

Tighe Bond Engineering Proposal 6-1-18

| Task | Budget, dollars |
|--|------------------------|
| Biofilter Investigation | |
| Review Historic Data | \$ 3,000.00 |
| Contact Other Water Treatment Facilities | \$ 2,000.00 |
| Assess Fouling | \$ 5,000.00 |
| Characterize Biofilter | \$ 5,000.00 |
| Evaluate Chemical Addition | \$ 25,000.00 |
| Summarry Memorandum | \$ 12,000.00 |
| Task Total | \$ 52,000.00 |
| Ozone and UV Evaluation | |
| Data Review | \$ 3,000.00 |
| Ozone Disinfection | \$ 10,000.00 |
| UV Upgrades | \$ 15,000.00 |
| Coordination with NYSDOH | \$ 4,000.00 |
| Summarry Memorandum and Review Meeting | \$ 13,000.00 |
| Task Total | \$ 45,000.00 |
| Hydraulics Evaluation | |
| Data Review | \$ 4,100.00 |
| Hydraulic Evaluation | \$ 11,000.00 |
| Summarry Memorandum and Review Meeting | \$ 10,000.00 |
| Task Total | \$ 25,100.00 |
| Miscellaneous Tasks as needed | |
| Attend Board Meetings (\$235/meeting) | |
| Budget Allocation | \$ 15,000.00 |
| TOTAL PROPOSAL | \$ 137,100.00 |
| Atlantium Pilot Test Proposal | |
| Replace 1 unit (does not include piping or UPS) | \$ 72,000.00 |
| Estimated cost to replace inkind | \$ 612,000.00 |
| Installation Cost | \$ 175,000.00 |
| UPS System | \$ 250,000.00 |
| Subtotal | \$ 1,037,000.00 |
| Contingency (25%) | \$ 259,250.00 |
| Budget Estimate | \$ 1,296,250.00 |

Elimination of UV can save \$200,000/year

Utilizing Ozone for disinfection will require reliability improvements

\$250,000?