

TO:	Gibby St. George-Sorel, DPW Director	DATE:	4/20/2020
FROM:	Wright-Pierce	PROJECT NO.:	13553C
SUBJECT:	Barnes Street WTP Cost Update		

It is our understanding that the Town is considering the submission of a new funding application with the USDA/RD program for the Barnes Street Water Treatment Plant (WTP). For this, the project's costs will need to be revised to current dollars since they have not been updated since 2017. Therefore, in accordance to our proposal we have updated the opinion of probable construction cost and the estimated annual Operation and Maintenance (O&M) cost. Each is presented below.

PROBABLE CONSTRUCTION COST

As proposed, we worked with Waterline Industries to update the opinion of probable construction cost for the Barnes Street WTP. The updated construction cost estimate is presented in Table 1.

**TABLE 1
OPINION OF PROBABLE CONSTRUCTION COST**

Discipline	Estimated Cost
General Conditions	\$1,057,000
Civil	\$387,000
Architectural	\$1,622,800
Structural	\$1,688,500
Process	\$1,400,600
HVAC	\$400,000
Plumbing	\$155,000
Fire Protection	\$125,000
I&C - SCADA	\$250,000
Electrical	\$1,331,500
Subtotal:	\$8,417,400
5% Contingency	\$420,000
15% Profit and Overhead	\$1,250,000
Total:	\$10,087,400

Based on current construction conditions, Waterline has estimated that the total project capital cost is approximately Ten Million dollars. This includes estimated material, labor, equipment, subcontractors, contingency, as well as profit and overhead costs. It is also noted that this cost

also reflects the recent hot construction market that our industry has been experiencing over the past few years and that it appears to be in line with other recent similar projects.

OPERATION AND MAINTENANCE COSTS

The annual O&M costs for the GreensandPlus™ treatment process at the Barnes Street WTP have been updated, and since USDA/RD also looks for the O&M for the entire water system, the annual cost for the rest of the water system has also been included. These costs are presented in Table 2.

**TABLE 2
 ESTIMATED ANNUAL O&M COST**

O&M Category	Annual Estimate
Barnes Street WTP:	
Power	\$115,310
Process Chemical	\$82,000
Labor	\$45,200
General Maintenance (equipment, building, heat, site)	\$25,200
Administrative Costs (i.e., office supplies, printing, etc.)	\$1,000
Monitoring and Testing	\$10,000
Professional Services	\$5,000
Short Lived Asset Maintenance/Replacement	\$48,040
Total:	\$331,750
Cost for Rest of Water System*:	
Salaries	\$209,766
Overtime	\$26,500
Licenses	\$1,000
Clothing Allowance	\$1,800
Purchase of Services	\$83,690
Supplies, Administrative Costs, & Process Chemicals	\$96,500
Other Charges	\$5,600
Extraordinary/Unforeseen	\$5,000
Total:	\$429,856
Combined Total:	\$761,606

* These costs were taken from the FY21 Request from Ware's FY2021 Budget Preparation Worksheet provided by the Town. The overlapping O&M costs for the Barnes Street WTP were removed from these costs and included with those of the WTP.

As presented in the table above, the total estimated annual O&M cost for the Barnes Street WTP is approximately \$331,750 per year and the estimated annual cost for the rest of the water system is approximately \$429,856 per year (based on Ware's budget for Fiscal Year 2021).

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In general, some of the major updates to the O&M costs include the following:

- The average daily demand (ADD) has been reduced from 0.78 million gallons per day (MGD) to 0.63 MGD since historical demand has decreased. The ADD from 2015 to 2019 has averaged around 0.61 MGD, but since this demand is anticipated to increase slightly once the WTP has been constructed, the ADD utilized in the calculations was 0.63 MGD.
- The power cost has been updated per current billing rates from this year.
- The chemical feed calculations have been updated per current dosages and costs.
- The labor cost now accounts for 2 operators (1 primary and 1 secondary) at 4 hours per day as may likely be required by MassDEP regulations for operating a 2T water treatment facility.
- An appropriate inflation rate was utilized for some of the other costs.

As requested, the total annual cost for the short-lived assets were also updated for the Barnes Street WTP and also included within Table 2.

In closing, as the Federal Government is currently discussing a future stimulus package as a result of the COVID-19 situation, it would be in the Town's benefit to reapply for the USAD/RD funding such that any available grant monies could be captured for this project.

Please review and let us know if you have any questions or would like to discuss the next steps.

Water Filtration Plant

Current Actions:

- Cost estimate update underway.
- Operational cost update underway.
- Amount for short-asset reserve fund update underway.
- PER (preliminary engineering report) to be updated.
- Title search completed.
- Discussed re-application with USDA officials.

Future Actions

- Resubmit updated PER to USDA along with FY 19 audit for potential grant/loan amount.
- Consider grant/loan amount and required Town contribution.
- Submit new application to USDA.
- Return to Town Meeting to change appropriation.