

Peachtree City Water & Sewerage Authority
Regular Meeting
Tuesday, March 21, 2023
8:30 a.m.

- I. Pledge of Allegiance
- II. Public Comment
- III. Minutes

January 19, 2023 - Regular Meeting Minutes

- IV. Reports
 - A. Authority Members
 - B. General Manager
- V. Line Creek Plant and Rockaway Plant SCADA
- VI. Line Creek Plant Gearbox
- VII. Program Management for ARPA Projects Work Authorization from ISE
- VIII. 2023 Long-Term Monitoring Work Authorization from ISE
- IX. Executive Session – Real Estate, Personnel, Potential Litigation
- X. Adjourn

** Location of meeting is Peachtree City Water & Sewerage Authority at 1127 Hwy. 74, South **

NOTE: This agenda is subject to change up to twenty-four hours prior to the scheduled meeting.

A quorum of City Council will be in attendance.

Peachtree City Water and Sewerage Authority

January 19, 2023

The Peachtree City Water and Sewerage Authority held its monthly meeting on Thursday, January 19, 2023, in the break room of the John W. Gronner Administrative Center. The following individuals were present: Chairman Kim Learnard, Vice-Chairman Mike King, Treasurer/Secretary Frank Destadio, Board Member Phil Prebor, Board Member Clint Holland, Ms. Melissa Griffis (attorney with Horne & Griffis), Mr. Dan Davis (ISE), Ms. Leslie Baer (ISE), Ms. Millie Shah (WASA), Mr. Larry McNeil (WASA), Mr. Chris Miller (Cpak Technology Solutions), Mr. Loren Yarbrough (WASA), Mr. Michael Cole (WASA), Mr. Jonathan King, Ms. Kathy Nguyen (GAWP), and Mr. John Dufresne.

Ms. Learnard called the meeting to order at 8:30 am. The meeting began with the Pledge of Allegiance.

Ms. Griffis administered the Oath of Office to board member Clint Holland.

Ms. Learnard opened the meeting up for public comment. There were no public comments.

Ms. Learnard asked for a motion to approve the November 8, 2022 regular meeting minutes. Mr. Destadio made a motion to approve the November 8, 2022 regular meeting minutes, seconded by Mr. King. Mr. Holland abstained. Motion carried.

There were no reports from the Authority members or General Manager.

Mr. Dan Davis introduced Ms. Kathy Nguyen, President Elect of the Georgia Association of Water Professionals (GAWP). Ms. Nguyen presented the Authority with the Gold Award for Outstanding Collection System. Ms. Nguyen stated the Authority received an outstanding score of 97.3%. The award was accepted by Authority staff members Mr. Cole and Mr. King.

Ms. Shah discussed the Quarterly Financial Report stating the Authority is at the 25% mark. Ms. Shah stated tap fees are beginning to decrease, expenses are under budget, and a bond payment is due in the near future.

Mr. Dan Davis discussed the Governors Square Phase I Sewer Extension project. Mr. Dan Davis stated there is an existing property owner with a failed septic system for the shopping center. The neighboring Towson development has allowed for a sewer connection to the shopping center. Mr. Dan Davis reviewed the location of the sewer extension on a map. Mr. Dan Davis stated the Rochester proposal provides for design of this sewer connection extension. Ms. Griffis stated another reason for completing this project is concerns for potential EPD violations for spillage, and that the Authority has a duty to minimize the potential risk of spillage. Mr. Dan Davis discussed the potential to recoup the cost of the sewer extension through allocating a proportionate cost to each parcel that connects to the system. Mr. Holland asked if there are any lots in the process of buildout. Mr. Dan Davis stated that there are not. Mr. Dan Davis stated that there are property owners interested in tying-in to the system. Mr. Dan Davis stated the Rochester proposal includes looking at the flow rate for each parcel. Mr. Prebor made a motion to approve the Rochester proposal as presented, seconded by Mr. Destadio. Motion carried.

Mr. McNeil discussed the Replacement Septage Receiving Screen proposal from Cornerstone H2O. Mr. McNeil stated the septage receiving screen at the Line Creek plant is eight years old. Previously a third

party septage receiving company did not properly maintain the equipment. Mr. McNeil stated the Cornerstone H2O proposal provides for replacement of the damaged screen. Mr. McNeil stated the number of loads being received has decreased due to the condition of the screen and this replacement screen will allow for an increase in loads received. Ms. Griffis stated that she reviewed the proposal and requested edits, and the revised document will be on the agenda for approval at the next Board meeting. Mr. Dan Davis stated proper procurement protocols were followed with three bids received, and Cornerstone H2O was the lowest bid.

Mr. Dan Davis discussed the Jefferson Architecture Proposal to provide design services and drawings for interior renovations to the administrative building. Mr. Dan Davis stated the project is being completed in order to improve security at the facility, increase office spaces, and provide necessary repairs to the kitchen area. Mr. King made a motion to approve the Jefferson Architecture proposal as presented, seconded by Mr. Destadio. Motion carried.

Ms. Learnard asked for a motion to adjourn into Executive Session for the purpose of Real Estate, Personnel, and Potential Litigation. The motion was made by Mr. King and seconded by Mr. Prebor. Motion carried. The meeting was adjourned into Executive Session at 9:16 am.

The meeting was reconvened at 9:50 am.

Ms. Learnard asked for a motion to adjourn. The motion was made by Mr. King and seconded by Mr. Destadio. Motion carried. The meeting was adjourned at 9:51 am.

Chairman – Kim Learnard

Vice Chairman – Mike King



MEMORANDUM

TO: Dan Davis
General Manager

FROM: Larry McNeil
Deputy General Manager

DATE: March 3, 2023

SUBJECT: Line Creek Plant and Rockaway Plant SCADA Upgrade

For approximately 25 years, both the Line Creek and the Rockaway Plants have been monitored by SCADA (Supervisory Control and Data Acquisition System) which allows the operators to monitor the facilities from a desktop as well as capture data required by our state issued NPDES permit for reporting purposes. The existing SCADA system is outdated, unreliable, and has become essentially obsolete as we can no longer source replacement parts/service. In FY2021, we upgraded the monitoring system for all pump stations and now plan to upgrade the SCADA systems for the treatment plants with a compatible system.

We solicited three proposals from SCADA equipment vendors and received two responses; the third vendor was unresponsive. MR Systems provided the lowest responsive bid at \$148,962. We budgeted \$200,000 in the FY2023 for this work. It is our recommendation that we proceed with MR Systems for the SCADA system upgrade for both treatment plants. The MR Systems' quote is attached.



Statement of Work

Peachtree City Water & Sewerage Authority

Ignition SCADA Migration

MR Systems Quote #Q22-10174 R2



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1 Revision History

Rev #	Date	Description	Author
0.0	2022-06-22	Initial draft	E. Conder
1.0	2022-08-04	Priced Proposal	S. Khel
2.0	2022-11-16	Breakout Per Plant	S. Khel

2 Statement of Work

2.1 Purpose

Provide and install new workstations and new Inductive Automation Ignition HMI software and application converted from the existing GE iFIX HMI application at both the Rockaway WWTP and Line Creek WWTP. The latest stable, supported firmware and software versions will be used. New 3D background graphics will be provided representing each Plant's processes.

2.2 Approach

New hardware and software will be implemented in parallel with at least one of the existing SCADA computers to be used for data verification and as a backup during the testing period.

2.3 Scope

2.3.1 Hardware

2.3.1.1 Rockaway WWTP

- (2) Two new Windows 10 workstations, monitors, keyboards, mice, and UPS
- (1) One new SMS modem to use in lieu of the existing MultiTech SMS modem that isn't compatible with the new Ignition HMI software. Compatible modems can be found [here](#) and MR Systems recommends the following Sierra Wireless cellular radio models:
 - RV50x
 - RV55x
- (1) NAS storage server to hold image backups of the primary and standby SCADA workstations for bare metal restore disaster recovery capability

2.3.1.2 Line Creek WWTP

- (1) One new Windows 10 workstation, monitor, keyboard, mouse, and UPS

2.3.2 Workshops

Workshops will be coordinated with the owner to discuss the customer's requirements for:



- 3D graphic backgrounds design
- Preliminary and final HMI screen layouts with badge mockups to show how the screens will look with data
- HMI screen navigation hierarchy

2.3.3 Software

The latest, stable version of Inductive Automation Ignition with the following modules & drivers:

2.3.3.1 Ignition Platform

- OPC UA Server Module
- Core Drivers
- Alarm Notification Module
- SQL Bridge Module
- Perspective Module Unlimited
- Tag Historian Module
- SMS Notification Module
- Reporting Module
- Three (3) Ignition Client Licenses

2.3.3.2 SQL Server Express

SQL Server 2019 Express will be installed on the primary and standby SCADA workstations and will serve as the Ignition Historian and reporting databases.

2.3.3.3 Veeam Agent for Windows

Veeam Agent for Windows will be configured on each of the workstations to perform scheduled full and increment image backups of the Windows workstations.

Recovery ISOs for each workstation will be created and stored on the NAS for use in backup image restoration.

2.3.4 Tag Historian and Reports

Microsoft SQL Server 2019 Express will be used for the Tag Historian and reporting database.

The following existing reports will be modified or recreated to work with the new SCADA software:

- Monthly Flows Report

2.3.5 Testing

Test results reports will be provided upon completion of testing.

2.3.5.1 IO Testing

All converted tag IO and functionality will be tested from the existing PLCs to the new SCADA HMI application.



2.3.5.2 HMI Head-End Testing

Basic computer and HMI component and redundancy testing will be performed.

2.3.5.3 Alarm Notifications

Alarm notifications pipelines and communication methods will all be tested to ensure correct operation.

2.3.5.4 Reports

Report data retrieval, saving, printing, etc. functionality will be tested.

2.3.5.5 Security

Each security level will be tested to ensure only the corresponding functionality is allowed within each level.

2.3.6 Customer Documentation & Backups

MR Systems' internal customer documentation will be updated with new hardware, software, architecture, license, and IP address information.

Final backups of all software and hardware configurations and credentials will be copied and stored on MR Systems' servers.

2.4 Not in Scope

- Migrating iFIX trend data into Ignition
- Collections System I/O and screen development
- Line Creek Plantera GC Discharge IO and screen development
- WIN-911 (will be replaced with new Ignition Alarm Notifications module)
- Antivirus and antimalware software
- Correction of existing SCADA issues unrelated to the HMI conversion

2.5 Deliverables

List of tangible items to be delivered by this work. Examples included below.

Phase	Deliverable
Planning	Color standards submittal for equipment, badge, and pipe colors
Planning	Graphics submittals for 3D background SCADA graphics
Planning	Tag standards submittal for descriptions, labels, eng. units, logging deadbands, etc.
Planning/Dev	SCADA screen badging submittal
On Site	SCADA Operation & Redundancy Test Report
Closeout	Encrypted archive of all credentials for supplied and configured hardware and software
Closeout	Final backup of HMI application and all software configurations



2.6 Cost Proposal

MR Systems is pleased to offer this proposal to the Peachtree City Water & Sewerage Authority to perform work and provide hardware and software as outlined above for migrating the HMI at both Rockaway WWTP and Line Creek WWTP from GE iFIX to Ignition.

To match the current SCADA system architecture and setup with HMI redundancy and clients, the Rockaway WWTP and Line Creek WWTP HMI will be combined into one (1) Ignition application. The Rockaway WWTP will have both the Primary SCADA and Secondary SCADA Workstations that will serve up the new Ignition HMI application and Historian. The Line Creek WWTP will connect to Rockaway WWTP as a client. The cost for Line Creek WWTP assumes that new SCADA Workstations and Ignition Software are in place at Rockaway WWTP.

Below is the cost summary per Plant and the total project cost.

Rockaway WWTP Cost (taxes not included)	\$105,233.00
Line Creek WWTP Cost (taxes not included)	<u>\$43,729.00</u>
Total Project Cost (taxes not included)	\$148,962.00

Thank you for allowing us the opportunity to provide this proposal. Please feel free to reach out to us if you have any questions.

Regards,

Sothorn Khel, P.E.
Vice President of Sales

Email: skhel@mrsystems.com
Cell #: 770-519-0597
Office #: 678-325-2824



MEMORANDUM

TO: Dan Davis
General Manager

FROM: Larry McNeil
Deputy General Manager

DATE: March 3, 2023

SUBJECT: Line Creek Plant Gearbox

We are seeking approval to purchase a spare gearbox for the Line Creek Plant. The gearbox is a critical component of the aeration system for the treatment plant and is unique to the equipment we have onsite, thus alternative gearboxes are not compatible. The aeration system is used to supply oxygen to the four basins, enabling us to remain in compliance with our state issued NPDES permit. In the event of a failure, we currently do not have a spare gearbox and repair/rebuild could take up to four months.

We received a quote of \$114,000 from the vendor which is below the budgeted amount of \$150,000 (FY2023). The quote from Applied Industrial Technologies is attached.

Quotation

Service Center Address: APPLIED IND TECH - DIXIE, INC. 1525 DISTRIBUTION COURT LITHIA SPRINGS, GA 30122-4115 TEL: 678-398-3185 FAX: 678-398-3195				Quote Create Date (MM-DD-YYYY): 12-01-2022		Sales Rep: KIMBERLY MASSINGILL Phone: 678-398-3185 EXT XXX Email: KMASSINGILL@APPLIED.COM		Page: 1/1
Account Manager:				Quotation Number: 511322671		PO #: Req #: Inquiry #:		
Sold-To Address: Account: C2240 PEACHTREE CITY WATER AND SEWERAGE 1127 HIGHWAY 74 SOUTH PEACHTREE CITY GA 30269				Ship-To Address: Account: C2240 PEACHTREE CITY WATER AND SEWERAGE AUTHORITY 1127 HIGHWAY 74 SOUTH PEACHTREE CITY GA 30269				
Payment Terms: COD - CASH BASIS				Customer Contact: LORIN Customer Contact Phone: (250) 992-8512				
Transport Mode and Means: CUSTOMER PICKUP, CUSTOMER PICK UP Terms:								
Item #	Quantity	UOM	Manufacturer Part #	Customer Part #	Est Delivery Date	Unit Price (USD)	Extended Price (USD)	
000010	1.000	EA	SUMITOMO DRIVE TECHN-RND36-AN-65 Description: SUMI_RND36-AN-65 Order Notes: HANSEN POWERPLUS SIMILAR TO MODEL: RND36-AN-45, SN: R03A079505, AND DWG: 97RND36-516Z THE FOLLOWING ITEMS ARE NOT IN THE SCOPE OF SUMITOMO SUPPLY: MOTOR, MOTOR BASE, BASE PLATE, PROTECTION HOODS, V-BELT DRIVE, AUXILIARY DRIVE, COUPLINGS, AND CERTIFICATES. APPROXIMATE WEIGHT: 1350 US POUNDS APPROXIMATE OIL CAPACITY: 5.3 US GALLONS LEGACY WARRANTY: 12 MONTHS AFTER DELIVERY			113,383.010	113,383.01	
SUBTOTAL (WITHOUT TAX)							113,383.01	
TAX							7,936.81	
TOTAL IN WORDS: ONE HUNDRED TWENTY-ONE THOUSAND THREE HUNDRED NINETEEN DOLLARS AND EIGHTY-TWO CENTS						TOTAL(USD)	121,319.82	
Special Information: Order Notes:								
PRICES QUOTED ABOVE ARE THOSE IN EFFECT AT THE TIME OF QUOTATION. MANUFACTURER INCREASES MAY APPLY UNLESS SPECIFICALLY STATED ON THE FACE OF THIS QUOTATION. RETURNED PRODUCT IS SUBJECT TO A RESTOCKING CHARGE.				THIS QUOTATION CONTAINS CONFIDENTIAL INFORMATION, MAY NOT BE DISCLOSED TO THIRD PARTIES AND IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS OF SALE, SHOWN ON THE REVERSE SIDE OF THIS DOCUMENT AND AVAILABLE AT WWW.APPLIED.COM . BUYER'S ACCEPTANCE OF SHIPMENT OR PERFORMANCE AND/OR PAYMENT CONSTITUTES ACCEPTANCE OF APPLIED'S TERMS AND CONDITIONS.				
THIS QUOTE MAY CONTAIN ITEMS THAT ARE SPECIAL ORDER, UNIQUE, OR CUT TO SIZE. THESE ITEMS ARE NON-RETURNABLE AND NON-CANCELABLE. YOUR ORDER IS SPECIFICALLY CONDITIONED ON ACCEPTING THESE TERMS.								

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ASSIGNMENT OR DELEGATION: Buyer shall not assign, transfer or delegate, whether by operation of law or otherwise, any or all of its duties or rights hereunder without SELLER's prior written consent.

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ADDITIONAL TERMS AND CONDITIONS RELATED TO EXPORT OF SELLER GOODS - IN ADDITION TO THE STANDARD TERMS AND CONDITIONS ABOVE, EXPORT SALES OF SELLER GOODS WILL BE GOVERNED BY THE FOLLOWING ADDITIONAL TERMS AND CONDITIONS ("ADDITIONAL TERMS") IN THE EVENT OF A CONFLICT BETWEEN SELLER'S STANDARD TERMS AND CONDITIONS AND THE ADDITIONAL TERMS, THE ADDITIONAL TERMS SHALL PREVAIL FOR EXPORT SALES OF SELLER GOODS.

ORDER ACCEPTANCE: Buyer acknowledges that no order shall be deemed accepted unless and until it is verified and accepted by SELLER, or any of its U.S. affiliates, subsidiaries and divisions, at a continental U.S. facility or at any of its website. Buyer further consents that submission of its order shall subject Buyer to the jurisdiction of the federal courts of the United States of America and of the State where acceptance occurred in the United States of America.

EXPORT CONTROLS AND RELATED REGULATIONS: Buyer represents and warrants that it is not on, or associated with any organization on the United States Department of Commerce's Bureau of Industry and Security's Denied Persons List or Unverified List, or the United States Department of the Treasury's Office of Foreign Assets Control lists, Specially Designated Nationals, Specially Designated Global Terrorists, Specially Designated Narcotics Traffickers, Specially Designated Narcotic Traffickers-Kingpin, or Specially Designated Terrorists List, or the United States Department of State's Designated Foreign Terrorist Organizations, Embargoed Countries List, or Denied Persons List; it is subject to a denial order issued by the United States Department of Commerce. Buyer shall comply with all relevant laws and regulations of governmental bodies or agencies, including but not limited to all applicable export control laws of the United States or other governing agencies and their successors. Any commodities, technology and software will be exported from the U.S. in accordance with the U.S. Export Administration Regulations and other applicable laws or regulations. Diversion contrary to U.S. law is prohibited. If requested by SELLER, Buyer shall provide documentation satisfactory to SELLER verifying delivery at the designated country. BUYER AGREES TO INDEMNIFY AND HOLD SELLER HARMLESS FROM ANY AND ALL COSTS, LIABILITIES, PENALTIES, SANCTIONS AND FINES RELATED TO NON-COMPLIANCE WITH APPLICABLE EXPORT LAWS AND REGULATIONS.

FOREIGN PRINCIPAL PARTY IN INTEREST; FREIGHT FORWARDER AND DOCUMENTATION: For any export sales, it is specifically agreed that Buyer shall be the foreign principal party in interest and/or that its freight forwarder shall act as Buyer's agent in such capacity for Export Administration Act or other applicable purposes; and Buyer and freight forwarder shall assume responsibility for all export or routed transactions documentation. At SELLER's request, Buyer or its freight forwarder shall provide copies of any export, shipping, or import documentation prepared by Buyer or its freight forwarder related to sales to them by SELLER.

ANTI-BRIBERY AND ANTI-CORRUPTION: Buyer states that it is an independent contractor, and represents, warrants, and covenants that it is in compliance with U.S. the Foreign Corrupt Practices Act and all applicable laws and regulations relating to bribery and corruption in all countries in which Buyer conducts business.

PERMITS, EXPORT AND IMPORT LICENSES: Buyer shall be responsible for obtaining any licenses or other official authorizations that may be required by the country of importation and/or under the Export Administration Regulations, International Traffic in Arms Regulations, Toxic Substances Control Act, or other applicable laws or regulations.

GENERAL: All orders are subject to acceptance by SELLER. The terms and conditions in SELLER's forms are incorporated herein by reference, and constitute the entire and exclusive agreement between Buyer and SELLER. Any representation, affirmation of fact and course of dealing, promise or condition in connection therewith or usage of trade not incorporated herein, shall not be binding on either party. If any provision hereof shall be unenforceable, invalid or void for any reason, such provision shall be automatically voided and shall not be part of this agreement and the enforceability or validity of the remaining provisions shall not be affected thereby.

To: Kim Learnard
Company: Peachtree City Water & Sewerage Authority
Address: 1127 Highway 74 South
Peachtree City, GA 30269

Date: March 13, 2023
From: Scott Thompson, P.E.
Copy to: L.H. (Dan) Davis, Jr., P.E.
File

Project: Program Management - American Rescue Plan Act
Funded Capital Projects

Background Information:

Peachtree City Water & Sewerage Authority (PCWASA) is receiving American Rescue Plan Act (ARPA) funding through the City of Peachtree City (City) to complete three capital projects. These projects have been identified as follows:

1. Larry B. Turner WRF – Headworks Rehabilitation
2. Larry B. Turner WRF and Rockaway WWTP – Disinfection Upgrades
3. Collection System Rehabilitation

The ARPA program requires extensive administrative, financial and schedule reporting. The funds must be designated to identified projects by 2024 and spent by 2026. Integrated Science & Engineering, Inc. (ISE) has prepared this Work Authorization (WA) to assist PCWASA with management of these projects. ISE shall serve as PCWASA's Program Manager between PCWASA and the Design-Builder (to be determined). ISE will assist with project definition and development, securing a qualified Design-Builder, and ARPA recording keeping, implementation, management, compliance, and monitoring of the projects. The Scope, Schedule, and Fee associated with performing the work is outlined herein.

The Larry B. Turner Water Reclamation Facility (WRF) was first designed in 1980 with a treatment capacity of 1 MGD. The plant uses an advanced version of oxidation ditch technology. The manufacturer chosen for treatment was EIMCO (now Ovivo) using their Carrousel system. The treatment train generally consists of a headworks for screening and grit removal, an aeration basin for biological treatment, clarifiers for settling of solids, filtration, and disinfection. In 1985, the facility was doubled in size to a treatment capacity of 2 MGD. In 2002, the facility was renovated again, this time to improve its treatment ability. Most recently, this facility has had difficulties meeting strict permit limits. The headworks of the plant need expansion to alleviate continued hydraulic overload and prevent bypass of the bar screen. Further, the existing Trojan ultraviolet (UV) disinfection units have reached the end of their service life. The units are requiring excessive amounts of maintenance and require Trojan specific maintenance technicians that have proven ineffective. New UV units are required.

The Rockaway WWTP was first designed in 1988 with a treatment capacity of 2 MGD. The process selected for treatment was a Sequencing Batch Reactor or SBR. The manufacturer was Sanitaire using their ICEAS treatment system. In 2002, the facility was expanded to 4 MGD again using an SBR design, only this time, the manufacturer was Aqua-Aerobics using their AquaSBR treatment system. The facility is in need of

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upgrades due to tightening of regulations and to be better positioned for any future permit limits. The existing filters are operating at 100% capacity and additional filters would provide redundancy in the system to ensure no filter bypass occurs and permit limits are always met. Further, the existing Trojan UV disinfection units have reached the end of their service life. The units are requiring excessive amounts of maintenance and require Trojan specific maintenance technicians that have proven ineffective. New UV units are required.

In early 2012, PCWASA contracted with Red Zone Robotics to generate video footage of its sanitary sewer system (approximately 181 miles). This footage was then cataloged in digital format and graded using the National Association of Sewer Service Companies (NASSCO) grading system. This association uses a nationally recognized standard for coding the condition of sanitary sewer laterals, pipes, and manholes. Using this coding system, PCWASA staff was able to identify the most critically deficient areas of its collection system and proactively implement a Capital Improvement Program (CIP). PCWASA has been working to address the collection system needs identified in the CIP. This is an ongoing proactive effort and will continue for the years to come. The most critical areas will be identified and addressed under the given budget.

Scope of Work:

Larry B. Turner WRF – Headworks Rehabilitation

Task 1A – Project Management

Projects with multiple tasks require project management and coordination for efficient and cost-effective engineering services. ISE will provide a Project Manager for coordination and correspondence for both internal and external services associated with project kickoff, project meetings, information requests, and final project delivery. ISE will provide project management including coordination and correspondence with PCWASA staff and other stakeholders, coordinating with the Design-Builder during design progression and construction, coordinating with City staff to ensure ARPA program compliance, record keeping, and project implementation.

Task 1B – Preliminary Design and Request for Proposal

ISE will provide a 30% design of the headworks improvements sufficient to support the preparation of a Request for Proposal (RFP) to secure a Design-Builder for final design and construction. ISE will review RFP responses and make an award recommendation to PCWASA for a qualified Design-Builder.

Task 1C – Construction Phase Services

ISE will serve as PCWASA's Owner's representative during the construction period. ISE will perform a weekly visit to areas with active construction and verify the project is being completed as designed, review and process contractor's monthly payment requests, be available to PCWASA and the Design-Builder to answer questions that arise in the field and help determine solutions to potential construction issues.

Larry B. Turner WRF and Rockaway WWTP – Disinfection Upgrades

Task 2A – Project Management

Projects with multiple tasks require project management and coordination for efficient and cost-effective engineering services. ISE will provide a Project Manager for coordination and correspondence for both

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internal and external services associated with project kickoff, project meetings, information requests, and final project delivery. ISE will provide project management including coordination and correspondence with PCWASA staff and other stakeholders, coordinating with the Design-Builder during design progression and construction, coordinating with City staff to ensure ARPA program compliance, record keeping, and project implementation.

Task 2B – Preliminary Design and Request for Proposal

ISE will provide a 30% design of the UV disinfection upgrades sufficient to support the preparation of an RFP to secure a Design-Builder for final design and construction. ISE will review RFP responses and make an award recommendation to PCWASA for a qualified Design-Builder.

Task 2C – Construction Phase Services

ISE will serve as PCWASA's Owner's representative during the construction period. ISE will perform a weekly visit to areas with active construction and verify the project is being completed as designed, review and process contractor's monthly payment requests, be available to PCWASA and the Design-Builder to answer questions that arise in the field and help determine solutions to potential construction issues.

Collection System Rehabilitation

Task 3A – Project Management

Projects with multiple tasks require project management and coordination for efficient and cost-effective engineering services. ISE will provide a Project Manager for coordination and correspondence for both internal and external services associated with project kickoff, project meetings, information requests, and final project delivery. ISE will provide project management including coordination and correspondence with PCWASA staff and other stakeholders, coordinating with the Design-Builder during design progression and construction, coordinating with City staff to ensure ARPA program compliance, record keeping, and project implementation.

Task 3B – Preliminary Design and Request for Proposal

ISE will provide a 30% design of the collection system rehabilitation sufficient to support the preparation of an RFP to secure a Design-Builder for final design and construction. ISE will review RFP responses and make an award recommendation to PCWASA for a qualified Design-Builder.

Task 3C – Construction Phase Services

ISE will serve as PCWASA's Owner's representative during the construction period. ISE will perform a weekly visit to areas with active construction and verify the project is being completed as designed, review and process contractor's monthly payment requests, be available to PCWASA and the Design-Builder to answer questions that arise in the field and help determine solutions to potential construction issues.

Schedule:

It is anticipated that all work can be completed within a 36-week construction period (NTP to Substantial Completion).

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Fee Estimate:

Task No.	Task Name	Contract Amount	Billing Type
Larry B. Turner WRF – Headworks Rehabilitation			
1A	Project Management	\$6,600	Lump Sum
1B	Preliminary Design and Request for Proposal	\$25,500	Lump Sum
1C	Construction Phase Services	\$33,000	Hourly
Larry B. Turner WRF and Rockaway WWTP – Disinfection Upgrades			
2A	Project Management	\$6,600	Lump Sum
2B	Preliminary Design and Request for Proposal	\$25,500	Lump Sum
2C	Construction Phase Services	\$33,000	Hourly
Collection System Rehabilitation			
3A	Project Management	\$6,600	Lump Sum
3B	Preliminary Design and Request for Proposal	\$15,500	Lump Sum
3C	Construction Phase Services	\$24,500	Hourly
TOTAL		\$176,800	

All work will be performed in accordance with the attached Terms and Conditions. The fees listed contain ISE labor, subconsultants, and direct project expenses previously noted in the Scope of Work section. Additional efforts, including fees and services outside the Scope of Work detailed herein will be coordinated directly with the Client prior to proceeding. Additional fees will be billed hourly and in accordance with the rate schedule herein.

If this Work Authorization is acceptable, please sign and return a copy for our records as our notice to proceed.

Authorization:

Authorized by: _____ Title: _____

Print Name: _____ Date: _____

Terms and Conditions Included

WORK AUTHORIZATION

TERMS AND CONDITIONS

Integrated Science & Engineering, Inc. (ISE) shall perform the services outlined in this agreement for the stated fee arrangement.

Access to Site: Unless otherwise stated ISE will have reasonable access to the site for activities necessary for the performance of the services. If reasonable access is not provided and consequently ISE is denied or delayed in performing their services, the associated cost may be viewed as a reimbursable expense.

Billings/Payment: Invoices for ISE's services shall be submitted, at ISE's option, either upon completion of such services or on a monthly basis (unless noted otherwise) and are due when rendered. Invoices shall be considered "Past Due" if not paid within 30 days after the invoice date. If the invoice is not paid within 30 days, ISE may, without waiving any claim or right against the Company, and without liability whatsoever to the Company, terminate the performance of the service. Unpaid accounts shall be subject to a monthly service charge of 1.5% on the unpaid balance at the sole election of ISE.

Reimbursable Expenses: Any expenses that are required beyond those identified under professional services will be billed at a multiple of 1.15 times the cost incurred.

Additional Services: Additional services include increase or change in scope of project, major revisions when such revisions are inconsistent with written approvals or instructions previously given, services after award of contract in evaluation of substitutions proposed by the construction contractor, and other services that are not included under professional services; provided, however, that additional services shall not be classified as reimbursable expenses and will be billed at ISE's cost incurred or normal prevailing rate. ISE will only perform additional services when authorized in writing by the Company.

Indemnification: ISE shall indemnify and hold harmless Company and all of Company's personnel from and against any claims, damages, losses and expenses (including attorney's fees) arising out of or resulting from the performance of the services, provided that any such claim, damage, loss or expense is caused by the negligent act, omission, and/or strict liability of ISE, anyone directly employed by ISE, or anyone for whose acts any of them may be liable.

Termination of Services: This agreement may be terminated by written notice by either the Company or ISE should the other fail to perform its obligations hereunder. In the event of termination, the Company shall pay ISE for all services rendered to the date of termination and all reimbursable expenses.

Ownership of Documents: All documents produced by ISE under this agreement shall remain the property of ISE and may not be used by the Company for any other endeavor without the written consent of ISE. Any unauthorized use or distribution shall be at Company's and Recipient's sole risk and without liability to ISE. Company further agrees that documents produced by ISE pursuant to this agreement will not be used at any location or for any project not expressly provided for in this agreement without ISE's written approval.

Discovery of Unanticipated Hazardous Materials: Hazardous materials may exist where there is no reason to believe they could or should be present. The Company acknowledges that ISE's scope of services for this project does not include any services related to hazardous wastes. ISE and the Company agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. ISE and the Company also agree that the discovery of unanticipated hazardous materials may make it necessary for ISE to take immediate measures to protect human health and safety, and/or the environment. ISE agrees to notify the Company as soon as practically possible should unanticipated hazardous materials or suspected hazardous materials be encountered. The Company encourages ISE to take any and all measures that in ISE professional opinion are justified to preserve and protect the health and safety of ISE personnel and the public, and/or the environment, and the Company agrees to compensate ISE for the additional cost of such work.

Site Operations: ISE field personnel will avoid hazards or utilities which are visible to them at the site. If ISE is advised or given data in writing that reveals the presence or potential presence of underground or overground obstructions, such as utilities, ISE will give special instructions to their field personnel. ISE will conduct the research that in its professional opinion is necessary to locate utility lines and other man-made objects that may exist beneath the site's surface. The Company recognizes that ISE's research may not identify all subsurface utility lines and man-made objects, and that the information upon which ISE relies may contain errors or may not be complete. ISE is not responsible for any damage or loss due to undisclosed or unknown surface or subsurface conditions, owned by Company or third parties. Evaluations of existing buildings require that certain assumptions be made regarding existing conditions, many of which are not able to be reviewed by reasonable visual observation. These assumptions cannot be verified without substantial cost of demolition. Where the detailed investigation of such a condition is not authorized, ISE shall not be responsible for the condition of the existing structure. The Company understands that actual field conditions may subsequently be found to vary from design assumptions which in turn may alter or increase the scope of the design and/or construction services. The Company is fully responsible for and assumes all risks associated with such conditions.

Construction Activities: Unless specifically stated otherwise, the Company and his contractor(s) are fully and solely liable for all means and methods of construction, temporary bracing and shoring, and construction site safety.

Integration: This agreement, the attached documents and those incorporated herein constitute the entire agreement between the parties and cannot be changed except by a written instrument signed by both parties.

Governing Law: Unless otherwise specified, this agreement shall be governed by the laws in the State of Georgia.

WORK AUTHORIZATION

UNIT RATES – 2023 BILLING RATES

Integrated Science & Engineering, Inc.

	Rate/Hour
Sr. Principal	\$ 230.00
Principal	\$ 210.00
Sr. Project Manager	\$ 185.00
Project Manager	\$ 170.00
Project Engineer III	\$ 165.00
Project Engineer II	\$ 150.00
Project Engineer I	\$ 135.00
Engineer II	\$ 125.00
Engineer I	\$ 110.00
Sr. Environmental Scientist	\$ 145.00
Environmental Scientist	\$ 115.00
Sr. Professional Land Surveyor	\$ 160.00
Survey Crew (1-person)	\$ 150.00
Survey Crew (2-person)	\$ 175.00
Planner	\$ 125.00
Technician III	\$ 125.00
Technician II	\$ 105.00
Technician I	\$ 85.00
Administrative	\$ 75.00
Subcontractor / Subconsultant	Cost + 15%
Reimbursables	Cost + 15%

To: Larry McNeil
Company: Peachtree City Water & Sewerage Authority
Address: 1127 Highway 74 South
Peachtree City, GA 30269

Date: March 8, 2023
From: Jason Ray, GISP
Copy to: file

Project: 2023 WPP Long-Term Water Quality Monitoring

Background Information:

The Peachtree City Water & Sewerage Authority (PCWASA) is required to perform annual long-term water quality monitoring to meet the requirements of its Watershed Protection Plan (WPP). This WPP was developed and approved by EPD in 2005. ISE proposes to implement the 2023 long-term monitoring activities required by PCWASA's WPP according to the scope, schedule, and fee described below.

Scope of Work:

Summary of Sampling Activities

ISE will conduct long-term water quality monitoring including sampling and analysis of physical and chemical parameters. Monitoring will be performed at five locations as specified in PCWASA's existing WPP. These stations are described below:

Station ID	Station Location	Sampling Type
FC – 1	Flat Creek at Highway 74 Crossing	Water Quality, Biological
FC – 6	Flat Creek at Crabapple Road	Water Quality, Biological
FC – 7	Flat Creek at Dogwood Trail Crossing	Water Quality, Biological
LC – 1	Line Creek at Highway 85 Crossing	Water Quality
LC – 7	Line Creek at Palmetto-Tyrone Road Crossing (Castlewood Road)	Water Quality, Biological

Water samples will be collected and analyzed for the following chemical constituents:

- Temperature (*In-situ*)
- Dissolved Oxygen (*In-situ*)
- pH (*In-situ*)
- Turbidity (*In-situ*)
- Conductivity (*In-situ*)
- *E. coli*
- Total Kjeldahl Nitrogen (TKN)
- Hardness*
- Total Suspended Solids (TSS)
- Ortho Phosphate
- Total Phosphorus
- Nitrate Nitrogen
- Nitrite Nitrogen
- Ammonia Nitrogen
- Dissolved Metals (Cadmium, Copper, Lead, Zinc)*

* Metals and hardness are sampled once per year during a wet weather sampling event.

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Parameters identified as “*in-situ*” will be measured directly in the stream using a Horiba U-52 water quality meter. The remaining parameters will be analyzed in a laboratory.

Dry and wet weather sampling will be performed quarterly (four times per year) for the above parameters except hardness, dissolved metals and *E. coli*. Sampling will be conducted during one dry weather event and one wet weather event during the summer period from May – October and during one dry weather event and one wet weather event during the winter period from November – April. Sampling for hardness and dissolved metals will be performed during a wet weather sampling event.

In August 2022, US EPA approved the revised water quality standards for Georgia that included a change in the bacteria indicator from fecal coliform to *E. coli*. As such, there is no longer a need to sample for fecal coliform. ISE will perform bacteria sampling for *E. coli* to calculate quarterly (four per year) geometric means each requiring four samples collected over a 30-day period (16 total sampling events).

ISE proposes to implement this work for the PCWASA according to the Scope of Work outlined below.

Task 1 – Water Quality Sampling and Analysis

ISE proposes to collect water quality data over 16 sampling events. These events will be divided into four distinct phases.

Task 1A – Winter Water Quality Monitoring

The initial water quality monitoring period will take place March to April and will consist of four separate sampling events at all five sites. The initial sampling event will focus on collecting water quality samples during a period preceded by at least 72-hours of no rainfall. This shall qualify as a “dry weather” event. This event will collect water quality samples to be tested for the aforementioned *in-situ*, chemical and bacteria parameters. Following this event, three additional sampling events will be conducted within 30 days and water quality samples will be tested for *in-situ* and bacteria parameters. These three events will be taken approximately every seven days irrespective of the weather. Following completion of all four sampling events, ISE will submit a memo summarizing the monitoring results for this task.

Task 1B – Spring Water Quality Monitoring

The second water quality monitoring period will take place May to July and will consist of four separate sampling events at all five sites. The initial sampling event will focus on collecting water quality samples during or immediately following a rainfall event of at least 0.2-inches of rainfall and preceded by a period of at least 72-hours of no rainfall. This shall qualify as a “wet weather” event. This event will collect water quality samples to be tested for the aforementioned *in-situ*, chemical and bacteria parameters as well as hardness and dissolved metals. Following this event, three additional sampling events will be conducted within 30 days and water quality samples will be tested for *in-situ* and bacteria parameters. These three events

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will be taken approximately every seven days irrespective of the weather. Following completion of all four sampling events, ISE will submit a memo summarizing the monitoring results for this task.

Task 1C – Summer Water Quality Monitoring

The third water quality monitoring period will take place August to October and will consist of four separate sampling events at all five sites. The initial sampling event will focus on collecting water quality samples during a period preceded by at least 72-hours of no rainfall. This shall qualify as a “dry weather” event. This event will collect water quality samples to be tested for the aforementioned *in-situ*, chemical, and bacteria parameters. Following this event, three additional sampling events will be conducted within 30 days and water quality samples will be tested for *in-situ* and bacteria parameters. These three events will be taken approximately every seven days irrespective of the weather. Following completion of all four sampling events, ISE will submit a memo summarizing the monitoring results for this task.

Task 1D – Fall Water Quality Monitoring

The final water quality monitoring period will take place November to December and will consist of four separate sampling events at all five sites. The initial sampling event will focus on collecting water quality samples during or immediately following a rainfall event of at least 0.2-inches of rainfall and preceded by a period of at least 72-hours of no rainfall. This shall qualify as a “wet weather” event. This event will collect water quality samples to be tested for the aforementioned *in-situ*, chemical, and bacteria parameters. Following this event, three additional sampling events will be conducted within 30 days and water quality samples will be tested for *in-situ* and bacteria parameters. These three events will be taken approximately every seven days irrespective of the weather.

Summary of Sampling Events

The following table provides a summary of the proposed water quality sampling schedule. ISE will subcontract with an EPA certified laboratory for all laboratory testing services.

Task	Event	Parameters to be Tested	Approximate Time Period	Season
Task 1A	Event #1	<i>In-situ</i> , Chemical, Bacteria (Dry Event)	March - April	Winter
	Events #2 - 4	<i>In-situ</i> , Bacteria		
Task 1B	Event #5	<i>In-situ</i> , Chemical, Bacteria, and Metals (Wet Event)	May - July	Summer
	Events #6 - 8	<i>In-situ</i> , Bacteria		
Task 1C	Event #9	<i>In-situ</i> , Chemical, Bacteria (Dry Event)	August - October	Summer
	Events #10 - 12	<i>In-situ</i> , Bacteria		
Task 1D	Event #13	<i>In-situ</i> , Chemical, Bacteria (Wet Event)	November - December	Winter
	Events #14 - 16	<i>In-situ</i> , Bacteria		

WORK AUTHORIZATION

Task 2 – Water Quality Evaluation and Report

Following completion of the water quality sampling activities, ISE will evaluate the data and prepare a water quality report summarizing the 2023 monitoring results. The water quality evaluation will include a comparison of the 2023 data with EPD or other appropriate guidelines for each parameter. If data indicate that water quality may be impacted by pollutants, potential pollutant sources will be identified. With the report, ISE will include a Certification Statement to be signed by PCWASA and the 2023 monitoring data entered into an EPD formatted spreadsheet saved to CD-ROM.

Deliverables

ISE will complete all sampling activities by December 31, 2023. ISE will prepare and submit one copy of the following documents to both PCWASA and EPD prior to EPD's June 30, 2024 reporting deadline for watershed protection plans:

- Annual Water Quality Report
- Certification Statement
- EPD Spreadsheet of Water Quality Data (CD-ROM)

Schedule:

ISE will begin work following the execution of this Work Authorization. Sampling will be completed by December 31, 2023. Project deliverables will be completed and submitted to PCWASA and EPD by June 30, 2024.

Fee Estimate:

Task No.	Task Name	Contract Amount	Billing Type
1A	Winter Water Quality Monitoring	\$ 5,500	Lump sum
1B	Spring Water Quality Monitoring	\$ 6,000	Lump sum
1C	Summer Water Quality Monitoring	\$ 5,500	Lump sum
1D	Fall Water Quality Monitoring	\$ 5,500	Lump sum
2	Water Quality Evaluation and Report	\$ 7,200	Lump sum
TOTAL		\$ 29,700	

All work will be performed in accordance with the attached Terms and Conditions. The fees listed contain ISE labor, subconsultants, and direct project expenses previously noted in the Scope of Work section. Additional efforts, including fees and services outside the Scope of Work detailed herein will be coordinated directly with the Client prior to proceeding. Additional fees will be billed hourly and in accordance with the rate schedule herein.

WORK AUTHORIZATION

If this Work Authorization is acceptable, please sign and return a copy for our records as our notice to proceed.

Authorization:

Authorized by: _____

Title: _____

Print Name: _____

Date: _____

Terms and Conditions Included

WORK AUTHORIZATION

TERMS AND CONDITIONS

Integrated Science & Engineering, Inc. (ISE) shall perform the services outlined in this agreement for the stated fee arrangement.

Access to Site: Unless otherwise stated ISE will have reasonable access to the site for activities necessary for the performance of the services. If reasonable access is not provided and consequently ISE is denied or delayed in performing their services, the associated cost may be viewed as a reimbursable expense.

Billings/Payment: Invoices for ISE's services shall be submitted, at ISE's option, either upon completion of such services or on a monthly basis (unless noted otherwise) and are due when rendered. Invoices shall be considered "Past Due" if not paid within 30 days after the invoice date. If the invoice is not paid within 30 days, ISE may, without waiving any claim or right against the Company, and without liability whatsoever to the Company, terminate the performance of the service. Unpaid accounts shall be subject to a monthly service charge of 1.5% on the unpaid balance at the sole election of ISE.

Reimbursable Expenses: Any expenses that are required beyond those identified under professional services will be billed at a multiple of 1.15 times the cost incurred.

Additional Services: Additional services include increase or change in scope of project, major revisions when such revisions are inconsistent with written approvals or instructions previously given, services after award of contract in evaluation of substitutions proposed by the construction contractor, and other services that are not included under professional services; provided, however, that additional services shall not be classified as reimbursable expenses and will be billed at ISE's cost incurred or normal prevailing rate. ISE will only perform additional services when authorized in writing by the Company.

Indemnification: ISE shall indemnify and hold harmless Company and all of Company's personnel from and against any claims, damages, losses and expenses (including attorney's fees) arising out of or resulting from the performance of the services, provided that any such claim, damage, loss or expense is caused by the negligent act, omission, and/or strict liability of ISE, anyone directly employed by ISE, or anyone for whose acts any of them may be liable.

Termination of Services: This agreement may be terminated by written notice by either the Company or ISE should the other fail to perform its obligations hereunder. In the event of termination, the Company shall pay ISE for all services rendered to the date of termination and all reimbursable expenses.

Ownership of Documents: All documents produced by ISE under this agreement shall remain the property of ISE and may not be used by the Company for any other endeavor without the written consent of ISE. Any unauthorized use or distribution shall be at Company's and Recipient's sole risk and without liability to ISE. Company further agrees that documents produced by ISE pursuant to this agreement will not be used at any location or for any project not expressly provided for in this agreement without ISE's written approval.

Discovery of Unanticipated Hazardous Materials: Hazardous materials may exist where there is no reason to believe they could or should be present. The Company acknowledges that ISE's scope of services for this project does not include any services related to hazardous wastes. ISE and the Company agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. ISE and the Company also agree that the discovery of unanticipated hazardous materials may make it necessary for ISE to take immediate measures to protect human health and safety, and/or the environment. ISE agrees to notify the Company as soon as practically possible should unanticipated hazardous materials or suspected hazardous materials be encountered. The Company encourages ISE to take any and all measures that in ISE professional opinion are justified to preserve and protect the health and safety of ISE personnel and the public, and/or the environment, and the Company agrees to compensate ISE for the additional cost of such work.

Site Operations: ISE field personnel will avoid hazards or utilities which are visible to them at the site. If ISE is advised or given data in writing that reveals the presence or potential presence of underground or overground obstructions, such as utilities, ISE will give special instructions to their field personnel. ISE will conduct the research that in its professional opinion is necessary to locate utility lines and other man-made objects that may exist beneath the site's surface. The Company recognizes that ISE's research may not identify all subsurface utility lines and man-made objects, and that the information upon which ISE relies may contain errors or may not be complete. ISE is not responsible for any damage or loss due to undisclosed or unknown surface or subsurface conditions, owned by Company or third parties. Evaluations of existing buildings require that certain assumptions be made regarding existing conditions, many of which are not able to be reviewed by reasonable visual observation. These assumptions cannot be verified without substantial cost of demolition. Where the detailed investigation of such a condition is not authorized, ISE shall not be responsible for the condition of the existing structure. The Company understands that actual field conditions may subsequently be found to vary from design assumptions which in turn may alter or increase the scope of the design and/or construction services. The Company is fully responsible for and assumes all risks associated with such conditions.

Construction Activities: Unless specifically stated otherwise, the Company and his contractor(s) are fully and solely liable for all means and methods of construction, temporary bracing and shoring, and construction site safety.

Integration: This agreement, the attached documents and those incorporated herein constitute the entire agreement between the parties and cannot be changed except by a written instrument signed by both parties.

Governing Law: Unless otherwise specified, this agreement shall be governed by the laws in the State of Georgia.

WORK AUTHORIZATION

UNIT RATES – 2023 BILLING RATES

Integrated Science & Engineering, Inc.

	Rate/Hour
Sr. Principal	\$ 230.00
Principal	\$ 210.00
Sr. Project Manager	\$ 185.00
Project Manager	\$ 170.00
Project Engineer III	\$ 165.00
Project Engineer II	\$ 150.00
Project Engineer I	\$ 135.00
Engineer II	\$ 125.00
Engineer I	\$ 110.00
Sr. Environmental Scientist	\$ 145.00
Environmental Scientist	\$ 115.00
Sr. Professional Land Surveyor	\$ 160.00
Survey Crew (1-person)	\$ 150.00
Survey Crew (2-person)	\$ 175.00
Planner	\$ 125.00
Technician III	\$ 125.00
Technician II	\$ 105.00
Technician I	\$ 85.00
Administrative	\$ 75.00
Subcontractor / Subconsultant	Cost + 15%
Reimbursables	Cost + 15%