



Hazen and Sawyer
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June 29, 2022

Sidney Forsyth
Director
Cartersville Water Department
148 Walnut Grove Rd SE
Cartersville, GA 30120

Re: Water and Wastewater Dynamic Rate Analysis Model

Dear Sidney:

As requested, Hazen and Sawyer (Hazen) is pleased to provide the following letter proposal to develop a Dynamic Water and Wastewater Rate Analysis Model in support of the City of Cartersville’s (City) current rate structure, proposed capital improvement projects, and planned future Capital Improvement Plan (CIP). If acceptable, this work will be performed under our Agreement for General Engineering and Consulting Services with the City of Cartersville, dated September 1, 2016.

Project Understanding

The Cartersville Water Department (CWD) owns and operates a water treatment facility and wastewater treatment facility that provides water and wastewater service for over 19,000 customers within the City and additional customers in Bartow County. Capital and operating expenses required to maintain the water and wastewater facilities and collection and distribution systems are funded by revenues generated from water and wastewater rates. The City requests Hazen to develop Dynamic Rate Analysis Models for water and wastewater to support the City’s operating, maintenance, and CIP and long-range Capital Plan and to evaluate the rate structure with a focus on its fairness to the customers.

Scope of Services

Hazen will perform the following tasks for preparation of the Rate Analysis Models:

- Task 1 – Dynamic Rate Analysis Modeling
- Task 2 – Documentation of Dynamic Rate Analysis and Findings
- Task 3 – Rate Model Training

Task 1 – Dynamic Rate Analysis Modelling

Hazen will develop a schedule of rates via Dynamic Rate Analysis Models (Models) to support the City’s expenditures. The models will be developed to meet the City’s specific conditions and needs. The scope of this task will include the following:

Job no

- Hazen will provide the City with a detailed data request list for input into the models. It is requested that required information be provided by the City in electronic format. Any debt service payments on existing loans will need to be provided and the year each existing loan will sunset.
- Hazen will schedule a Kickoff Meeting with the City to discuss the input data received prior to beginning the initial model(s) development and the planning period.
- Hazen will build a Microsoft Power BI Dynamic Rate Analysis Models (Models) for water and wastewater services using data inputs from the City regarding water and wastewater expenses and revenues including financial and billing records.
- The models for the City will reflect changing labor, consumables, and operation and maintenance (O&M) costs, when combined with budgeting for current debt service, any proposed future capital improvements (e.g., CIP), repair and replacement, and other stipulated costs.
- Hazen will develop a plan description and schedule to adjust water and wastewater rates/fees to fund projected debt service, operation, and maintenance expenses. Various model scenarios will be run to evaluate the impact and effectiveness of the magnitude and schedule of rate increases to meet these needs. Hazen will consult with the City to determine the most appropriate schedule and changes in rates and/or rate structure to support the associated cost.
- Hazen will build into the models different cost categories for expenditures in the overall water and wastewater system. The models will also include dashboard interfaces to indicate relative cost allocations and provide a summary report for management use.
- The models, dashboards, and charts will illustrate the average percent usage between the user classes based on water meter readings or classifications, such as industrial or commercial. The models will also include an evaluation of the average bill paid per user in each user class. This will help to determine if the City's rates are as equitable and fair between user classes. Estimates on the annual growth or increase in flow will be incorporated into the models based on assumed areas of growth and expansion.
- Hazen will perform an analysis of fees being charged by the City for new connections to the water distribution and wastewater collection systems in accordance with industry standard methods.
- Hazen will provide a review of the existing high strength waste surcharge fee to confirm an equitable allocation of treatment costs to customers that contribute higher than domestic strength wastes.
- The models will provide a five-year financial projection which will be used to help the City safeguard and plan for the future of the system. Hazen will develop data inputs on an annual basis to allow the rates to adjust for changing consumables and/or projected estimates.
- The accuracy of the models will depend greatly on the input from City staff regarding expenditures or statement of accounts for the most recent complete calendar year or fiscal year

for water and wastewater, water meter readings (usage), and budget line items along with input from finance on the structure of reserves and funds for water and wastewater. User charge ordinances including minimum and unit charge rates will need to be provided for water and wastewater as well as any future rate changes which are planned.

Task 2 – Documentation of Dynamic Rate Analysis and Findings

Hazen will document the Dynamic Rate Analysis with written narratives in a Technical Memorandum summarizing the model output outlining the water wastewater rates required to fund the existing debt service, operation and maintenance, and cost associated with the water and wastewater system over the planning period.

- Hazen will review the Draft Final Dynamic Rate Analysis Models with the City. Hazen will incorporate comments, modifications, and changes to the analysis.
- Hazen will meet with City's key personnel to finalize and review the Final Dynamic Rate Analysis Models and narrative summaries.
- Hazen will provide the City with a status update and a presentation overview of the Water and Wastewater Dynamic Rate Analysis findings and conclusions.
- If requested, Hazen will meet with the City Council and staff to present the findings of the Final Water and Wastewater Dynamic Rate Analysis.
- Electronic format and hard copies of the Final Water and Wastewater Dynamic Rate Analysis Models and Narrative Summaries will be provided to the City.

Task 3 – Rate Model Training

Hazen will conduct a one-day training session, including a tutorial of the models, to train City staff on how to use the models and change data inputs.

Potential Additional Services

Additional services will be provided only upon specific written direction and authorization by the City. These services may include:

- Updates to the Dynamic Rate Study Models after the final models are delivered to the City.
- Additional presentations and meetings to the City.
- Development of a revised CIP for input into the models.

Schedule and Fee Estimate

Hazen proposes to accomplish the above scope of work for a not-to-exceed fee of \$98,000. Work will be compensated on a reimbursable time and expense basis as described in the *Agreement for General*

Engineering and Consulting Services between the City of Cartersville and Hazen and Sawyer and the attached billing rate schedule. Please note that we are requesting a 6% increase in our billing rates compared to our previous 2019 billing rates to account for salary and cost of living adjustments.

The final deliverables will be completed within 6 months of receipt of Notice to Proceed as follows:

Task	Estimated Schedule
Notice to Proceed	July 2022
Data Request	1 month after NTP
Kickoff and Data Collection Meeting	1 month after NTP
Remaining Data Collection	2 months after NTP
Development of Rate Model	3 months after NTP
Review of Draft Rate Model with Cartersville	4 months after NTP
Final Rate Model and Report	5 months after NTP
Presentation of Final Rate Model and Training to Cartersville	5 to 6 months after NTP
Rate Model Training	6 months after NTP

Please call me at 404-353-0571 or Alan Karnovitz at 202-570-9750 if you have any questions regarding this proposal. We look forward to continuing to serve the City of Cartersville through this important project.

Respectfully,



Pat Rogers, PE
Vice President

cc: Kristen Smeby, Alan Karnovitz

HAZEN AND SAWYER
Standard Hourly Billing Rate Schedule
January 1, 2022 to December 31, 2022

Staff Type	Rate
Vice President	\$223.00
Senior Associate	\$217.00
Associate	\$196.00
Senior Principal Engineer	\$172.00
Principal Engineer	\$151.00
Assistant Engineer II	\$133.00
Assistant Engineer I	\$115.00
Senior Principal Designer	\$138.00
Principal Designer	\$122.00
Designer	\$95.00
Operations Specialist	\$143.00
Senior Resident Project Representative	\$138.00*
Resident Project Representative	\$117.00
Office Support	\$72.00

Above hourly billing rates include normal and customary expenses including computer, telephone, miscellaneous copying, and postage.

Hourly rates are subject to a yearly escalation factor not to exceed 3%, unless an alternate factor is approved by both parties.

The following travel expenses are reimbursable work items and will be charged at cost:

- Travel expenses
- Bulk reproduction of reports, drawings and specifications
- Charges for permit fees and reviews by government agencies
- Subcontract services will be billed at cost, with the exception of the Senior RPR/CM, who will be provided at \$124/hour.

Automobile mileage is reimbursed at \$0.625 per mile without markup.