

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

DESCRIPTION	COST ⁽¹⁾⁽³⁾	COST ⁽²⁾⁽³⁾
	Alternative 3 (Phase 1)	Alternative 4 (Phase 2)
Preliminary Treatment		
Headworks	\$1,700,000	\$1,700,000
Activated Sludge Secondary Treatment System		
Oxidation Ditch (ORBAL)	\$4,100,000	\$5,700,000
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
Filtration		
Denitrification Filters	\$2,500,000	\$2,700,000
Recycle Flows		
Recycle Pump Station	\$200,000	\$200,000
Flow Monitoring and Disinfection		
Effluent Flow Monitoring and Disinfection	\$790,000	\$820,000
Odor Control		
Odor Control	\$340,000	\$400,000
Solids Handling		
Sludge Holding Tank and Equipment	\$420,000	\$1,100,000
Solids Processing Building and Equipment	\$730,000	\$1,900,000
Electrical Power Distribution and Auxiliary Power		
Major Electrical Power Distribution	\$1,800,000	\$1,800,000
Instrumentation		
Major Instrumentation/SCADA	\$720,000	\$720,000
Buildings		
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
Treated Water Recharge		
Sand Beds	\$800,000	\$1,200,000
Other		
Yard piping	\$1,500,000	\$1,900,000
General Electrical and Instrumentation	\$2,500,000	\$3,000,000
Site work	\$880,000	\$1,100,000
HVAC	\$640,000	\$790,000
Painting, Plumbing	\$430,000	\$530,000
Miscellaneous Metals	\$320,000	\$390,000
Construction Cost Subtotal	\$28,400,000	\$35,200,000
Contingency (20%)	\$5,700,000	\$7,000,000
Design Engineering	\$1,600,000	\$2,000,000
Fiscal, Legal and Engineering (15%)	\$4,300,000	\$5,300,000
Total Project Cost ⁽⁴⁾⁽⁵⁾⁽⁶⁾	\$40,000,000	\$49,500,000

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.