment Analysis – Post Bench Scale

Parameter	No Treatment	Scenario 1 PFAS treatment of water from Well 6	Scenario 2 PFAS treatment of water from Wells 6, 8A, 9, 11
Treated water flow rate (gpm)	0	360	1,676
PFOA+ PFOS (ng/L) ¹	9 – 12	7	<4 ²
Sum of Regulated PFAS (ng/L) ¹	14 – 19	11	<4 ²
Total PFAS (ng/L)	31 – 48	21 – 39	<4 ²
Estimated capital cost³	\$0M	\$3.7M	\$6.1M
Estimated annual O&M costs⁴	\$0M	\$0.1 - \$0.2M	\$0.2 - \$1.8M
Rate increase required⁵	0%	8%-9%	14 %- 35%

¹ Based on maximum concentration of PFAS in well waters; concentrations as entering the distribution system

² Method Reporting Limit (MRL) of 4 ng/L.

³ Conceptual capital costs have an expected accuracy of -30%/+50%.

⁴ Annual O&M costs for GAC are based on a one year replacement frequency.

⁵ Actual rate increase required will depend on final capital and annual O&M costs.

Other Major Capital Projects

- **Water Treatment Upgrades**
 - **Mill Road**
 - **Little River Road for Wells 7 & 22**
- **Well 22**
 - **Large Groundwater Withdrawal Permit**



Rt 101 Main Replacement



Environmental Champions

- Celebrating the people, companies and non-profit organizations who demonstrate excellence in caring for New Hampshire's natural resources



- May 9, 2019 Event

