



CITY OF COLUMBIA
AGENDA MEMORANDUM

MEETING DATE: July 19, 2016

DEPARTMENT: Utilities and Engineering

FROM: *Joey Jaco, Director of Utilities and Engineering*

SUBJECT: Water Quality Monitoring

PRESENTER: Joesph D. Jaco

FINANCIAL IMPACT: Staff has negotiated a not to exceed fee for this Agreement for \$448,472.00 for the specified needs above with Woolpert. The budget for this project is \$550,000.00. Funding for this Agreement will come from the Storm Drain Operating and Maintenance (5534202-SD8360-638305). The excess funding between the original budgeted amount and the recommended project award will be transferred to WM4323: unforeseen projects and used as needed for projects not yet identified.

ORIGINAL BUDGET: \$550,000.00

CLEAN WATER 2020?: No

FEMA DR-SC4241?: No

The above referenced Agreement is to compensate Woolpert for conducting operation and maintenance activities associated with the nine (9) stormwater quality monitoring stations currently in operation throughout the city in Columbia, SC

Woolpert is a firm headquartered in Dayton, Ohio with a local office located in Columbia, SC. The following subconsultants will provide additional services: Rogers and Callcott, Inc. with headquarters in Greenville, SC and a local office in Columbia, SC, will provide laboratory analytical services. YSI, Inc., with headquarters in Yellow Springs, Ohio, will provide equipment and calibration solution for multi-parameter data sondes. Services to be performed will impact all City Council Districts.

Contract Amount: \$448,472.00

\$32,004.00(7.14% of the total contract value) awarded to Rogers & Callcott for stormwater runoff sample analysis and general laboratory services.

\$10,406.00 (2.32% of the total contract value) awarded to YSI, Inc. for monitoring equipment sales and monitoring site installation services.

The Legal Department has reviewed the Agreement. The Director of Utilities and Engineering and the ACM for Operations recommend its approval.

AGREEMENT FOR ENGINEERING SERVICES

THIS AGREEMENT is made this ____ day of _____, 20__, by and between the City of Columbia, South Carolina (hereinafter referred to as the "City") and Woolpert, Inc., (hereinafter referred to as the "Engineer"), for Engineer to conduct operations and maintenance activities associated with the nine (9) stormwater quality monitoring stations currently in operation throughout the city in Columbia, SC. Funding has been identified as 5534202-SD8360-638305.

For and in consideration of the mutual covenants and promises contained herein, the parties agree as follows:

I. Scope of Services

Upon written notification by the City to proceed, the Engineer shall complete the scope of services more fully described in Exhibit A, attached hereto. The Engineer shall perform any and all incidental services not specifically set forth in Exhibit A, which are necessary to fully complete the scope of services described in Exhibit A.

II. Supplemental or Additional Services

Supplemental or Additional Services may be required of the Engineer by the City or recommended by the Engineer and approved by the City in writing.

The Engineer must obtain written approval from the City for any Supplemental or Additional Services prior to the work being performed. If the Engineer fails to obtain prior written approval to perform the work, the City is under no obligation to compensate the Engineer for services performed.

III. Term of Agreement

This Agreement shall expire, unless terminated earlier as provided for herein, on June 30, 2017, or at such time the total compensation provided for herein is reached, whichever is earlier. The Engineer may request renewal annually for no more than three (3) years under the same covenants, terms and conditions contained herein. Should a renewal be desired, a contract amendment must be signed by the City Of Columbia and the Engineer.

IV. Schedule for Completion of Services

Time is of the essence. The Engineer shall complete any and all services performed under this Agreement within the timeframes as outlined in Exhibit A, attached hereto.

V. Compensation

A. The compensation to be paid by the City to the Engineer under this Agreement show on Exhibit A attached hereto, for Task 1 Discharge Measurement/ Programming, shall be a fee not to exceed Thirty-Two Thousand Thirty-Five Dollars and No/100 (\$32,035.00).

B. The compensation to be paid by the City to the Engineer under this Agreement show on Exhibit A attached hereto, for Task 2 Operation and Maintenance, shall be a fee not to exceed Ninety-One Thousand Two Hundred Twenty Dollars and No/100 (\$91,220.00).

C. The compensation to be paid by the City to the Engineer under this Agreement show on Exhibit A attached hereto, for Task 3 Grab Sampling, shall be a fee not to exceed Thirty-One Thousand Three Hundred Thirty Dollars and No/100 (\$31,330.00).

D. The compensation to be paid by the City to the Engineer under this Agreement show on Exhibit A attached hereto, for Task 4 Data Management/Statistical Analysis, shall be a fee not to exceed Ninety-Four Thousand Fifty Dollars and No/100 (\$94,050.00).

E. The compensation to be paid by the City to the Engineer under this Agreement show on Exhibit A attached hereto, for Task 5 Data management/Statistical Analysis/ Reporting shall be a fee not to exceed Sixty-Seven Thousand Three Hundred Sixty-Five Dollars and No/100 (\$67,365.00).

F. The compensation to be paid by the City to the Engineer under this Agreement show on Exhibit A attached hereto, for Task 6 Project Management, shall be a fee not to exceed Sixty-Eight Thousand Five Hundred Five Dollars and No/100 (\$68,505.00).

G. The compensation to be paid by the City to the Engineer under this Agreement show on Exhibit A attached hereto, for Reimbursable Expenses, shall be a fee not to exceed Sixty-Three Thousand Nine Hundred Sixty-Seven Dollars and No/100 (\$63,967.00).

H. The total compensation to be paid by the City to the Engineer under this Agreement shall not exceed Four Hundred Forty-Eight Thousand Four Hundred Seventy-Two Dollars and No/100 (\$448,472.00).

I. The Engineer shall submit invoices no more frequently than monthly for services rendered during each phase of the Project. Each invoice submitted must describe the services for which payment is requested, show payment calculations and specify the person(s) rendering such service(s). Each invoice must also clearly identify any portion of the fee invoiced for sub-consultants services, specified on Exhibit B, attached hereto, and identify if the sub-consultant is a Minority or Female Business Enterprise. Each invoice shall bear the signature of the Engineer, which signature shall certify that the information contained in the invoice is true and accurate and that the invoice amount is currently due and owing. The City will not pay interest or penalty on any past due amount.

VI. Indemnification, Hold Harmless And Insurance

A. The Engineer shall provide to the City evidence of Professional Liability Insurance in an amount not less than One Million and no/100 (\$1,000,000.00) Dollars per occurrence and Two Million and no/100 (\$2,000,000.00) Dollars Aggregate and General Liability Insurance in accordance with the current Columbia Code of Ordinances, which can be located at www.columbiasc.net.

B. The Engineer shall furnish the City with a certificate showing satisfactory proof of carriage of the insurance required hereunder and such insurance shall be approved by the City prior to the Engineer and any subcontractor of the Engineer commencing any services under this Agreement and this insurance shall remain in effect throughout the term of this Agreement and any renewals. Insurance shall remain in effect for the duration of the project and for a period of one (1) year after completion. The City of Columbia shall be the Certificate Holder and shall be named as an Additional Insured.

C. The Engineer shall hold harmless, defend and indemnify the City from any and all claims, actions, suits, charges and judgments whatsoever that arise out of the Engineer's performance or nonperformance of the services or subject matter called for in this Agreement.

VII. Subcontracting Outreach Program (<http://www.columbiasc.net/business-outreach/>)

The attention of the Engineer is directed to the Subcontracting Outreach Program. The Engineer is required to comply with the terms and conditions of this policy stated in this section if specified in Exhibit B attached hereto. The Engineer shall, in performance of the Agreement, only use those sub-consultants upon which the Engineer's proposal was based. Sub-consultants substitutions shall only be made upon the Owner's approval. The Engineer shall enter into contracts with those sub-consultants, in the same dollar amount upon which the Engineer's proposal was based, prior to award of the Agreement. Such Agreements shall be contingent upon award of the Agreement by the Owner and the Owner's Notice to Proceed to the Engineer. Each pay request shall identify the name of each sub-consultant and dollar amount that will be paid to each sub-consultant for work performed and materials/products furnished under the Agreement.

VIII. Mentor-Protégé Program (<http://www.columbiasc.net/business-outreach/>)

The City of Columbia shall encourage, where economically feasible, establishment of mentor-protégé relationships to ensure contracting opportunities for all businesses, including minority / women / small business enterprises. The Mentor-Protégé Program (MPP) helps develop private sector business relationships and enhances the contracting capabilities of minority-owned business enterprises (MBE), women-owned business enterprises (WBE), and small business enterprises (SBE). In order to provide opportunities for growth and to encourage hands-on business relationships, certain capital improvement projects may be designated by the City of Columbia as Mentor-Protégé Program projects. The City of Columbia has determined that participation in the City's Mentor-Protégé Program *is not* required for this project specified on Exhibit C, attached hereto. The Engineer must comply with Mentor-Protégé Program Guidelines. The Engineer agrees that the Mentor Protégé Program does not create any contractual rights and/or duties between the City and the Protégé and that the City is not a party to the Implementation Plan.

The Engineer agrees that it has or will enter into a separate contractual Agreement with the Protégé to which the City is not a party.

IX. Permits and Licenses

A. The Engineer shall be responsible for obtaining any approvals, permits and/or licenses as may be required of the Engineer in performing the services required under this Agreement. The Engineer shall be responsible for any costs relating to same.

B. The Engineer shall be responsible for identifying and providing any applications and supporting documentation to the City for any approvals and/or permits required of the City in order for the Engineer to perform the services required under this Agreement. Such approvals and/or permits may include, but not necessarily be limited to, SCDHEC Construction Permits, SCDHEC Stormwater Management for Construction Sites Permits, SCDHEC Water Resources Permits, Corps of Engineers Permits, City/County/SCDOT Encroachment Permits, Encroachment Permits for other utility rights-of-way and Railroad Right-of-Way Encroachment Permits/Agreements. The City shall obtain the approvals and/or permits identified by the Engineer and pay any costs relating to same.

C. The Engineer shall answer questions and consult with the City and/or appropriate authorities as necessary to assist the City's efforts in obtaining required permits/approvals.

D. The Engineer shall procure a City of Columbia business license while performing services under this Agreement.

X. Duties Upon Termination

At termination of this Agreement, the Engineer shall immediately provide the City with all records and data in any format the Engineer is capable of producing and at no cost to the City, which were generated, created or received by the Engineer in performance of the services required by this Agreement or as the City may deem necessary to perform the required services by the City or the Engineer's successor. All records shall be free from any proprietary claims or interest. The Engineer agrees to fully cooperate with the City and any successor to ensure an effective transition to continuously provide the required services.

XI. Termination of Agreement

The City may terminate this Agreement at any time upon any of the following grounds:

A. Failure by the City to appropriate funds for the performance of any of the services required in this Agreement in any annual budget;

B. The Engineer fails to perform any of the services required in this Agreement and does not correct such deficiency within fifteen (15) days having been notified by the City of such deficiency;

C. Force Majeure;

D. The City shall, at its sole option and discretion, have the right to terminate this contract for any reason whatsoever. A termination for default under this Agreement, if wrongfully made, shall be treated as a termination for convenience under this clause;

E. Upon expiration of the term of this Agreement; and

F. By mutual agreement.

Notice of termination shall be sent by registered mail, return receipt requested. In the event of termination, the Engineer shall only be entitled to the actual direct costs of all labor and material expended on the services required under this Agreement prior to the effective date of the termination or the Engineer shall be entitled to be paid a pro-rata percentage of the total Agreement price which is equal to its percent of completion, whichever of the two methods provides the lowest sum to be paid to the Engineer. In no event shall the Engineer be entitled to anticipatory profit or damages for any termination under this Agreement. In no event shall the Engineer be entitled to assert a claim in quantum meruit or any other measure of damages other than that stated herein.

XII. Ownership of Project Documents

All data, documents or other information of any description generated by or used by the Engineer or any subcontractor retained by the Engineer and related to the services required by this Agreement shall be the property of the City and shall not be used by the Engineer for any purpose whatsoever except to perform the services required by this Agreement.

XIII. Notice

A. Written notice to the City shall be made by placing such notice in the United States Mail, postage prepaid and addressed to: Director of Utilities and Engineering, c/o City of Columbia, Post Office Box 147, Columbia, South Carolina 29217.

B. Written notice to the Engineer shall be made by placing such notice in the United States Mail, postage prepaid and addressed to: Woolpert Inc., 2000 Center Point Rd. Suite 2200 Columbia, SC 29210.

XIV. Miscellaneous

A. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the City and the Engineer.

B. The Engineer shall be responsible for performance of all services required by this Agreement. The Engineer does not act as the City's agent or employee.

C. The Engineer will not assign or sublet its obligations to perform the services required by this Agreement without the written consent of the City.

D. In the event there are any disagreements between the City and the Engineer with regard to any of the requirements, specifications or interpretation of this Agreement, the Engineer agrees to defer to the reasonable interpretations of the City as, from time to time may be made by the City. Ambiguities in the terms of this Agreement, if any, shall not be construed against the City.

E. This Agreement shall be construed in accordance with the laws of the State of South Carolina. The Engineer agrees to subject itself to the jurisdiction and venue of the Circuit Courts of Richland County, State of South Carolina as to all matters and disputes arising or to arise under this Agreement and the performance thereof. The City may seek attorney's fees and the Engineer agrees to pay such fees as awarded by the Court or other body. No attorney's fees may be sought by, nor will be paid to, the Engineer.

F. This Agreement represents the entire agreement between the City and the Engineer and supersedes all prior communications, negotiations, representations or agreements, either written or oral. Only written Change Order signed by both the City and the Engineer may amend this Agreement.

G. The failure of either the Engineer or the City to insist upon the strict performance of any provision of this Agreement shall not be deemed to be a waiver of the right to insist upon strict performance of such provision or of any other provision of this Agreement at any time. Partial payment by the City shall not be construed as a waiver. Waiver of any breach of this Agreement shall not constitute waiver of a subsequent breach.

H. In the event any provision of this Agreement is determined to be void or unenforceable, all other provisions shall remain in full force and effect.

I. This Agreement is subject to City Council approval.

J. The Engineer is subject to the provisions of the 1991 Ethics Reform Act (8-13-100, et seq, South Carolina Code of Laws, 1976, as amended). Under this Act, City employees are prohibited from accepting anything of value from any person. "Anything of value" includes, but is not limited to, lodging, transportation, entertainment, food, meals, beverages, money, gifts, honorariums, discounts and interest-free loans.

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Witness the parties' respective hands and seals on the date first written above.

CITY OF COLUMBIA, SOUTH CAROLINA

Witness

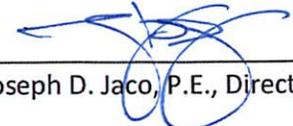
By: _____
Teresa Wilson, City Manager

Woolpert Inc.,



Witness

By: 
Title: SENIOR ASSOCIATE

RECOMMENDED BY: 

Joseph D. Jaco, P.E., Director of Utilities and Engineering

RECOMMENDED BY: _____
Melissa A. Gentry, P.E., Assistant City Manager for Operations

APPROVED AS TO FORM


Legal Department City of Columbia, SC

SCOPE OF SERVICES

City of Columbia, SC Water Quality Monitoring Operation and Maintenance for Phase 1, 2 and 3 Stations

Project Name:	City of Columbia Water Quality Monitoring Program Phase 5 Operation & Maintenance, Continuation
Project Number:	To Be Determined
Watersheds Monitoring:	Gills Creek, Lower Saluda, Congaree and Broad
Number of Stations:	9 Stations on Gills Creek, Kinley Creek, Rocky Branch and Smith Branch
Estimated Project Start Date:	July 2016
Estimated Project End Date:	June 2017
Project Duration:	12 months
Project Total Fee:	\$ 448,472

Project Understanding

In 2012, the City began developing a monitoring program in response to requirements outlined in the City's Phase I MS4 permit. Specifically, the City developed a monitoring program to gather more data regarding total maximum daily loads (TMDLs) in the Gills Creek watershed. Over the last four years, the City extended the monitoring program into the Rocky Branch, Kinley Creek, and Smith Branch watersheds. The comprehensive program included the implementation of a permanent monitoring network that incorporates the use of various water quality sensors, rainfall gages, stage/flow information, remote telemetry, and supplementary manual grab sampling. This program allows the City to thoroughly evaluate current baseline conditions, identify potential pollutant sources within and/or entering into City limits, and assess long term improvements in water quality due to the implementation of various BMPs. In addition, the rainfall and stream stage data will likely be useful for a range of other City needs, while data from the monitoring network may also provide further ancillary benefits including data for floodplain model calibration, spill tracking, and emergency response.

The following sub-tasks highlight the proposed scope of services to operate and maintain the continuous water quality stations for Gills Creek, Kinley Creek, Rocky Branch, and Smith Branch:

Task 1 – Rating Curve Development / Revisions

Stream discharge is a crucial component of the City's loading calculation at each of the water quality stations, and is calculated by creating and maintaining a relationship between stream stage and individual point discharge measurements at various stages. Continued flow measurements are necessary to ensure the accuracy of calculated loading rates. Stream cross sections and flow rates will be collected at the pressure transducer at each monitoring station. Data collected will be added to the model to refine the rating curve (i.e. stage versus flow rate). Rating curves will be programmed into the monitoring station's data logger and will be used to estimate continuous flow rates. This effort is important for calculation of pollutant mass loadings and assessing the potential improvement of water quality from various types of best management practices.



At Smith Branch B, a maximum of 8 measurements will be taken to develop a rating curve for the new station. This will include up to 4 low-flow and 4 high-flow measurements. Smith Branch A will utilize the stage vs discharge relationship already developed by the USGS; who maintains their stream gauge station upstream of the City’s Smith Branch A monitoring station. Continued rating curve development will occur at each of the water quality stations in the Kinley Creek and Rocky Branch watersheds. This will include up to 4 measurements at each of the 2 stations in each watershed. Particular emphasis will be put on capturing measurements at stages previously not captured.

At the Gills Creek A and C monitoring stations, rating curves have been finalized. However, the recent 1000-year flood event drastically modified the Gills Creek watershed and potentially the current stage-discharge relationship. It is imperative that the rating curves at these stations be validated throughout the year to account for changes in the stream bed and stage-discharge relationship and calibrated when changes occur. It is recommended that up to four measurements be taken at Gil A and Gil C during the Permit year. Additional discharge measurements may be needed if channel dimensions were altered drastically by the historic rain event. At Rocky B, up to 6 validation measurements shall be taken throughout the year to account for the relatively frequent changes in the downstream boundary condition, which is unique for this monitoring site. This would be in addition to the continued development of a rating curve at Rocky A.

Station ID	Number of Measurements	Station ID	Number of Measurements	Station ID	Number of Measurements
Gil A	4	Gil B	0	Gil C	4
Kin A	4	Kin B	4	Roc A	2
Roc B	6	Smi A	0	Smi B	8

Task 2- Operation and Maintenance

This task includes **monthly site visits** by Woolpert personnel for the purposes of maintaining the **nine (9) water quality monitoring stations** and associated hardware/sensors for **12 months**. This includes inspections of the casing pipe and equipment enclosure, removal of debris/pests, retrieval of the data sondes, confirmation of sufficient power supply, inspection of the rain gages (when needed), and documentation of field observations. Before retrieving the data sondes, Woolpert will check the weather forecast to ensure that the sensors will not be removed from the field for calibration when a perceptible event is predicted for the greater Columbia area. This task also includes field verification of the calibration of the Hydrological Services tipping bucket (TB-4) rain gauges using two different intensities.

After retrieval of the data sondes, the sensors on each data sonde will be cleaned and calibrated by Woolpert in accordance with the manufacturer’s recommendations. This will include the **calibration of sensors for pH, conductivity, temperature, turbidity, and dissolved oxygen**. Upon completion of the successful calibration of the sensors, the data sondes will be redeployed at each station. During routine calibration, the sensors may be out of the water for up to 72 hours.

Based on daily observations of field conditions via the project website (work days only), this task will include a maximum of **twelve (12) unscheduled site visits** to any of the **nine (9) monitoring stations** to address obvious maintenance needs such as buried sensors, sensors that have fouled or likely need maintenance/replacement, and/or rain gages where funnels or siphons have become clogged with debris. Woolpert will document the maintenance needs in a site specific maintenance log book.

Data Hosting

All recorded field data will be transmitted at a predefined interval, via the cellular modems, to a dedicated Woolpert server. Woolpert will host the data and setup a secure website for the City and Woolpert’s use with various graph templates to view the real time data. Woolpert will monitor recorded field data each work day during the deployment period. The data hosting effort will help identify any potential problems as they occur and reduce the potential for inaccurate water quality/rainfall reporting over significant periods of time. Costs associated with this task include a monthly data hosting fee for the use, maintenance, and updates of software/hardware that are needed for real-time observations and quality control services provided by Woolpert staff.



Dry Weather Screening of Major Outfalls

Woolpert will use a two-man field crew to visit major outfalls (approximately 120 major outfalls exist within the City limits) previously identified by the City of Columbia during dry weather conditions (less than 0.1 inch within 72 hours) to check for dry weather flow. Woolpert will coordinate with a City GIS representative to obtain a GIS shape file of the locations of the major outfalls and a list of attributes to collect while performing the dry weather screening activities at major outfalls. If dry weather flow or evidence of intermittent flows is present, Woolpert will record the observations in a database and report the flows to the City at the end of the dry weather screening process. Woolpert will not be responsible for tracking dry weather flows to their source and will not produce illicit discharge detection and elimination (IDDE) reports as a part of this task.

Task 3- Grab Sampling

This task includes near daily weather tracking for the collection of manual grab samples over a twelve month period at each of the nine (9) monitoring sites. This task will require the use of a SCDHEC certified laboratory and detailed coordination during a potential approaching storm. Up to four (4) samples will be collected for TP, TN, TSS, and *E. coli* during eight storm events pending appropriate weather conditions (target of two (2) events/season) at each of the monitoring stations. The samples will be spaced based upon the anticipated duration of storm water runoff, but the period of time for collection during each event will be heavily influenced by inclement or dangerous weather conditions, pollutant holding times, and/or laboratory staff availability. Additional *E. coli* samples will be collected as needed during dry weather conditions to assist with the regression analysis in Task 4. Woolpert intends to establish a subcontract agreement with a local business (SCDHEC certified laboratory) to provide the laboratory services to analyze samples collected at water quality monitoring stations. Invoices from the laboratory will be passed directly through to the City via Woolpert invoices during months where the laboratory services were used on the project.

Task 4 – Data Management/Statistical Analysis

This task includes monthly evaluation of the continuously collected field data from each of the nine (9) monitoring stations for quality control to identify any unusual or suspect pollutant concentrations. This includes noting any questionable data to be further analyzed or potentially removed from the final dataset based upon field observations during maintenance activities. Sensor drift corrections, equipment inventory, and calibration logs will be documented for each of the nine (9) sondes.

After correcting the continuous dataset based on field observations and maintenance activities, Woolpert will provide the City with descriptive statistics, which will be used in Task 5 below. This task also includes the development of a regression equation between *E. coli* and surrogate parameters from the multi-parameter data sonde.

Task 5 – Reporting

After the monthly evaluation of the continuously collected data is conducted, Woolpert will provide the City with summary reports for all nine monitoring stations. These reports will be in a format that will allow the City to post the graphical data and summaries to their website for the public to view. Upon the completion of the data collection process over the 12 month period for all nine (9) monitoring stations, descriptive statistics for the grab sample data and for each continuously measured field parameter will be calculated. The statistical analysis for all parameters and *E. coli* data will be summarized in a supporting narrative, all of which will be included in a final report. This task includes detailed seasonal and/or base flow/storm flow analysis among the nine (9) monitoring stations.

This task also includes Woolpert's assistance with compiling the City's comprehensive SCDHEC annual report. The DHEC annual report will be completed in time for the City to review before the City submits the finalized report to DHEC. Woolpert will provide the City with a monitoring summary for the City's annual report to SCDHEC for compliance with the City's MS4 permit. This summary of the monitoring station data will consist of study area descriptions, methods used, results, and a trend analysis for each of the stations.

Task 6 – Project Management

This project will require routine project management needs such as project setup, scheduling, client correspondence, team management, and invoicing. This task also includes sub-consultant management and monthly client meetings.

A general consulting fee has been added to the fee estimate to account for unforeseen situations that may occur in the field that require consultation between City and Woolpert staff. This fee can also be used to address Stakeholder interests, assist with written correspondence with SCDHEC, and mentor a City representative on various aspects of this project throughout its completion.

Reimbursable Expenses

Expenses requiring reimbursement will include but are not limited to analytical expenses from the laboratory, monitoring equipment, monthly data hosting, one year of calibration solutions, sonde parts/replacements, assorted equipment maintenance supplies, and mileage or work truck fees. The reimbursable expenses are, in part, determined by quotes Woolpert receives from sub consultants hired to perform work encompassed by this scope of services. The reimbursable expense contained in the Fee Estimate is subject to change based on quotes received by Woolpert. Reimbursable expenses can be used to address Stakeholder interests.

Assumptions / Notes

- Woolpert staff will make every effort to sample two storm events/season, but this task is contingent upon appropriate rainfall and safe weather conditions. It should also be noted that snow melt and smaller rainfall events will be avoided if possible due to lack of sufficient runoff. Woolpert will also attempt to avoid events that would cause the City to incur overtime billing rates from the laboratory.
- There are approximately 120 major outfalls to be screened. Fees for this service can change if additional major outfalls are identified during the project.

Data Hosting

Woolpert's data hosting responsibilities are intended to ensure that data is stored in such a manner as to permit access by the City as well as interested and affected parties as designated by the City. Woolpert's data hosting responsibilities are:

- a) Install, maintain, and operate software on a dedicated server to host data from each monitoring and sampling station. This responsibility shall include customary maintenance of the software and associated servers during normal business hours which are defined as 8:00 AM to 5:00 PM EST/EDT, Monday through Friday, and not including the following holidays- New Year's Day, President's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and the day after, and Christmas Day.
- b) Program modems at each monitoring station to call the server at selected intervals with appropriate phone numbers and routing information.
- c) Provide training in a timely manner to the City on the access of the data, including changes and/or upgrades to the system.
- d) Provide coordination between vendors and various Woolpert personnel to develop an IP address and web page to display the field data. Each station will be setup on the web page for viewing purposes and various security levels will be setup to maintain data security.
- e) Designate, by name or position a representative who shall act as the Woolpert Data Hosting Coordinator and designate also at least one back-up representative.

Data posted to the Woolpert-hosted webpage will be raw data and will not have any quality control routines or checks prior to posting. Each individual user of the real-time data will be responsible for any quality control processes before use. Woolpert cannot and does not warrant the accuracy of the real-time data and shall not be responsible for any use of such data.



Fee Estimate

Task Description	Fee Estimate
Task 1 Discharge Measurements / Programming - Regression Equation Programming / Alarms - Rating Curve Development - Discharge Measurements - Verify Survey Sections and Station	\$ 32,035
Task 2 Operation and Maintenance - Field Inspections - Sensor/Sonde Calibration - Daily Data Observations - Rain Gauge Calibration Check - Unscheduled Maintenance - Dry Weather Screening of Major Outfalls	\$ 91,220
Task 3 Grab Sampling - Weather Tracking - Laboratory Coordination - Sample Collection	\$ 31,330
Task 4 Data Management/Statistical Analysis - Monthly Quality Control - Descriptive Statistics - Regression Equation Development - Annual Load Calculations	\$ 94,050
Task 5 Data Management/Statistical Analysis/Reporting - Monthly Quality Control - Monthly Charts and Bulleted Summary - Descriptive Statistics - Final Report - DHEC Annual Report Compilation	\$ 67,365
Task 6 Project Management - Project Meetings - Invoicing - Client Meetings - General Consulting	\$ 68,505
Project Subtotal:	\$ 384,505
Reimbursable Expenses¹:	\$ 63,967
Project Total:	\$ 448,472

¹ See Attachment 2 for a cost breakdown for reimbursable expenses.



Hourly Rate Table

Principal	\$260
Project Director	\$215
Project Manager	\$175
Senior Professional Engineer	\$135
Professional Engineer	\$125
Engineer	\$115
Environmental Scientist	\$115
Junior Professional Engineer	\$100
Technician	\$80
GIS Analyst	\$150
Business Manager	\$85
Intern	\$60

Approximate Project Schedule²

Task Number	Task Description	Approximate Start Date	Approximate End Date
Task 1	Discharge Measurements / Programming	July 2016	July 2017
Task 2	Operation and Maintenance	July 2016	July 2017
Task 3	Grab Sampling	July 2016	July 2017
Task 4	Data Management / Statistical Analysis	July 2016	July 2017
Task 5	Reporting	July 2016	July 2017
Task 6	Project Management	July 2016	July 2017

² It is anticipated that this scope of services will require approximately **12 months** from notice to proceed to complete. However, the completion of the scope tasks is highly dependent on the frequency of rainfall events that occur during the project schedule timeframe.

Woolpert staff will make every effort to sample two storm events per season, but this task is contingent upon appropriate rainfall and safe weather conditions. It should also be noted that snow melt and smaller rainfall events will be avoided if possible due to lack of sufficient runoff. Woolpert will also attempt to avoid events that would cause the City to incur overtime billing rates from the laboratory.



Attachment 2 – Reimbursable Expenses

Reimbursable Expenses	Fee	Qty	Total Costs
Laboratory Fee for 8 events for each site	\$3,556	9	\$32,004
Turbidity Sensor*	\$1,640	3	\$4,920
DO Membrane*	\$150	9	\$1,350
pH Sensor*	\$325	7	\$2,275
Laboratory Supplies*	\$250	1	\$250
Misc. Field and Office Equipment*	\$10,000	1	\$10,000
Subtotal:			\$50,799

12 Month Calibration Solution	Unit Costs	Qty	Total Costs
Calibration Solutions (Sp. Conductivity, pH (4, 7, 10) Turbidity)*	\$1,180	1	\$1,180
Subtotal:			\$1,180

*Items that include sales tax

Subtotal A: \$51,979

SC Sales Tax (8%) \$1,598

Additional Reimbursable Expense		Total Costs
Service		
Mileage or work truck fees, additional supplies and equipment, rental rate for Flow Tracker and S5 ADP		\$7,150
Data Hosting		\$3,240
Subtotal:		\$10,390
Subtotal B:		\$10,390
Reimbursable Expense Total A + B+ tax:		\$63,967

NOTE: Total Costs are round up or down to the nearest dollar.

SUBCONSULTANT BUSINESS INFORMATION – ATTACHMENT B

Project: Phase 5 Monitoring Scope

The Bidder shall list all subcontractors and vendors, who will be providing subcontracting services, furnishing materials, etc. for this project. The list shall be submitted in the format provided below. Any proposed changes from the list shall be submitted in writing to the Owner prior to initiation of any action, with the reason for the proposed changes.

Business Name/ Address	Contact Name Telephone	WBE/MBE/ DVBE Information	Services/ Materials to be Provided	Cost of Service (\$ Value)
Rogers and Callcott Environmental 215 Stoneridge Dr, Columbia, SC 29210	(803)-509- 8999	n/a	Laboratory Analytical Services	\$32,004
YSI Incorporated 1700/1725 Brannum Lane Yellow Springs, Ohio 45387-1107	(937)-767- 7241	n/a	Equipment and calibration solution for multi- parameter data sondes	\$10,406

TOTAL: \$ 42,410.00

I certify this information is true and correct. *Michael J. Gony*