

Compliance with R.I.G.L. §39-3-12.1**(1) Status of Physical Plant**

The physical plant of the Providence Water Supply Board consists of five (5) feeder reservoirs (Ponagansett, Moswansicut, Barden, Westconnaug, and Regulating) and the main Scituate Reservoir, a 100% surface water supply with a total storage capacity of 41,268 million gallons; a filtration plant with associated sedimentation basins, and chemical storage and feeding equipment, and a filtration capacity of 144 million gallons per day; a transmission and distribution system, consisting of more than 1024 miles of transmission and distribution mains, which vary in size from 6 inch to 102 inches, and consisting primarily of pipe constructed of cast and ductile iron, asbestos-cement and concrete; four (4) completely enclosed distribution reservoirs with a total capacity of 115.3 million gallons; two (2) pre-stressed concrete cylindrical tanks with a total capacity of 4.5 million gallons; five (5) distribution system pumping stations; one (1) raw water booster pumping station; five (5) pressure boosting pumping stations; eleven (11) emergency power systems, eight (8) driven by diesel engines and three (3) driven by gas engines; and administrative and maintenance garage facilities.

Compliance with R.I.G.L. §39-3-12.1

(2) Maintenance Policy

It is the policy of the Water Supply Board to maintain its system in proper operating condition in accordance with all accepted standards. Leaks and damaged valves, hydrants and other appurtenances of the distribution system are repaired and/or replaced expeditiously. Physical plant maintenance is performed in a planned manner by permanent crews when possible. Outside contractors are used to supplement forces when needed. Distribution pipes (most recent main extensions) were installed through fiscal reporting year ending June 30, 2019. Total pipe installed (and or replaced) in the last ten (10) year period is as follows:

| <u>Year</u> | <u>Feet</u> | <u>Miles</u> |
|--------------|----------------|--------------|
| 2010 | 7,330 | 1.39 |
| 2011 | 39,141 | 7.41 |
| 2012 | 19,499 | 3.69 |
| 2013 | 35,275 | 6.68 |
| 2014 | 45,553 | 8.63 |
| 2015 | 50,030 | 9.48 |
| 2016 | 71,374 | 13.50 |
| 2017 | 40,273 | 7.63 |
| 2018 | 83,205 | 15.76 |
| 2019 | <u>52,763</u> | <u>10.00</u> |
| | | |
| Total | 444,443 | 84.00 |
| | | |

Compliance with R.I.G.L. §39-3-12.1

(3) Water Treatment Methods and Chemicals used

During the last fiscal reporting period, (July 2018 through the end of June 2019), Providence Water utilized the following seven (7) chemicals during the treatment process, as follows:

1. Ferric Sulfate - Used to coagulate and settle out micro-organisms and particles that cause color and turbidity,
2. Lime - Used to adjust PH
3. Chlorine - Used as a disinfectant
4. Fluoride - Used to prevent dental cavities
5. Ascorbic Acid – Used to dechlorinate backwash water
6. Orthophosphate – Used as corrosion control (Pilot Area)
7. Sodium Hydroxide – Used to adjust PH

The quantities and costs of the chemicals used based on purification plant reporting data for dosing of specified water are as follows:

| <u>Chemical</u> | <u>Quantity Used</u> | <u>Unit Cost</u> | <u>Total Cost *</u> |
|------------------|----------------------|------------------|---------------------|
| Ferric Sulfate | 652,119 gals | \$1.529 | \$996,852 |
| Lime | 1,674 tons | \$258 | \$432,645 |
| Chlorine | 159 tons | \$1,266 | \$201,244 |
| Fluoride | 50,371gals | \$1.884 | \$94,874 |
| Ascorbic Acid | 1,100 kg | \$16.75 | \$18,425 |
| Orthophosphate | 1,094 gals | \$8.32 | \$9,102 |
| Sodium Hydroxide | 3,925 gals | \$2.34 | \$8,622 |
| | | Total | \$1,761,764 |

*Total cost does not compute exactly from figures shown, as it includes audit adjustments.

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(4) Policy Relating to Expansion and Renovation of Physical Plant

It is the policy of the Board to assure that the system will continue to provide service to all existing customers. Technical evaluations are made to determine future needs so that required expansion can proceed in a timely manner in order to assure that new customers can be provided with the same level of service without any degradation of service to existing customers. Providence Water has an Infrastructure Replacement Program that addresses the renovation or replacement of major system components. A Capital Improvement Program is also in place to address the implementation of new capital assets. Funding has been provided through rates established by the Public Utilities Commission. The programs are administrated through restricted funds for which semi-annual reports are provided to the Commission.

In the fiscal year ending June 30, 2019, Providence Water invested approximately **\$29.2 Million** into the infrastructure replacements and capital improvements to the system.