

**TABLE 9-3****COST ESTIMATE FOR CHATHAM WWTF IMPROVEMENTS**

| DESCRIPTION  | COST <sup>(1)(3)</sup> | COST <sup>(2)(3)</sup> |
|--|------------------------|------------------------|
|  | Alternative 3          | Alternative 4          |
| <b>Preliminary Treatment</b>                                       |                        |                        |
| Headworks  | \$1,700,000            | \$1,700,000            |
| <b>Activated Sludge Secondary Treatment System</b>                 |                        |                        |
| Oxidation Ditch (ORBAL)  | \$4,100,000            | \$5,700,000            |
| Post Anoxic/Reaeration Tanks                                       | \$0                    | \$0                    |
| Clarifier Flow Distribution Box and Scum Pumping                   | \$210,000              | \$230,000              |
| RAS & WAS  | \$1,800,000            | \$2,000,000            |
| Clarifiers   | \$2,000,000            | \$3,000,000            |
| Methanol Storage/Feed System                                       | \$180,000              | \$180,000              |
| <b>Filtration</b>  |                        |                        |
| Denitrification Filters  | \$2,500,000            | \$2,700,000            |
| Recycle Pump Station   | \$200,000              | \$200,000              |
| <b>Flow Monitoring</b>   |                        |                        |
| Effluent Flow Monitoring   | \$230,000              | \$230,000              |
| <b>Odor Control</b>  |                        |                        |
| Odor Control   | \$340,000              | \$400,000              |
| <b>Solids Handling</b>   |                        |                        |
| Sludge Holding Tank and Equipment                                  | \$420,000              | \$1,100,000            |
| Solids Processing Building and Equipment                           | \$730,000              | \$1,900,000            |
| <b>Electrical Power Distribution and Auxiliary Power</b>           |                        |                        |
| Major Electrical Power Distribution                                | \$1,800,000            | \$1,800,000            |
| <b>Instrumentation</b>   |                        |                        |
| Major Instrumentation/SCADA  | \$720,000              | \$720,000              |
| <b>Buildings</b>   |                        |                        |
| Chemical Storage/Feed System (Caustic, Hypo, Blowers & Compressor) | \$400,000              | \$400,000              |
| Operations Building  | \$3,200,000            | \$3,200,000            |
| General modifications to existing buildings                        | \$220,000              | \$220,000              |
| <b>Other</b>   |                        |                        |
| Yard piping  | \$1,400,000            | \$1,800,000            |
| General Electrical and Instrumentation                             | \$2,400,000            | \$2,900,000            |
| Site work  | \$820,000              | \$1,000,000            |
| HVAC   | \$620,000              | \$760,000              |
| Painting, Plumbing   | \$410,000              | \$510,000              |
| Miscellaneous Metals   | \$310,000              | \$380,000              |
| <b>Construction Cost Subtotal</b>                                  | <b>\$25,000,000</b>    | <b>\$31,300,000</b>    |
| Contingency (20%)  | \$5,000,000            | \$6,300,000            |
| Design Engineering   | \$1,100,000            | \$1,800,000            |
| Fiscal, Legal and Engineering (15%)                                | \$3,800,000            | \$4,700,000            |
| <b>Total Project Cost</b> <sup>(4)(5)(6)</sup>                     | <b>\$34,900,000</b>    | <b>\$44,100,000</b>    |

## Note:

- Alternative 3 is for the Phase 1 Improvements to allow sewer extension to meet the Nitrogen TMDLs in the future.
- Alternative 4 is for Phases 1 and 2 to allow sewer extension Town-wide.
- All costs are referenced to construction in May 2007 based on Engineering News Record (ENR) index of 7942. Costs must be increased by a ratio of the appropriate ENR indices for construction costs in subsequent years.
- Costs do not include any allowance for vehicles.
- Borings and a survey were not part of the scope of the project. Information obtained when this work is conducted could result in cost increases.
- All costs (except construction costs subtotal and total) are rounded to 2 significant digits.