



# CITY OF CLEARWATER

RFQ #39-25; Water, Reclaimed Water and Well Program Consultant

**SEPTEMBER 29, 2025 | 10:00 AM**

**PROPOSER:**

CHA Consulting, Inc.  
2502 N Rocky Point Drive, Suite 145  
Tampa, FL 33607

**PRIMARY CONTACT:**

Weston Haggen, PE, DBIA, ENV SP, PMP, Program Manager  
T: (727) 599-6071 | E: WHaggen@chasolutions.com

**CHA. CONTINUITY YOU CAN COUNT ON.**



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TAB 1

# LETTER OF INTEREST





# 1. LETTER OF INTEREST

SEPTEMBER 29, 2025

City of Clearwater  
Procurement Division  
PO Box 4748  
Clearwater, FL 33758-4748

**RE: RFQ #39-25; Water, Reclaimed Water and Well Program Consultant**

Dear Selection Committee Members:

For years, CHA Consulting, Inc. (CHA) and the City of Clearwater (city) have worked side by side to protect and renew the city’s most critical water infrastructure. Together, we’ve built momentum, and we are ready to carry it forward without interruption.

As your current potable water and reclaimed water program manager, we understand the city’s deep dedication to providing superior utility services to support its mission in providing uninterrupted and high-quality water, reclaimed water, and wastewater service. As part of this mission, the city is interested in continuing its water and reclaimed water program for assessment, design, procurement, and construction engineering inspection (CEI) services for water and reclaimed water main projects under a comprehensive renewal and replacement program for critical pipeline infrastructure within heavily-traveled and densely developed urban corridors. CHA has been a partner to the city in these efforts, **including design and construction oversight for over 90,000 feet of pipeline and other as-needed, on-call support services.** Our mission has always been directly aligned with the city’s mission for this program; we are very excited to have this opportunity to continue to partner with you to define and achieve your goals.

With proven experience and established program knowledge, CHA is the ideal partner to advance the city’s critical water infrastructure renewal and replacement program by providing:

**Local Experienced Leadership with Existing Synergy.** Our proposed program manager, **Weston Hagen, PE, DBIA, ENV SP, PMP**, has managed over 150 projects. He is Florida Department of Transportation (FDOT) certified for maintenance of traffic (MOT) and has extensive experience in the design and construction of pipeline conveyance systems using both trenchless and open-cut technologies. Weston brings more than 15 years of experience with the City of Clearwater, serving as program manager for the current Water and Reclaimed Water Program and as engineer-of-record (EOR) on numerous city projects. **He is the main point of contact for the ongoing program and will continue to serve in this role, providing steady leadership and consistency.** Additionally, our proposed deputy program manager, **Emily Williamson, PE**, is a key task leader and engineer under the current program, supporting timely project execution and completion of high-priority items, including construction coordination, permitting, and emergency-related situations. Together, and with the support of numerous additional support staff, our team is excited to continue our support and service to the City of Clearwater.

## WHY CHOOSE CHA?

- ✓ **Continuity You Can Count On** - CHA brings unmatched program insight, seamless coordination, and trusted relationships with city staff to keep this vital program moving forward.
- ✓ **Highly Experienced Local (Tampa) Staff** - Our team has over 300 years of combined, applied experience dedicated to this contract.
- ✓ **Familiar Team with Established Synergy with City Staff** - Our team’s existing relationships with city staff will support continued smooth collaboration, fast decision-making, and a reduced learning curve for continued successful program execution.
- ✓ **Understanding Clearwater’s Preferences** - Our extensive experience with the city enables us to consistently align each project with your vision, from design preferences to constructability considerations.
- ✓ **Familiarity with Construction Practices** - Proven success in Clearwater’s urban corridors.



**Superior, Unmatched Program Understanding.** CHA staff are very familiar with the City of Clearwater and all matters related to utility construction within its service area. As your current Water and Reclaimed Water Program Manager, along with our involvement in the city’s Wastewater Collection System Program, **our team understands your goals in improving existing infrastructure systems through hydraulic modeling, extending the useful life of existing assets with advanced condition assessment, and delivering comprehensive designs to replace existing infrastructure when necessary, all while planning for the future.** Our team has served as your eyes and ears in the field, overseeing a wide range of construction efforts, from major pipeline replacements to targeted point repairs. In addition to current programs, CHA provided engineering services for the design and construction of Clearwater’s award-winning 6.25 MGD Reverse Osmosis (RO) Water Treatment Plant (WTP) No. 2 and 62,000 feet of raw water transmission mains through the same urban corridors, completed in 2015.

**Full-Service Engineering and Science Firm.** CHA is an Engineering News-Record (ENR) Top-60 firm with over 2,000 employees located in more than 40 offices company-wide. In Florida, we have seven offices with a total staff that exceeds 250 professional engineers, scientists, and specialists. Our team includes local and nationally respected subject matter experts (SMEs) in pipeline conveyance, hydraulic modeling, master planning, water quality, and condition assessment. Our primary focus is to be a “solutions-based” firm with your needs in mind.

**Design and Construction Experience in High-Traffic and High-Risk Corridors.** The repair, replacement, and extension of new pipelines in highly urbanized, high-traffic, and high-risk areas present significant engineering and community participation and education challenges that CHA staff are well-equipped to address. Challenging pipeline designs and alignments are routine business at CHA. Our experience includes projects in congested corridors within the city’s limits, Pinellas County area, FDOT limits, and across the state of Florida.

We greatly appreciate your consideration of CHA’s qualifications and experience in providing utility engineering services to the City of Clearwater. **CHA brings unmatched program insight, seamless coordination, and trusted relationships with city staff to keep this vital program moving forward.** We are committed to working in full partnership with your staff and are ready to listen, understand, and act on your needs. Should you have any questions, please contact CHA’s program manager, Weston Haggen, PE, DBIA, ENV SP, PMP, at (727) 599-6071 (WHaggen@chasolutions.com) or CHA’s principal-in-charge, Allen Dethloff, PE, at (813) 819-0561 (ADethloff@chasolutions.com).

We certify that CHA has the personnel, equipment, and time necessary to successfully execute this program, and we are fully committed to dedicating these resources to support the city’s needs.

Sincerely,

**CHA Consulting, Inc.**

Michael A. Platt, Esq.  
Executive VP/General Counsel

Allen Dethloff, PE  
Principal-in-Charge

Weston Haggen, PE, DBIA, ENV SP, PMP  
Program Manager

TAB 2

# TECHNICAL APPROACH TO MANAGE A SYSTEM-WIDE COMPREHENSIVE PROGRAM



# 2. TECHNICAL APPROACH TO MANAGE A SYSTEM-WIDE COMPREHENSIVE PROGRAM

## STRATEGIC TECHNICAL APPROACH FOR SYSTEM-WIDE SUCCESS

### PROJECT UNDERSTANDING

**Sample Project:** *City of Clearwater's Current Water and Reclaimed Water Program*

Since 2019, the City of Clearwater has implemented a water and reclaimed water program to provide assessment, design, permitting, bidding, and construction oversight services that strengthen the long-term resiliency of its utility systems. The city is seeking to continue its long-term, system-wide potable water and reclaimed water assessment and replacement program, as well as add well support services. CHA has assembled a well-qualified team comprising CHA staff and strategic subconsultants to continue to support the city in the execution of this vital program.

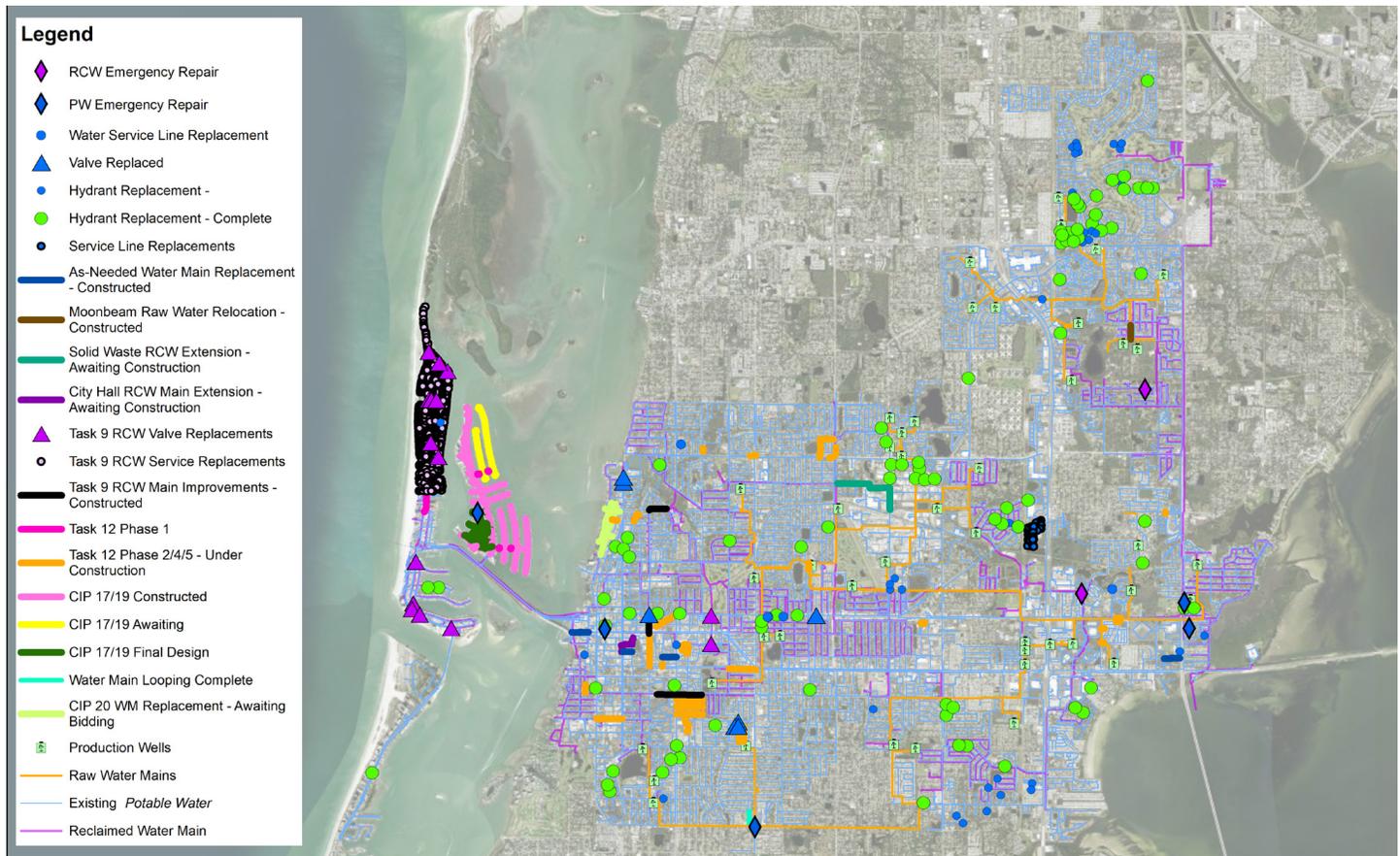
The anticipated scope of services for this program will be a continuation of the ongoing work our team is thoroughly familiar with, including review of available information; assessment of existing pipeline conditions; design services, including the replacement of the water mains, reconnection of water service to the new mains, removal of the existing pipe network, well support services, and restoration and upgrades to all disturbed areas; permitting services; and procurement services. After procurement, CHA will provide construction-phase services, including work order coordination, cost estimate request and review, construction coordination, submittal review, pay application review, and resident project representative (RPR) inspection.

It is anticipated that this program will also include maintenance, design, and condition assessments for the city's wells. The city currently operates 44 wells to supply raw water to its three WTPs. To provide superior and familiar support, our team includes **WSP USA, Inc. (WSP)**. WSP has a long history with the city, providing design and construction oversight for the expansion of the city's well fields, evaluation and rehabilitation of several city public supply wells, evaluation of water quality changes in the well fields for the city's Water Master Plan, permitting and construction of the Class I injection well at the RO2 WTP, as well as injection well services, including mechanical integrity testing, acidizing, and design of a flow control valve to prevent cascading water in the injection well.

Since 2019, the Water and Reclaimed Water Program has made significant progress, as outlined below and shown on **Figure 2-1** on the following page:

- **Program management and as-needed utility engineering services**
- **Hydraulic Modeling**
  - Fort Harrison Avenue water main and reclaimed water main hydraulic modeling evaluation
  - Nash Street reclaimed water main hydraulic modeling evaluation
  - SR 60 offline water main hydraulic modeling evaluation
  - Autoflusher water quality modeling evaluation
  - City hydraulic model protocol development
  - Osceola complete streets hydraulic modeling
- **Condition Assessment**
  - Reclaimed water quality investigations and ground storage tank (GST) evaluations
  - Pipe inspection technology evaluation and desktop evaluation for future inspection planning
  - System-wide potable water main leak detection, technology evaluation, and bidding support
  - Drew Street water main assessment of 3,150 feet of pipe using pCAT non-destructive condition assessment technology, followed by verification of data using ultrasonic thickness testing (UTT)
  - Raw and concentrate pipeline UTT
- **Detailed design of over 90,000 feet of pipeline, including:**
  - Reclaimed water main looping at Drew Street, Martin Luther King, Jr. Avenue, Druid Road, and Memorial Causeway (total ~5,200 feet) of various-sized reclaimed water main
  - Various potable water piping replacement, relocation, looping, upsizing, and abandonment projects (total ~23,200 feet) at 35 different locations throughout the city based on priority projects identified
  - Imagine Clearwater water main conflict as-needed hydraulic modeling and design
  - Extension of 3,963 feet of 6-inch reclaimed water main to the city's solid waste facility
  - Extension of 1,437 feet of 6-inch reclaimed water main to City Hall Complex
  - Island Estates water main replacement via pipebursting across five different phases, totaling over 40,000 feet of water main

**FIGURE 2-1:** *Clearwater’s Water and Reclaimed Water Program Designed or Constructed*



- **Various other as-needed water main design support services, including:**
  - Imagine Clearwater potable water main relocation
  - Franklin Street potable water main upsizing
  - Gould Street potable water main upsizing
  - Jordan Hills Court potable water main looping
  - Sylvan Abbey reclaimed water main extension
- **Bidding and construction services for the design projects outlined above**
  - Updating of city Standard Specifications and Details
  - Continuing contractor bidding document development
  - Continuing contractor support and full-time construction oversight
  - Coordination of over 40 valve and 130 hydrant replacements within the point repair contract
- **Regulatory Support**
  - Lead and Copper Rule Revision (LCRR) compliance inventory development according to the U.S. Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP) requirements, along with future planning for regulatory compliance
  - Reuse system permit renewal

Our team understands your goals to continue this program seamlessly while completing more projects identified in recent studies. Our approach to executing these tasks is further detailed in **Tab 4**.

**PROGRAM OUTLINE DETERMINATION**

**The city requires a program manager who can anticipate its needs and effectively execute the program with minimal day-to-day oversight, recognizing that city staff are already managing more projects than available resources allow.** The program manager must obtain approval on key decisions to confirm the program is being executed to the city’s goals and expectations. To reduce the efforts of the city, CHA will continue to be a responsive partner to the city. The main program components include:

- Continuing contractor oversight and construction support
- Collaboration with city staff to identify high-risk infrastructure for replacement
- Strategic consolidation of similar projects
- Alternative installation methods to limit disruptions
- Preliminary design
- Detailed design
- Permitting
- Bidding services
- Construction services



### **Continuing Contractor Oversight and Construction Support**

The ‘Annual Water and Reclaimed Water Repair and Improvements’ point repair contract was significant to the city in the most recent program, allowing for the construction of over 10,000 feet of pipe, over 40 teams insert valves for operation flexibility, and over 130 hydrants to be replaced due to increased age or adding isolation valves. The contract also supported multiple emergency-related point repairs to allow for swift response to minimize impacts to the city’s customers. In the early phases of the Water and Reclaimed Water Program, CHA reviewed and updated the city’s water and reclaimed water standard specifications and standard details. This update allowed for the specifications and details to incorporate current industry standard material specifications, city preferences, and added detail for installation and performance requirements. CHA’s experience in updating standard details for other utilities allowed the city to view other standard details that would be useful to incorporate into their standards.

To allow the city to continue replacing aging infrastructure and completing emergency repairs, CHA recently assisted the city with updating and re-advertising the point repair contract. The documents were updated based on lessons learned during the first point repair contract, including development of a detailed measurement and payment specification to specifically define each bid item and reduce potential gray areas, in addition to adding trenchless point repair and well maintenance.

### **Collaboration with City Staff to Identify High-Risk Infrastructure for Replacement**

CHA will collaborate with the city to identify high-priority projects requiring replacement or attention. Under the current program, we understand that the needs of the city change regularly and may not be captured in previous studies/plans or often arise unexpectedly. The city does not need a sophisticated and expensive assessment management program; the methodology we are proposing is better suited to the city’s needs. Through data collection, categorization, and assessment, CHA’s infrastructure and planning experts begin the development of the overall condition assessment and associated improvement recommendations. These factors, as well as other elements, are utilized by the project team to determine specific improvement actions and their associated schedules of need. The CHA approach also includes assigning tags to projects, indicating the ability to defer projects, if possible, or to identify elements of critical importance. In this manner, the city receives a complete roadmap to not only the current condition of infrastructure elements, but a defined set of projects for planning and capital improvement plan (CIP) inclusion.

### **Strategic Condition Assessment and Planning**

The city has made significant strides in efforts to implement more condition assessment technologies to support decision-making. As part of the current program, CHA evaluated over 30 condition assessment technologies for the city to

consider. This evaluation allowed the city to narrow down a handful of technologies to potentially use. In this next phase of the program, CHA will further support the city in strategic applications of the technologies, where sensible. Areas where pipe condition is older and composed of materials known to progressively degrade should be assessed and tracked over time to determine when replacement will be required. CHA will also assist the city in decision-making for infrastructure replacements, specifically where assessment should be bypassed and replacement prioritized.

### **Strategic Consolidation of Similar Projects**

Mobilization and demobilization costs are necessary for every construction project. The CHA program approach will look to consolidate projects, where possible. Past candidates for consolidation included nearby water main replacements, valve replacements, service line replacements, and new concrete pads.

### **Alternative Installation Methods to Limit Disruptions**

The City of Clearwater is densely populated and highly trafficked, with multiple significant city, county, and FDOT roads. As such, **CHA will continue to incorporate trenchless installation methods as the preferred method of construction.** Throughout the current Water and Reclaimed Water Program, CHA has utilized trenchless installations (including HDD, pipebursting, and jack-and-bore) for significant road crossings, highly residential areas, and other situations where open-cut would have negatively impacted the area. In total, trenchless installation was used for over ~50,000 feet of the current Water and Reclaimed Water Program, which allowed for restoration cost savings, limited impacts to traffic, reduced impacts to residential neighborhoods, and fast-paced schedule installations while maintaining utility service to customers.

Conversely, in congested ROWs where there were significant utility conflicts causing concern, with respect to the separation of utilities, CHA designed a new water main to be removed and replaced in the same location, with temporary bypassing to maintain utility service. This method effectively allowed the water main to be replaced in the same horizontal and vertical alignment and limited the extent of impacts above ground to add a water main pipeline into a congested ROW, among many other utilities.

## **APPROACH TO PROJECT MANAGEMENT**

### **Preliminary Design**

Preliminary design is a critical deliverable that will establish the design criteria and approach to achieve the city’s goals and vision. Preliminary design will include survey, geotechnical engineering, review of the pipeline hydraulic profile, prepare preliminary plan and profiles, any further hydraulic modeling, and an opinion of probable construction cost (OPCC).

The 30% design will identify and address the design criteria and approaches to the key design and construction challenges



that are anticipated. Issues addressed at this stage are anticipated to include:

- Identifying constructability challenges of existing gravity main
- Obtaining topographic survey of pipeline alignment
- Conducting preliminary subsurface utility investigations
- Conducting geotechnical investigations
- Developing construction drawings
- Control data sheet and plan and profile sheets
- Preparing preliminary pipeline plan alignment, including existing utilities
- Showing potential conflicts with existing facilities and extent of adjustments or relocation of existing utilities
- Identifying temporary and permanent easements
- Preparing outline technical specifications
- Conducting pre-application meetings with regulatory agencies

[Survey and Subsurface Utility Engineering \(SUE\)](#) - Our surveying and mapping team member, **ECHO UES (ECHO)**, will complete site survey and utility designation with test holes in these areas to confirm the topographic elevations used in the previous analysis. SUE will be used to identify utility conflicts and unknowns to reduce surprises during construction.

[Geotechnical Engineering](#) - Geotechnical borings will be performed by **Driggers Engineering Services (DESI)** to the anticipated depth of proposed potable water and reclaimed water pipelines and associated appurtenances to confirm that soil conditions are suitable for the planned installation methods. The results will be incorporated into the preliminary engineering analysis and will inform recommendations to be integrated into the detailed design deliverables.

### Detailed Design

Once the above-detailed preliminary design is completed and approved by the city, the design services phase will commence, including 60%, 90%, and final (100%) design. These design phases will be adjusted based on project complexity and other time-sensitive requirements. During the detailed design phase, we will use the following goals and objectives to deliver a successful project:

- Conduct final subsurface utility investigations
- Show remaining existing utilities
- Prepare the final plan and profiles with notations and coordinate geometry
- Prepare existing utility relocation, replacement or adjustments
- Show surface restoration requirements
- Show temporary/permanent construction easements
- Prepare detail sheets using city Standard Details
- Prepare technical specifications
- Prepare engineer's OPCC with each phase submittal
- Prepare a detailed maintenance of traffic (MOT) plan to allow for minimized traffic impacts
- Acting on city staff thoughts and ideas

- Construction sequencing
- Use of AutoCAD Civil 3D to identify and mitigate utility conflicts before construction commences

There will undoubtedly be other goals and objectives that are important to the city. Once the information collection and preliminary engineering assessments are complete and detailed design is underway, the design workshops with key city staff will be critical to making sure that the city's goals and success factors are incorporated as the design progresses (before such changes will impact the project schedule and budget). Utilizing existing relationships, the CHA team can coordinate directly with key decision makers to facilitate the timely completion of projects. City staff will be encouraged to offer thoughts and suggestions during these workshops. CHA is excited to continue to collaborate with the city on unique projects.

### Permitting Services

CHA will work closely with the Florida Department of Environmental Protection (FDEP), the Southwest Florida Water Management District (SWFWMD), Pinellas County Public Works, the Florida Department of Transportation (FDOT), and other necessary permitting agencies, depending on project requirements. CHA's standard practice is to coordinate with any permitting agency early in the design process to confirm any project specific requirements.

Additionally, our team understands that permitting needs may be urgent due to emergency response requirements. As soon as we are notified, our team will coordinate with regulatory agencies to submit necessary permits and documents.

### Bidding and/or Continuing Contractors Coordination for Pricing

Similar to the current program, it's anticipated that a combination of traditional bidding and utilizing the continuing water and reclaimed water contractor will be used to construct improvements. **This allows the city to use competitive low bid as well as timely as-needed continuing contractor usage to accelerate construction schedules.**

### Construction Engineering and Inspection (CEI) Services

The construction, testing, and commissioning of the pipelines will be carried out in close collaboration with the city, with careful consideration of requirements and potential impacts to the public. **CHA will seamlessly utilize its familiar construction inspection team, who are already familiar with the city's specifications, preferences, and connected with current city field staff to continue this construction oversight support without any interruption.** We recognize your goals of minimizing impacts to both your systems and residents by carefully coordinating tie-ins and stub-outs, providing temporary piping and jumper connections, and planning roadway crossings to reduce traffic disruptions throughout the project.

TAB 3

# EXPERIENCE AND QUALIFICATIONS OF FIRM AND STAFF

# 3. EXPERIENCE AND QUALIFICATIONS OF FIRM AND STAFF

## INTRODUCTION TO YOUR TEAM

CHA has proudly served as the city’s program manager for this contract since 2019, giving our team **unmatched familiarity with the city’s potable and reclaimed water transmission systems, operations, and personnel**. We bring proven expertise, experience, and institutional knowledge to successfully manage this program and deliver the high-quality results the City of Clearwater expects. Our key team members have extensive local experience in assessing, planning, designing, and constructing transmission systems, and are well-versed in the latest technologies. CHA is fully equipped to address all program elements outlined in the RFQ, and **all assigned staff are properly licensed to practice in Florida**, as documented in their resumes. The proposed team members are the same trusted professionals currently serving under this program.

## KEY TEAM MEMBERS WORKING FOR YOU

**Weston Haggen, PE, DBIA, ENV SP, PMP**, will serve as program manager and the city’s primary contact, bringing extensive experience in planning, design, and construction of water and wastewater infrastructure, with a strong record of delivering critical projects on time and within budget. Weston will continue to provide personalized and responsive service, delivering high-quality results for the city.

**Allen Dethloff, PE**, will serve as principal-in-charge, ensuring staff and resource availability, providing strategic direction, and acting as a secondary city contact, supported alongside Weston by a multidisciplinary team experienced in pipeline assessment, planning, design, and construction.

## SUBCONSULTANTS

CHA’s team is further strengthened by subconsultants with proven success and familiarity with the city:

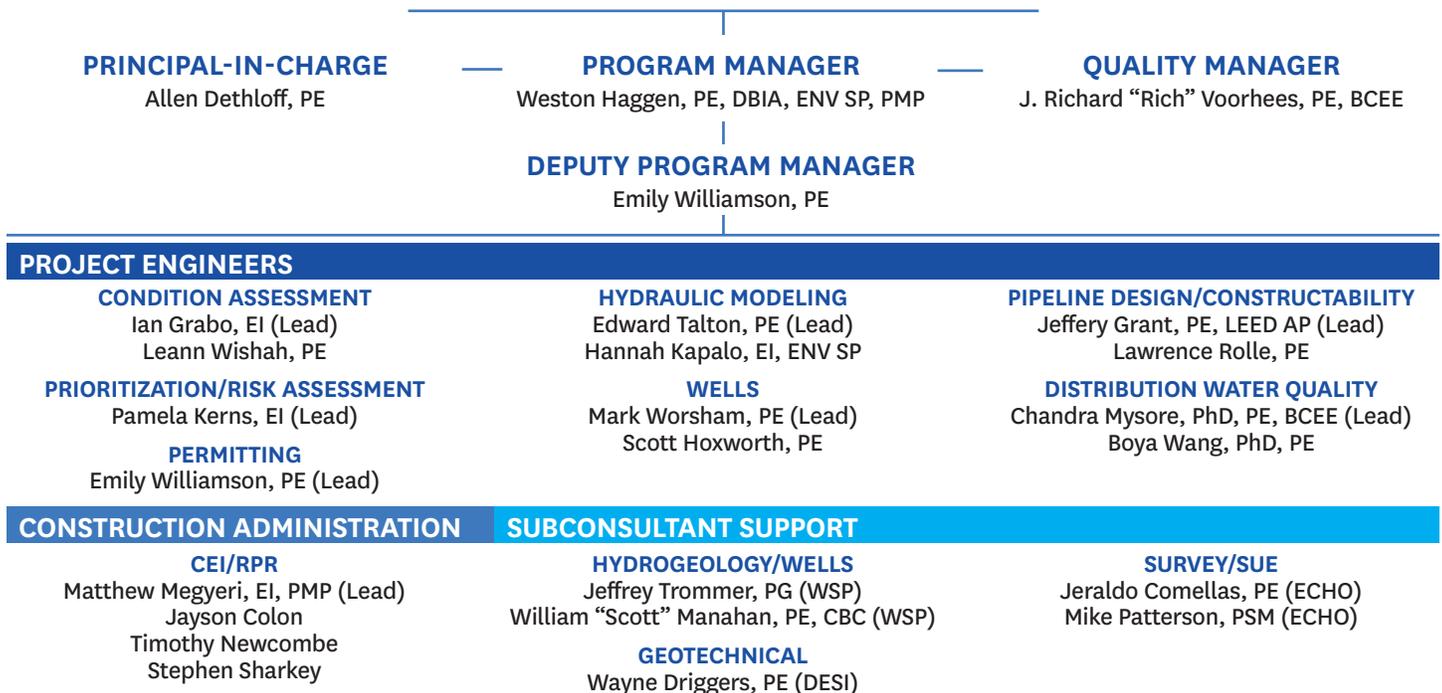
**Hydrogeology/Wells** – WSP USA, Inc. (WSP) offers deep expertise in hydrogeology, from groundwater assessments and well design to permitting and rehabilitation, with a proven record of delivering reliable, sustainable water supply solutions.

**Geotechnical** – Driggers Engineering Services, Inc. (DESI) is a locally owned Florida corporation providing geotechnical engineering, construction inspection, and materials testing services. DESI has completed over 17,000 geotechnical and construction testing projects.

**Surveying/SUE** – ECHO UES, Inc (ECHO) specializes in SUE and survey services throughout Florida, supporting owners, engineers, and constructors across the entire project cycle from design through construction and maintenance.

An organizational chart is provided below, along with brief resumes and project profiles on the following pages.

## CITY OF CLEARWATER



RESUMES FOR KEY TEAM MEMBERS

# Weston Haggen, PE, DBIA, ENV SP, PMP

## Program Manager

Weston has over 16 years of experience in water, wastewater, and reclaimed water. He is a 2022 graduate of the Water Environment Federation’s Water Leadership Institute that focuses on holistic solutions to our “one water world” challenges. His expertise includes water quality hydraulic modeling, master planning, pipeline design, lift station design, potable water quality improvement, unidirectional flushing (UDF), I&I studies, construction administration, preliminary design of wastewater and water plants, regulatory permitting, water treatment pilot studies, feasibility studies, report writing, and data management, including GIS for a variety of municipal and government projects in water and wastewater treatment. Representative project experience includes:

**City of Clearwater, FL, Water and Reclaimed Water Program Management.**

Program manager for this water main replacement program that addressed aging infrastructure through 34 high-priority projects involving over 23,000 linear feet of water main improvements, including replacements, relocations, upsizing, and looping. Pipe sizes ranged from 4 to 20 inches, with materials including ductile iron, cast iron, PVC, HDPE, and concrete. The project included full-service delivery (survey, geotechnical, design, permitting, bidding, and RPR) and required construction in challenging, utility-dense corridors. Trenchless methods, such as pipe bursting, HDD, and jack-and-bore, were used to minimize disruptions. The design was phased to accelerate construction, with Phase 1 currently underway.

**City of Clearwater, FL, Potable Water Distribution System Improvements.**

Project manager for this project that encompassed 34 high-priority water main improvement sites identified based on field maintenance history, water quality concerns, and pipe age. The scope included replacement, upsizing, relocation, and looping of water mains ranging from 2 to 24 inches in diameter, constructed of ductile iron, cast iron, PVC, HDPE, and concrete materials.

**City of Clearwater, FL, Reclaimed Master Plan.** Senior project engineer for this master plan that considered the full build out of the reclaimed water system up to 10.0 MGD and 420 miles of piping where the first two of six phases could be incorporated with limited modifications to the existing system. Phases three and beyond required the incorporation of a new pump station, additional storage, and improvements to existing pump stations to accommodate the added demands. CHA recommended the city consider beginning early phases to add new connections to nearby existing infrastructure to increase reclaimed water use and decrease surface water discharge to support efforts to meet regulatory requirements.

**SSNOCWTA, FL, Program Management and Owner’s Representative Contract.**

Senior project engineer and project manager supporting SSNOCWTA, a regional consortium of municipalities and counties, in managing a 47-MGD wastewater system with 32 pump stations and major transmission mains (10–42 inches). Responsibilities include design, permitting, and construction administration; contractor management and procurement; asset rehabilitation and emergency response; O&M support and infiltration and inflow (I&I) program implementation; and updates to master and capital improvement plans (CIPs).

**Pinellas County, FL, 86th Avenue Water Main Replacement.** Client service manager for the design, permitting, and construction administration services to replace approximately 19,500 feet of water main ranging from 2 inches to 12 inches in diameter to replace aging cast iron water mains using HDD and open-cut. This work includes connections to the existing potable water distribution system, replacement of fire hydrants, replacement of existing water services, valves and other appurtenances, and restoration. This project utilizes trenchless installation designs to limit disruptions and impacts to nearby properties and homeowners.



**Firm**

CHA Consulting, Inc.

**Years of Experience**

16

**Level of Involvement**

60%

**Education**

University of Central Florida, FL, M.S.E., Civil Engineering

University of Central Florida, FL, B.S.E., Civil Engineering

**Registration and Certifications**

Professional Engineer - FL (No. 77777)

FDOT, MOT Advanced

NASSCO PACP/MACP/LACP Certification

Design-Build Professional Certification

Envision Sustainability Professional Certification

Project Management Professional Certification

**Memberships and Affiliations**

American Water Works Association

Water Environment Federation

Florida Water Environment Association





**Allen Dethloff, PE**  
Principal-in-Charge

**Education:** B.S., Civil Engineering | **Years of Experience:** 23 | **Level of Involvement:** 25% | **Registrations & Certifications:** Professional Engineer - FL (#66382)

Allen offers a wide range of experience in civil engineering, process mechanical engineering, permitting, and construction management. He brings over 23 years of experience in preliminary design, final design, permitting, bidding, construction administration, and managing multidisciplinary engineering teams for pipelines (including various trenchless technologies), sanitary sewer collection systems, pumping stations, water, wastewater facility improvement, chemical feed systems, and stormwater management projects.

Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- City of Haines City, FL, Integrated “One Water” Program Management, Hydrogeology Leadership, and Funding Strategy
- City of Haines City, FL, Reclaimed GST and Pump Station
- Polk County, FL, Ernie Caldwell Boulevard Reclaimed Water Main Improvements, Phases 1 and 2
- City of Haines City, FL, Lake Eva Recharge Feasibility Study



**Emily Williamson, PE**  
Deputy Program Manager

**Education:** B.S., Civil Engineering | **Years of Experience:** 9 | **Level of Involvement:** 60% | **Registrations & Certifications:** Professional Engineer - FL (#93264)

Emily is an engineer with over nine years of experience in planning, permitting, design, and construction for potable water, wastewater, and reclaimed water projects throughout Florida. She has contributed to various projects, including septic-to-sewer, pipeline design, pump station design, hydraulic modeling, infrastructure condition assessment, and asset management. Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- City of Clearwater, FL, Wastewater Collection Program
- City of Clearwater, FL, Reclaimed Master Plan
- SSNOCWTA, FL, Program Management/Owner’s Representative Contract
- Pinellas County, FL, 86th Avenue Water Main Improvements
- Polk County Utilities, FL, Ernie Caldwell Reclaimed Water Main Improvements Phases 1 and 2
- Pinellas County, FL, Force Main Condition Assessments



**Rich Voorhees, PE, BCEE**  
Quality Manager

**Education:** M.S., Civil/Environmental Engineering B.S., Civil Engineering | **Years of Experience:** 49 | **Level of Involvement:** 25% |

**Registrations & Certifications:** Professional Engineer - FL (#25385); Board-certified Environmental Engineer

Rich brings nearly 50 years of expertise in planning, design, construction, and operation of water and wastewater treatment and pumping facilities. A Board-Certified Environmental Engineer, he is recognized in Florida as a leader in biological nutrient removal and enhanced lime softening. Rich has managed the design and construction of multi-million-dollar treatment facilities and previously worked as a general contractor on water and wastewater projects.

Representative projects include:

- City of Clearwater, FL, Water and Reclaimed Water Program
- City of Apopka, FL, Mount Plymouth Lake WTP Wells
- City of Haines City, FL, Reclaimed GST and Pump Station
- City of Melbourne, FL, Pineda Causeway Water Mains
- Tampa Bay Water, FL, Brandon Booster Station



**Ian Grabo, EI**  
Condition Assessment Lead

**Education:** M.S. and B.S., Environmental Engineering | **Years of Experience:** 3 | **Level of Involvement:** 40% | **Registrations & Certifications:** Engineer Intern - FL (#1100026208)

Ian has three years of experience in the environmental engineering field, working primarily on state permitting, pipeline/lift station design, infrastructure management, capital projects, and distribution/collection systems modeling. He is skilled in water/wastewater systems modeling, data managements, field sampling. Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- City of Clearwater, FL, Wastewater Collection Program
- City of Clearwater, FL, Pipe Inspection Technology Evaluation
- City of Haines City, FL, Reclaimed GST and Pump Station
- Pinellas County, FL, Force Main Condition Assessment, Ph. 3
- SSNOCWTA, FL, Ultrasonic Thickness Testing
- Town of Belleair, FL, Greenfield RO WTP
- City of Temple Terrace, FL, Water Facility Master Plan
- City of Melbourne, FL, WRF Master Plan





**Leann Wishah, PE**  
Condition Assessment

**Education:** M.S. and B.S., Environmental Engineering | **Years of Experience:** 4 | **Level of Involvement:** 30% | **Registrations & Certifications:** Professional Engineer - FL (#102326); FDOT MOT Certification

Leann is a project manager with over four years of experience in water and wastewater projects, including lift station field testing, ARV program management, lead service line inventories, septic-to-sewer remediation planning, and wastewater hydraulic modeling and master planning. She has published work with USGS’s Invasive Wetland and Aquatic Species department and holds MOT certification. Representative project experience includes:

- SSNOCWTA, FL, Valve/Pump Station Condition Assessment
- SSNOCWTA, FL, Pipeline Ultrasonic Thickness Testing
- SSNOCWTA, FL, Master Plan and CIP Update
- City of Clearwater, FL, Lead & Copper Program
- Seminole County, FL, County-wide I&I Evaluation
- Seminole County, FL, Wekiva Septic-to-Sewer Conversion
- Orange County Utilities, FL, LCRR Ph. 2 Compliance Program
- New Smyrna Beach Utilities, FL, Lead and Copper Program



**Pamela Kerns, EI**  
Prioritization/Risk Assessment Lead

**Education:** B.S., Environmental Engineering A.S., Engineering Science | **Years of Experience:** 14 | **Level of Involvement:** 60% | **Registrations & Certifications:** Engineer Intern - MD (#49950)

Pamela is a project engineer with 14 years of experience in water and wastewater treatment, stormwater, pump stations, and collection system design. Her expertise includes hydraulics, permitting, construction support, cost estimation, and design calculations for hydraulic evaluations, flow, and pipe systems. She is proficient in InfoWater, InfoSWMM, PCSWMM, AutoCAD, Revit, EPANET, and HEC-HMS. Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- Polk County Utilities, FL, Ernie Caldwell Reclaimed Water Main Improvements, Phase 1
- City of Orange City, FL, Water Main Replacement Design
- City of Haines City, FL, Well #3 Generator
- City of Melbourne, FL, Lake Washington Road 36-inch Water Main



**Edward Talton, PE**  
Hydraulic Modeling Lead

**Education:** M.S. and B.S., Environmental Engineering | **Years of Experience:** 36 | **Level of Involvement:** 10% | **Registrations & Certifications:** Professional Engineer - FL (#47023)

Ed brings over 36 years of experience in master planning and hydraulic/water quality modeling, including major master plans, wastewater model calibrations, distribution optimization, and risk-based asset prioritization. He has led large-scale efforts such as a comprehensive reuse master plan and a 1,500-mile wastewater force main model for M-D WASD, as well as master planning and modeling projects for numerous Florida utilities and municipalities. Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- City of Clearwater, FL, Supply Reduction and Pressure Dependent Demand Analysis
- City of Clearwater, FL, Reclaimed Master Plan
- Polk County, FL, NERUSA Master Plan
- City of Fort Lauderdale, FL, Comprehensive Utility Strategic Master Plan
- Orlando Utilities Commission (OUC), FL, Water Quality Modeling
- Orange County, FL, Continuing Hydraulic Modeling Services



**Hannah Kapalo, EI, ENV SP**  
Hydraulic Modeling

**Education:** B.S., Environmental Engineering | **Years of Experience:** 3 | **Level of Involvement:** 30% | **Registrations & Certifications:** Engineering Intern - FL (#1100024106); Envision Sustainability Professional

Hannah has three years of experience in the environmental engineering field, working primarily on the hydraulic modeling of reclaimed and potable water systems. Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- City of Clearwater, FL, Reclaimed Master Plan
- City of Clearwater, FL, Water Distribution System Improvements
- City of Clearwater, FL, SR 60 Water Main
- City of Vero Beach, FL, Water Quality Modeling
- Pinellas County, FL, 86th Avenue Water Main Replacement
- City of Haines City, FL, Integrated Water Supply Plan (IWSP)
- Town of Dundee, FL, Utility Master Plan





**Mark Worsham, PE**

Wells Lead

**Education:** B.S., Civil Engineering and Agricultural Engineering | **Years of Experience:** 40 | **Level of Involvement:** 30% |

**Registrations & Certifications:** Professional Engineer - FL (#63729), VA (#0402020574)

Mark has over 40 years of experience in utility and building construction and project management for municipal, industrial, and government clients. His expertise includes construction management, inspections, testing, and commissioning of building, mechanical, electrical, and control systems, as well as the design and operation of well, water treatment, pumping, chemical feed, and distribution systems. He has supported more than 130 water supply systems and multiple wastewater systems with design, modifications, and regulatory compliance. Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- City of Clearwater, FL, Brackish RO WTP #2 Design
- Town of Dundee, FL, Riner WTP Improvements
- Seminole County, FL, Markham WTP Improvements
- Seminole County, FL, Lynwood WTP Improvements Design
- Accomack County, VA, Town of Onancock Water System Upgrades



**Jeffery Grant, PE, LEED AP**

Pipeline Design/Constructability Lead

**Education:** M.S. and B.S., Civil Engineering | **Years of Experience:** 20 | **Level of Involvement:** 40% | **Registrations &**

**Certifications:** Professional Engineer - FL (#70678); LEED-Accredited Professional; FDEP Stormwater Erosion and Sediment Control Certification

Jeff has 20 years of experience in engineering design, project and construction management for civil and water/wastewater projects. His expertise includes pump station and utility design/modeling, wastewater treatment processes, stormwater modeling and management, roadway and drainage design, and heavy pavement projects. As a former municipal employee, he has overseen capital improvement projects, managed consulting contracts, participated in selection committees, and supported development review and resident concerns. Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- SSNOCWTA, FL, Program Management
- WS-GIR, LLC, Osceola County, FL, Green Island Ranch - Canoe Creek Road Utility Extension
- St. Lucie County Utilities, FL, Potable Water Main and Force Main Extension
- Seminole County, FL, Country Club Heights Water Main and Gravity Sewer Replacement



**Scott Hoxworth, PE**

Wells

**Education:** M.S. and B.S., Environmental Engineering | **Years of Experience:** 27 | **Level of Involvement:** 20% | **Registrations &**

**Certifications:** Professional Engineer - FL (# 58643)

Scott has 27 years of experience in water, wastewater, and reclaimed water projects, including the design, construction, startup, and operation of treatment facilities, pipelines, stormwater systems, and pump/lift stations. He also has expertise in membrane treatment, groundwater remediation, landfill closure design, permitting, and construction oversight. Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- City of Clearwater, FL, Brackish RO WTP #2
- Tavistock Development Company, Osceola County, FL, Sunbridge WTP and WRF
- St. Lucie West, St. Lucie County, FL, RO WTP Expansion
- City of St. Cloud, FL, WTP #1 Improvements



**Lawrence Rolle, PE**

Pipeline Design/Constructability

**Education:** B.S., Civil Engineering; A.A., Engineering | **Years of Experience:** 13 | **Level of Involvement:** 30% | **Registrations &**

**Certifications:** Professional Engineer - FL (#83257)

Lawrence has experience in building construction, process design, hydraulics, steel, and geotechnical engineering. He has worked on the design, construction, startup, and operation of water and wastewater treatment facilities, pipelines, and pump/lift stations, serving as both project engineer and providing construction administration services. Representative project experience includes:

- City of Apopka, FL, Grossenbacher WTP Well Extension
- Seminole County, FL, Country Club Heights Water Main and Gravity Sewer Replacement
- Volusia County, FL, Normandy Boulevard Reclaimed Water Main Extension
- City of Cocoa, FL, Sea Ray Drive Water Main





**Chandra Mysore, PhD, PE, BCEE**  
Distribution Water Quality Lead

**Education:** Ph.D. and M.S., Environmental Engineering; M.S., Water Resources and Reuse; B.S., Civil Engineering | **Years of Experience:** 35 | **Level of Involvement:** 10% | **Registrations & Certifications:** Professional Engineer - GA (#PE023935), LA (#27157); Board-Certified Environmental Engineer

Dr. Chandra Mysore is an engineering management professional with over 35 years of experience in municipal and industrial water/wastewater quality, treatment, reuse, and desalination. He has led projects worldwide in business development, planning, design, construction, O&M, and commissioning of large treatment plants, and has served as a technical advisor and principal investigator on studies addressing PFAS and other emerging contaminants.

Representative project experience includes:

- Town of Belleair, FL, Greenfield RO WTP
- City of Tampa, FL, Tampa Bay Regional WTP (TBRWTP)
- City of St. Petersburg, FL, Integrated Water Resources Master Plan
- Town of Davie, FL, Drinking Water Plant Design-Build
- City of Melbourne, FL, WTP Improvements



**Matthew Megyeri, EI, PMP**  
Construction Administration Lead

**Education:** M.E., Engineering Management; B.S., Mechanical Engineering | **Years of Experience:** 8 | **Level of Involvement:** 40% | **Registrations & Certifications:** Engineer Intern - FL (#1100028455); Project Management Professional

Matt is a project manager with over eight years of experience spanning military service, product development, and utility engineering. A former U.S. Army logistics officer, he transitioned to engineering project coordination in R&D before earning his Master of Engineering Management and PMP certification. At CHA, he manages major projects, including the Tyndall Air Force Base Utility Design-Build. Representative project experience includes:

- City of Clearwater, FL, Potable Water Distribution Improvements CEI
- St. Lucie County, FL, Septic-to-Sewer CEI
- City of North Port, FL, Effluent Pump Station
- City of Haines City, FL, Lake Eva RIB
- Lane Construction Corporation, Panama City, FL, Tyndall Air Force Base Utility Design-Build



**Boya Wang, PhD, PE**  
Distribution Water Quality

**Education:** Ph.D. and M.S., Civil Engineering; B.S., Building Environment and Energy Engineering | **Years of Experience:** 9 | **Level of Involvement:** 20% | **Registrations & Certifications:** Professional Engineer - FL (#99929)

Boya has nine years of experience in environmental engineering, specializing in water treatment and wastewater reclamation. Based in Winter Haven, FL, he contributes to the planning, design, and delivery of water infrastructure projects, supporting sustainable, resilient communities and high-quality outcomes across multidisciplinary teams.

Representative project experience includes:

- City of Clearwater, FL, Water and Reclaimed Water Program
- Town of Belleair, FL, Greenfield RO WTP
- City of Vero Beach, FL, Water Quality Modeling
- City of Temple Terrace, FL, WTP Evaluation and Facility Master Plan
- Tavistock Development Company, Osceola County, FL, Sunbridge WTP and WRF
- City of Haines City, FL, Reclaimed GST and Pump Station
- City of Vero Beach, FL, PFAS Treatment Feasibility Study



**Jeffrey Trommer, PG (WSP)**  
Hydrogeology/Wells

**Education:** M.S. and B.S., Geology | **Years of Experience:** 39 | **Level of Involvement:** 55% | **Registrations & Certifications:** Professional Geologist - FL (#1315)

Jeffrey has nearly 40 years of experience in hydrogeologic investigations, with expertise in water supply development, water use and injection well permitting, groundwater modeling, and regional resource evaluations. He has led numerous permitting efforts, impact analyses, and injection well studies, including hydraulic and water quality assessments and reclaimed water ASR feasibility evaluations. Representative project experience includes:

- City of Clearwater, FL, Water Supply and Treatment Master Plan
- City of Clearwater, FL, RO2 Injection Well Services
- City of Clearwater, FL, Groundwater Replenishment Project
- City of Tarpon Springs, FL, Well Rehabilitation
- City of Sarasota, FL, Downtown RO Wellfield Chloride Cap WUP Modification
- Hernando County, FL, Potable Water Master Plan





**William “Scott” Manahan, PE, CBC (WSP)**  
Hydrogeology/Wells

**Education:** B.S., Petroleum Engineering | **Years of Experience:** 36 | **Level of**

**Involvement:** 55% | **Registrations & Certifications:** Professional Engineer - FL (#51423), NC (#28493), TX (#97929), VA (#0402043668), CA (#1840); Certified Building Contractor - FL (#1256914)

Scott brings over 36 years of engineering experience in hydrologic assessment, well construction, water treatment, and groundwater remediation. He specializes in aquifer performance testing, hydraulic analysis, wellfield and pumping system design, and project management from proposal to completion. Scott is well-versed in permitting with regulatory agencies and skilled in interpreting geophysical logs and acquiring hydrogeologic data. Representative project experience includes:

- City of Sarasota, FL, Land Application of Reclaimed Water
- Polk Regional Water Cooperative, FL, Southeast and West Polk Wellfields
- Polk Regional Water Cooperative, FL, Peace Creek Aquifer Recharge Project
- James City Service Authority, VA, Lower Potomac Aquifer Supply Wells Troubleshooting Services



**Wayne Driggers, PE (DESI)**  
Geotechnical

**Education:** B.S., Civil Engineering; Masters Studies, Geotechnical Engineering | **Years of Experience:** 28 | **Level of Involvement:** 40% |

**Registrations & Certifications:** Professional Engineer - FL (#58013)

Wayne has 28 years of experience as a geotechnical engineer with DESI. A University of Florida graduate in geotechnical engineering, he manages projects involving soil investigations, foundation studies, and geotechnical testing. Wayne’s work spans foundation design for buildings, utilities, bridges, piers, residential developments, and evaluations of embankment and slope stability. Representative project experience includes:

- City of Clearwater, FL, Water Main Replacements
- Pinellas County, FL, Subaqueous Water Main Crossing
- City of Dunedin, FL, Virginia Street Water Main
- City of Pinellas Park, FL, Belcher Road and 71st Street Force Main



**Jeraldo Comellas, PE (ECHO)**  
Survey/SUE

**Education:** B.S., Civil Engineering; A.A., Engineering | **Years of Experience:** 39 | **Level of Involvement:** 50% | **Registrations**

**& Certifications:** Professional Engineer - FL (#45838), MS (#27049), LA (#41310)

Jerry, president of ECHO, brings over 39 years of civil engineering and surveying experience, including nearly two decades with FDOT and 19 years in the private sector. He has been instrumental in growing ECHO’s SUE and surveying services across three Florida offices and has extensive expertise managing multi-service projects. As SUE lead, he will support the CHA team with scope and estimate development, financial oversight, and resource management to ensure project delivery. Representative project experience includes:

- City of Clearwater, FL, SR 60 Water Main Hydraulic Modeling
- City of Clearwater, FL, Task 12 - Pinellas County Water Main Replacement/Improvements
- Pinellas Suncoast Transit Authority (PSTA), Clearwater, FL, Park Street Terminal Water Line
- City of Clearwater, FL, Lift Station Elevation Project
- City of Clearwater, FL, Solid Waste Truck Wash Connection



**Mike Patterson, PSM (ECHO)**  
Survey/SUE

**Education:** B.S., Surveying | **Years of Experience:** 24 | **Level of Involvement:** 60% | **Registrations & Certifications:** Professional

Surveyor and Mapper - FL (#LS6560)

Mike, senior vice president of surveying at ECHO, has over 24 years of experience in surveying, mapping, and SUE for projects across Florida. He has led right-of-way (ROW), geodetic control, topographic, boundary, and utility surveys, while developing standards to improve efficiency, quality, and safety. In his leadership role, he oversees standard of procedure (SOP) development, staff training, quality control, and technical guidance for the firm. Representative project experience includes:

- City of Clearwater, FL, SR 60 Water Main Hydraulic Modeling
- City of Clearwater, FL, Task 12 - Pinellas County Water Main Replacement/Improvements
- Pinellas Suncoast Transit Authority (PSTA), Clearwater, FL, Park Street Terminal Water Line
- City of Clearwater, FL, Lift Station Elevation Project
- Pinellas County, FL, Force Main Assessment



## WATER & RECLAIMED WATER PROGRAM

### City of Clearwater, FL

The City of Clearwater owns and maintains potable water and reclaimed water distribution systems. The potable water system includes three WTPs (two RO) and ~620 miles of pipe, ranging from 4- to 24-inch-diameter. The reclaimed water system includes three WRFs, four high-service pump stations, and ~130 miles of pipe, ranging from 4 to 30 inches in diameter. The city has embarked on a long-term, system-wide potable water and reclaimed water program that includes the **conceptual routing, design, permitting, and construction services for pipeline improvements that are in keeping with the big-picture goal of renewing critical infrastructure and the assessment and replacement methods to minimize impacts to service and critical roadways**. CHA has supported the city with **studies, design, and construction services (including full-time resident project representative (RPR) services)** for the following projects:

- Program management and as-needed utility engineering services
- Specifications, details, and continuing contractor assistance
- Fort Harrison Avenue water main hydraulic modeling evaluation
- SR 60 water main hydraulic modeling evaluation
- Reclaimed water quality investigations and GST evaluations
- Pipe inspection technology evaluation and desktop evaluation for future inspection planning
- System-wide potable water main leak detection, technology evaluation, and bidding support
- Drew Street water main assessment of 3,150 feet of 8-inch pipe using pCAT non-destructive condition assessment technology
- Memorial Causeway reclaimed water mains replacement of 8-inch cast iron pipe
- Various water and reclaimed water main and valve replacements
- Perform additional hydraulic and water quality modeling
- Reclaimed water main looping at Drew Street, Martin Luther King, Jr. Avenue, Druid Road, and Memorial Causeway (total ~5,200 feet) of various-sized reclaimed water main
- Various potable water piping replacement, relocation, looping, upsizing, and abandonment projects (total ~23,200 feet) at 35 locations throughout the city based on priority projects identified
- Imagine Clearwater water main conflict as-needed hydraulic modeling and design
- Extension of 3,963 feet of 6-inch reclaimed water main to the city's solid waste facility
- Extension of 1,437 feet of 6-inch reclaimed water main to City Hall Complex
- Lead and Copper Rule Revision compliance inventory development according to EPA and FDEP requirements, along with future planning for regulatory compliance
- Island Estates water main replacement via pipebursting across five different phases totaling over 40,000 feet of water main
- Various other as-needed services

The six-year program is currently underway and will replace a significant amount of the city's potable water and reclaimed water piping system.

#### Project Location

Clearwater, FL

#### Dates

Ongoing since 2019

#### Cost

##### CHA Fee:

Varies per project (Program limit of \$8.675M over 6 years)

#### Construction:

Varies per project

#### Reference

City of Clearwater  
 Andrija Selak, Project Manager  
 100 S Myrtle Avenue  
 Clearwater, FL 33756  
 (727) 513-0228  
 andrija.selak@myclearwater.com

#### Relevance to Scope

- ✓ Complete program management
- ✓ Hydraulic modeling
- ✓ Water quality modeling
- ✓ Condition assessment
- ✓ Prioritization
- ✓ Pipeline design
- ✓ Regulatory compliance/permitting
- ✓ Continuing contractor selection
- ✓ CEI/RPR services



## PROGRAM MANAGEMENT & OWNER'S REPRESENTATIVE CONTRACT

### South Seminole & North Orange County Wastewater Transmission Authority (SSNOCWTA)

SSNOCWTA provides funding, planning, operating, and maintenance of a wastewater transmission system serving several major municipalities. SSNOCWTA's wastewater transmission system consists of 32 pump stations (design capacity of 47 MGD), more than 37 miles of force mains (6- to 42-inch diameter), and monitoring stations to transmit collected wastewater from the cities of Casselberry, Winter Park, Maitland, and Seminole County to the City of Orlando's Iron Bridge Regional WRF. CHA provides engineering services related to general system conditions, operation and maintenance, and engineering services as required for repair, rehabilitation, and capital planning. Services under this ongoing owner's representative program include:

**Program Management and Extension of Staff** - CHA delivers comprehensive program management, including a 20-year, \$75M CIP master plan to guide infrastructure rehabilitation and replacement for a reliable collection and transmission system. We also provide on-call staff support for ARV maintenance, emergency response, coordination with member governments and consultants, Sunshine 811 requests, and compliance with SSNOCWTA standards.

**Hydraulic Modeling and CIP** - CHA regularly conducts hydraulic modeling with advanced software to assess force mains and lift stations for capacity, velocity, and pressure. This includes analysis of SCADA data, pump performance, flow projections, operational protocols, structural updates, and diurnal/seasonal variations to identify system limitations and potential improvements.

**Continuing Contractor Selection** - CHA has completed RFQ documents, advertisement, and selection process for SSNOCWTA's continuing pipeline and pump station contractors.

**Cast Iron and Ductile Iron Pipe Testing, Analysis, and Testing-Phase Services** - Based on record drawings and historical data, CHA targeted pipeline areas for inspection. Pipe thickness testing data was compiled, and the extent of corrosion was identified and assigned a rank. A database with pipe conditions was created and monitored to provide the necessary rehabilitation.

**Wastewater Engineering and Operations Services** - CHA has worked closely with the authority to provide survey, design, engineering, and construction inspection services for force main repairs and replacements. CHA also provides engineering services related to general system condition, operation and maintenance, and engineering services as required for valve exercising, replacement, and rehabilitation.

**Construction Engineering and Inspection (CEI)** - SSNOCWTA has only one staff member; therefore, CHA provides up to full-time CEI and construction management services for all construction projects. This includes submittal and RFI review and response, pay application review, inspections, oversight, and daily reporting.

#### Project Location

Seminole & Orange Counties, FL

#### Dates

Ongoing since 2009

#### Cost

##### CHA Fee:

Varies per project (each project fee ~\$20K-\$300K)

#### Construction:

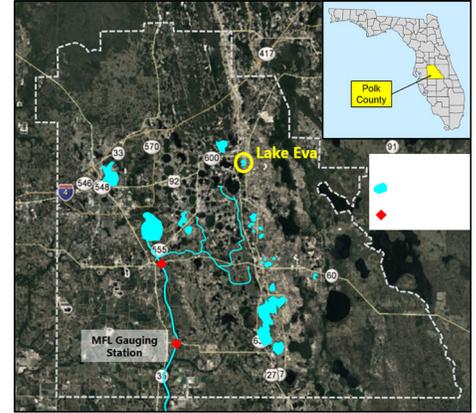
Varies per project

#### Reference

SSNOCWTA  
David Bass, Director  
410 Lake Howell Road  
Maitland, FL 32751  
(407) 256-0131  
david@ssnocwta.com

#### Relevance to Scope

- ✓ Complete program management
- ✓ Extension of staff
- ✓ Hydraulic modeling
- ✓ Water quality modeling
- ✓ Condition assessment
- ✓ Prioritization
- ✓ Pipeline design
- ✓ Regulatory compliance/permitting
- ✓ Continuing contractor selection
- ✓ CEI/RPR services



# INTEGRATED “ONE WATER” PROGRAM MANAGEMENT, HYDROGEOLOGY LEADERSHIP, AND FUNDING STRATEGY

## City of Haines City, FL

Haines City faces aging infrastructure, rapid population growth, and strict groundwater withdrawal limits under the Central Florida Water Initiative (CFWI). The city is also required to protect sensitive resources, including Lake Eva, a designated Minimum Flows and Levels (MFL) lake. To address these challenges, Haines City adopted an **integrated “One Water” approach, with CHA serving as program manager, technical lead, and funding strategist to ensure sustainable growth, regulatory compliance, and environmental protection.**

**Program Management** - CHA manages the city’s entire water, wastewater, and reclaimed water portfolio, coordinating projects from multiple consultants under a unified framework aligned with the “One Water” vision. Key initiatives include:

- Lake Eva and Southern Dunes Rapid Infiltration Basins (RIBs) - CHA led evaluation, design, and permitting of new RIBs to expand reclaimed water disposal and recharge the Floridan aquifer, supporting Water Use Permit (WUP) compliance and environmental protection.
- Wastewater Treatment Plant (WWTP) Process Improvements - CHA designed and delivered biological treatment and disc filter improvements to meet nutrient limits, enhance recharge suitability, and support regional Basin Management Action Plan (BMAP) compliance.
- Lower Floridan Aquifer Exploratory Wells - Advanced hydrogeologic modeling supports exploratory wells, diversifying supply and reducing Lake Eva impacts.
- WTP-2 Improvements - CHA is leading the design and construction of a 1.5-MG GST and high-service pumps to expand potable water capacity and reliability.
- WUP Compliance - Ongoing population/demand projections, recharge tracking, and regulatory reporting for sustainable allocations.

**Alternative Funding & Grant Support** - CHA has secured major state and federal funding, including CDBG-MIT, SWFWMD cost-share, SRF loans, and FDEP 319 grants, reducing local costs and accelerating delivery. We manage compliance with Davis-Bacon, AIS, and other requirements, aligning funding with technical objectives.

**Hydrogeologic & Regulatory Integration** - CHA uses advanced hydrogeologic modeling and monitoring to guide design, permitting, and long-term performance. We evaluate recharge, nutrient migration, and aquifer interactions to diversify supply while protecting Lake Eva, providing a strong basis for compliance and sustainable growth.

In conclusion, Haines City’s “One Water” program is recognized as a regional model for innovation and integration. Through program management, hydrogeologic expertise, and funding leadership, CHA helps the city achieve long-term water supply resiliency, regulatory compliance, and financial sustainability.

### Project Location

Haines City, FL

### Dates

Ongoing since 2012

### Cost

#### CHA Fee:

Varies per project

#### Construction:

Varies per project

### Reference

City of Haines City  
James Keene  
Public Services Administrator  
620 E Main Street  
Haines City, FL 33844  
(863) 421-9951 x5954  
James.Keene@hainescity.com

### Relevance to Scope

- ✓ Complete program management
- ✓ Hydraulic modeling
- ✓ Water quality modeling
- ✓ Condition assessment
- ✓ Prioritization
- ✓ Process design
- ✓ Well design
- ✓ Regulatory compliance/permitting
- ✓ WUP compliance
- ✓ Funding support/strategy
- ✓ CEI/RPR services

TAB 4

# WORK PLAN AND SCHEDULE FOR INITIAL TASKS

TAB 4  
WORK PLAN AND SCHEDULE  
FOR INITIAL TASKS

# 4. WORK PLAN AND SCHEDULE FOR INITIAL TASKS

## TURNING EXISTING PROGRAM KNOWLEDGE INTO ACTION

### PROGRAM UNDERSTANDING

The City of Clearwater’s Water and Reclaimed Water Program has been successful over the past six years with the design, construction, and replacement of over 90,000 feet of pipeline and over 130 hydrants, 40 teams valves, and service lines. Many of these improvements were selected in collaboration with Public Utilities field staff who identified areas which had past history of failure or regular maintenance,

upgrading undersized or aging pipe, non-functional valves, hydrants without isolation valves, or other concerns. As part of the program, significant efforts have also been made in progressing the distribution system capital improvement plan (CIP) projects previously identified in the Potable Water Master Plan, as summarized in **Table 4-1** below.

CIP #	PROJECT NAME	STATUS
17	Island Estates Windward Passage Water Main Replacement	Constructed and complete
18	South Fort Harrison Belleair Road to Myrtle Avenue Water Main Replacement	Ongoing as part of a separate complete streets project
19	Island Estates Cast Iron Water Main Replacement	Phases 1-3 complete; phases 4 & 5 designed
20	West Central Cast Iron Water Main Replacements	Designed; awaiting construction
21	Fire Stations #45 and #46 Cast Iron Water Main Replacements	Designed; awaiting construction
22	City-wide Water Main Replacements	Designed; awaiting construction
23	Eldorado Avenue Cast Iron Water Main Replacements	Constructed and complete
24	Physical Conditions Assessment 2021-2050	Leak detection ongoing
25	Annual Conditions Assessment and Replacement Program 2021-2029	pCAT pilot complete UTT complete pCAT sole sourcing in progress
26	Cast Iron Pipe Replacement Program 2030-2039	Next phase of program
27	Cast Iron Pipe Replacement Program 2040-2049	Next phase of program
28	Fire Flow Hydraulic Improvements - Phase 1	Ongoing (separate from program)
29	Fire Flow Hydraulic Improvements - Phase 2	Ongoing (separate from program)
30	Elevated Storage Tanks Demolition and Removal	Ongoing (separate from program)

Based on the CIP progress and understanding of the city’s goals, CHA knows the city’s goal is to continue replacing infrastructure that has either previously required point repairs, replace infrastructure nearing end of useful life, or add infrastructure that may result in increased redundancy/operational flexibility. Our team has evaluated the previous studies and incorporated past input from the city to develop a workplan for potential projects that may be included in this next phase of the program. Potential anticipated projects are detailed below and in **Figure 4-1** on the following page.

### **Cast Iron Material and Other Water Main Replacement**

Replacement of aging cast iron pipe will be a high priority. CHA has already designed and provided construction oversight services (including full-time RPR services) for the significant replacement of cast iron, including the first three phases of Island Estates (over 28,000 feet). Beyond the currently designed water mains, CHA plans to continue identifying areas for replacement as part of CIP projects 26 and 27.



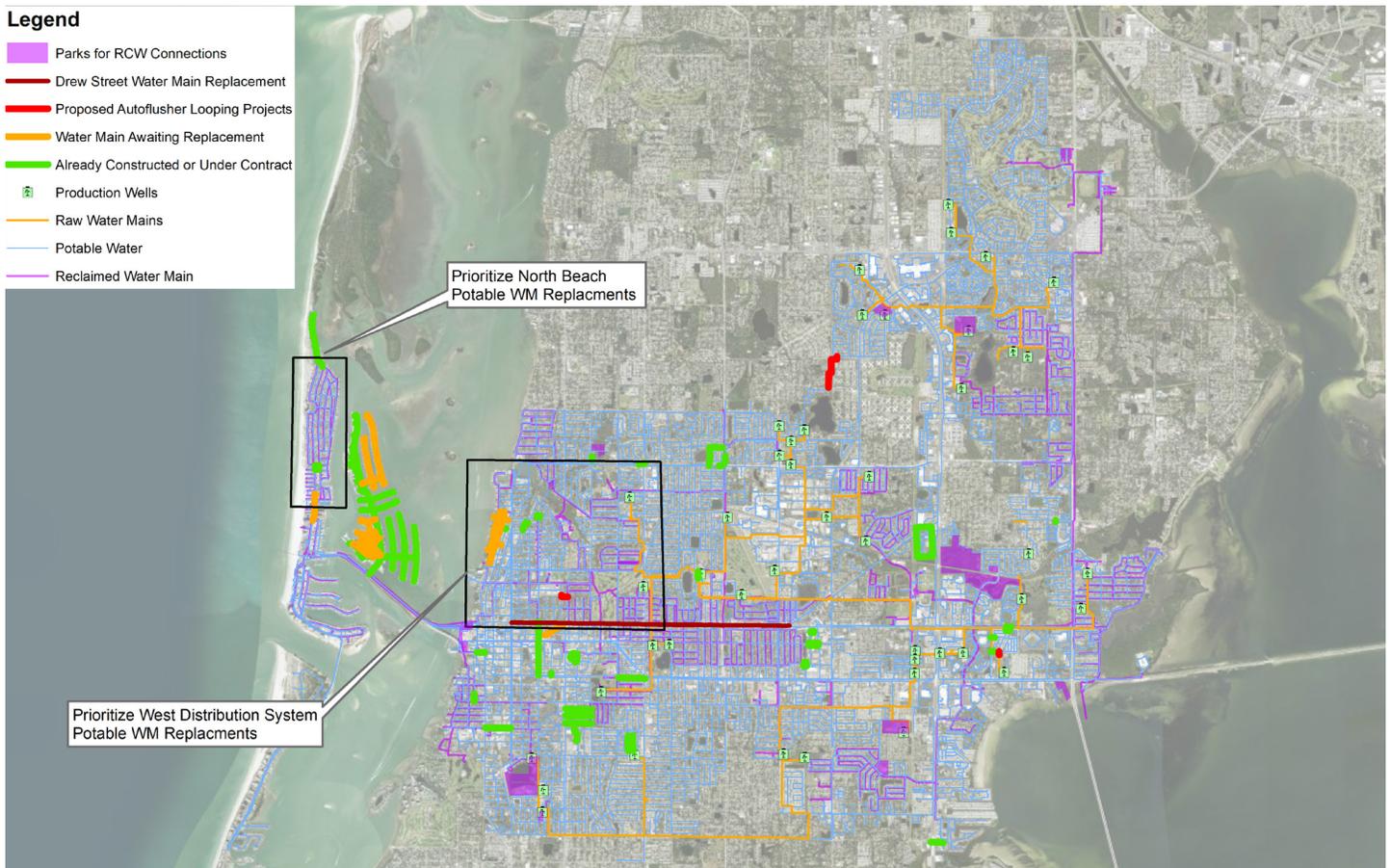
Based on GIS data, areas of cast iron and older pipe are anticipated to be located in the western areas of the city, around the Marshall Street Water Reclamation Facility (WRF) and the North Beach residential areas. When reviewing these areas, CHA will evaluate other factors, such as the existing condition of roadways, other planned utility projects, other planned public works projects, hydraulic or water quality improvements, and other factors that may support replacing water mains now or in conjunction with other projects.

Given the significant amount of cast iron, it is anticipated that pipebursting could be used to continue efficient pipe replacement, while reducing impacts that would require restoration. The city successfully used pipebursting in the Island Estates area, which allowed for timely replacements of aging pipe with reduced restoration. For this program, as areas are selected for pipeline replacement, CHA will provide support in decision-making for the most sensible installation method.

Drew Street Water Main Replacement - The Drew Street water main replacement project remains a high priority for the city,

having been identified initially early in the program. However, this project includes many other controlling stakeholders, such as FDOT, as well as changes in scope to the areas of the project. With recent decision-making to reduce the areas for rehabilitation by FDOT, CHA has supported the city in decision-making for replacement or rehabilitation of its potable water, reclaimed water, and wastewater utilities. Based on recent pre-permitting meetings, CHA will continue to prioritize the design of the utility replacements in this corridor and collaborate to determine which areas can be replaced as part of the FDOT project and which areas should be replaced ahead of FDOT construction activities.

Autoflusher Looping Projects - CHA previously completed evaluations to decrease the use of autoflushers throughout the city. The city currently utilizes autoflushers to flush dead-end water mains where water may stagnate due to low flow. In an effort to decrease the quantity of water flushed, the city asked CHA to evaluate potential projects that could reduce flushing. **CHA identified over 20 projects where existing water mains could be looped and subsequently reduce the quantity of water flushed.** It is anticipated



**FIGURE 4-1:** Clearwater’s Water and Reclaimed Water Program: Proposed, Pending, and Completed Projects

that the “Priority1” looping projects could be designed and constructed as part of this program.

[Reclaimed Water Parks Connections](#) - CHA previously identified multiple parks and city-owned parcels that could be easily connected. These improvements were developed in coordination with the city’s Public Utilities and Parks Departments. It is anticipated that these improvements may be completed as part of this program, or as part of the Senate Bill 64 (SB 64) Surface Water Discharge Reduction efforts.

[New Raw Water Pipelines](#) - As part of recent plans to construct six new wells, pipelines will be required to connect the wellfields to the city’s water treatment plants (WTPs). Once the well locations are finalized, our team will collaborate with the city to evaluate potential alignments and identify the most feasible options considering cost and other factors.

**Construction Oversight and Point Repairs**

Oversight of the city’s Water, Reclaimed Water, and Well Repair and Improvement contract will be a critical piece of this program. This program allowed the city to be responsive to urgent needs while regularly completing necessary hydrant, valve, and service line replacements. Having developed the bidding documents for the the current 21-0025-UT Annual Water and Reclaimed Water Point Repair contract, developing the current 25-0027-UT bid documents, and providing construction oversight throughout the entire contract, our team understands the unique nature and specifics of this type of contract.

From start to finish, we will provide coordination throughout the entire process, including:

- Work order creation (with required public utilities approvals)
- Cost estimate request and review
- Cost estimate approval
- Submittal review
- Request for information review
- Pay application review
- Contract document interpretation and review
- Construction coordination with city staff and the contractor
- Full-time RPRs who are familiar with city staff and preferences

Our team has worked with multiple contractors with the city, likely including a contractor who will be selected for this next point repair contract. Our familiarity with local contractors and the city will allow for smooth construction to continue to replace critical infrastructure for the city.

**Strategic Replacement of Valves and Hydrants**

As part of the point repair contract oversight, CHA will work with the city to identify and prioritize valves, hydrants, and services requiring replacement. These critical appurtenances are essential for maintaining utility service, as well as increasing operational and maintenance flexibility. Over the course of the next contract, it is anticipated that the point repair contract will be utilized to support the city’s goal in replacing infrastructure, with specific focus on hydrants and associated valves older than 1970s. Together, with the city, CHA will organize appurtenances for replacement into “packages” to reduce mobilizations by the contractor, as well as reduce long-term construction impacts to residents.

After the cost estimate has been received and reviewed, CHA will notify the point repair contractor of the cost estimate approval to begin work. CHA will oversee and document the work throughout the construction process. To support the city’s efforts for management and record keeping, CHA can utilize ArrowGold GPS equipment to capture near survey grade latitude and longitude data of the new infrastructure. When the data is captured, CHA can provide GIS shapefiles to the city’s CAD/GIS group to update or add to the city’s GIS records for the new infrastructure. We know that your field staff and engineering team rely on accurate data to support regular maintenance and operational activities.

**Maintaining the City’s Hydraulic Models**

The city has invested significant time and effort to have detailed calibrated hydraulic models for their potable water and reclaimed water systems. CHA has direct experience with both models. For the potable water model, our team has completed multiple significant projects, including fire flow analysis, studies to eliminate redundant and aging infrastructure, studies to reduce water age by looping dead-end water mains, and other as-needed hydraulic modeling requests. For the reclaimed water model, **our team developed this hydraulic model as part of the Reclaimed Water Master Plan completed in 2024.** This model development included structure updates, demand allocation, calibration using field pressure data for wet and dry periods, scenario development, and CIP development.

Maintaining accurate models is easier said than done. The distribution systems change on a regular basis with piping upgrades and replacements, changing demands, and different studies. In an effort to maintain the models and create a standard process for updating models, CHA will work in partnership with the city and other consultants to develop a “Hydraulic Model Protocol” to define a procedure for keeping “Master Models” and a methodology for completing minor



project-specific updates, as well as when to incorporate larger updates to the master model.

As part of this program, our team will assist the city in maintaining the models by tracking who has access to the models for the purpose of coordinating updates, regularly updating the hydraulic models, assessing when updates may be made, and coordinating with other necessary parties to make sure that the latest version of the model is being utilized.

**Condition Assessment**

Condition assessment is a useful tool to identify vulnerable pipe and quantify potential issues, such as pipe wall loss. However, with many different types of technologies and applications, condition assessment tools are not “one size fits all.” As part of the Water and Reclaimed Water Program, CHA completed a detailed condition assessment technology analysis. This analysis presented a comprehensive evaluation of technologies available, along with a decision matrix for utilizing the tool based on pipe material, pipe size, desired results, and cost. Based on the evaluation, the city elected to move forward with the successful pilot of pCAT, which screens pipe to narrow down vulnerable areas in the distribution system. CHA is currently supporting the city in the procurement of this condition assessment, which can be used to further identify potential pipe replacement to complete in this next phase of the program.



In addition to pCAT, CHA understands that the city has expressed some concern for limited areas where existing conditions may be contributing to the exterior corrosion of piping and valve appurtenances. In some areas, such as Greenbriar and Bayshore Apartments, the city has observed that valves and other infrastructure experience above-average rates of exterior corrosion that impact the functionality and use for maintenance. For these areas, CHA would propose targeted investigations of soil conditions to determine the presence of any aggressive corrosive soils and develop an action plan to place cathodic protection measures in those areas to slow the exterior corrosion.

**Other Projects to be Identified**

CHA is looking forward to collaborating with the city in identifying other initiatives, designs, or improvements to benefit the city long term. Potential tasks that CHA could also complete for the city include unidirectional flushing.

CHA knows that the city’s priority during the design and construction of these critical projects is to limit disruptions to traffic and adjacent residents or businesses while maintaining detailed attention to the challenges associated with these replacement projects. Many of these projects are located in challenging, congested ROWs with significant underground and overhead utilities. The CHA team, including ECHO, DESI, and WSP, possesses all the required skills and experience to work closely with the city to complete these projects successfully. We will work with city staff to develop a full understanding of the city’s needs, from maintenance of system operations to compliance with schedule and fiscal year budget limits, including any critical success factors specific to the particular project. This full understanding facilitates the definition of a vision for the project during the scoping process for success for all stakeholders with respect to each key project element.

Through our previous experience with the city, as well as on similar projects, we understand how to successfully execute pipeline projects that include:

- Trenchless installation (i.e., HDD, jack-and-bore, pipebursting, etc.)
- Congested utility and roadway corridors
- Maintenance of service
- Community outreach and education
- Drainage system crossings
- MOT to maintain access to homes and businesses
- Identification and acquisition of easements
- Line stops and wet taps
- Service connections

All members of our project team have managed, designed, and/or completed construction engineering services for pipeline projects ranging from 2 to 54 inches in diameter. They have completed the design of over 100,000 feet in the last four years alone.

The following sections demonstrate our proposed technical approach to implementation of these important replacements and program support. This approach was developed after careful physical inspection and photography of the proposed route, review of previous studies and design drawings, consideration of the specific challenges that we understand will be encountered, team collaboration, and our experience with numerous similar projects that have been successfully completed by the same key project team members that we are proposing for this project.



## TECHNICAL APPROACH AND CAPABILITIES

### Constructability and Route Analysis

The presence of residential areas, commercial properties, other utilities, and significant traffic volume often makes pipeline alignments and alternative routes difficult to assess. However, our team is composed of strategically chosen personnel with expertise in pipeline alignments and design. We understand where potential conflicts and interruptions can surface, and **through this instinctive experience, we will reduce conflicts, complications, public distress, and unnecessary disruption of services.** For any proposed pipeline improvement, we will review existing utilities, major road crossings, and other conflicts to determine the best path forward for the improvements.

Early in any pipeline replacement project, our team walks the route with the public utilities staff to capture critical field information, including existing infrastructure, conflicts, preferred placements of above-ground appurtenances, and other specific details to make sure that the pipeline is designed with your preferences and desires included.

### Hydraulic Modeling

Where necessary, CHA will model each new system to be appended to the city's hydraulic models. CHA is familiar with the city's models, having developed the reclaimed water master plan and completed multiple analyses on the potable water system for various improvements. CHA will use the models, where necessary, to confirm impacts of various improvements to the city's distribution systems.

### Survey/SUE

Our surveyor (ECHO) will complete site survey and utility designation with test holes in these areas. CHA and ECHO have worked together on multiple projects for the City of Clearwater's potable and reclaimed water pipe replacement projects under the current program, including surveys across thousands of feet of pipe replacements, involving continued coordination and communication. CHA and ECHO has also worked together for other nearby utility owners, including Pinellas County, for the recent 86th Avenue Water Main Replacement, the North County force main assessments, and the Dunn WRF Electrical Improvements projects.

### Geotechnical Engineering

Geotechnical borings will be performed by DESI to the anticipated depth of the installations to make sure that soils are suitable for the proposed methods of installation; this is a critical step for projects that include large-diameter pipe and trenchless installations. The survey and borings will

be incorporated into the preliminary design report, which will include drawings depicting an approximate 30% level of completion.

### Utility Conflicts

Our team understands that the city's distribution system traverses city, Pinellas County, and FDOT ROWs, as well as easements and private property, which are highly congested with existing infrastructure of other utilities. CHA understands the conflicts and constraints critical to the city, including power, other wet utility owners, communication utilities, gas, and more. When possible, SUE is utilized to identify as much detail as possible during design to limit surprises during construction. During construction, our team coordinates with the contractor when unknowns arise and collaborates to find solutions quickly to avoid any construction delays.

### Trenchless Installation

Where the pipelines cross major roadways, intersections, or other surface features, consideration will be given to trenchless installation techniques, including HDD, jack-and-bore, or pipe bursting, so that disruption and restoration are minimized to nearby residents, traffic, schools, and businesses. When open cutting is utilized due to constructability or preference, CHA will include detailed specifications for work to be completed during off-peak times outside of rush hour, along with detailed restoration requirements to re-open traffic flow.

### Maintaining Service

Maintaining potable water service is non-negotiable for utilities, as it is essential. For design projects, CHA will evaluate options specific to each situation that will best provide uninterrupted service, whether it be utilizing wet taps, line stops, teams valves, and/or temporary bypassing. **As part of ongoing work for water main replacements for the city, CHA specified the use of temporary bypassing to maintain water service to all customers in the vicinity of the pipeline project, which allowed the existing pipeline to be removed and replaced in the same location while maintaining service throughout.** The detailed specifications included requirements for tie-ins, maintaining bypassing, sampling, notification, and other critical requirements.

### Easement Acquisition

Easement evaluation and acquisition will be performed as necessary for each project. CHA has significant experience in assisting with documentation for obtaining utility easements. **CHA and ECHO have already assisted the city in obtaining easements for new water main improvements, including developing sketches and legal descriptions.** CHA has

experience working directly with the city’s real estate coordinator to successfully obtain easements for the city’s water main improvements.

**Permitting**

Permitting is essential to any utility infrastructure project due to the nature of impacts to ROWs and regulatory requirements. CHA has developed working relationships with the agencies that the city commonly requires permitting with, including FDEP, FDOT, and Pinellas County Public Works. Our team has completed over 50 different FDEP and ROW permits for the city, specifically some requiring immediate action due to emergency needs. At the start of each project, our team will complete and submit permits to these agencies to incorporate any specific requirements into designs as soon as possible.

**PROJECT SCOPE AND EXECUTION**

The following subsections summarize the typical major scope elements for projects anticipated to be completed as part of this program. It is anticipated that CHA will remain flexible in the scoping elements based on specific project needs.

**1. PROJECT CONCEPTION AND INITIATION**

- Notice to proceed (NTP)
- Project initiation

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**2. PROJECT DEFINITION AND PLANNING**

- Scope and budget definition and negotiation
- Work breakdown and schedule
- Communication plan
- Risk management

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**3. PROJECT LAUNCH OR EXECUTION**

- Status and tracking
- Quality control
- Set milestones

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**4. PROJECT PERFORMANCE AND CONTROL**

- Objectives
- Quality deliverables
- Effort and cost tracking
- Performance check-in

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**5. PROJECT CLOSE**

- Lessons learned
- Punch list
- Reporting
- Close-out

**Preliminary Design**

The preliminary design will identify and address the design criteria and approaches to the design and construction challenges that are anticipated. These phases generally include:

- Evaluating the constructability of the proposed alignment
- Topographic survey
- Preliminary subsurface utility investigations
- Conducting geotechnical investigations
- Developing construction drawings
- Control data sheet and plan and profile sheets
- Preparing preliminary pipeline plan alignment, including existing utilities
- Showing potential conflicts with existing facilities and the extent of adjustments or relocation of existing utilities
- Identifying easements
- Preparing an outline for technical specifications
- Conducting pre-application meetings with regulatory agencies
- Providing options for improvements with reasoning to support city decision-making

Once the final alignment is selected during 30% design, ECHO will perform SUE services and complete a detailed survey. DESI will complete the geotechnical borings. CHA intentionally waits until the preferred alignment is finalized with the city to perform these services to avoid paying for services that are not needed.

**Detailed Design**

Once preliminary engineering is completed and the 30% design is approved by the city, the detailed design package, consisting of the 90% and final design drawings and specifications for construction, will be completed. Each set of intermediate design products will be delivered to the city for review. The 90% design submittal packages will be reviewed in a workshop setting with key members of our project team and city staff. These workshops will expedite the review and revision process. During the final design, we will use the following goals and objectives to deliver a successful project:

- Conduct final subsurface utility investigations
- Show remaining existing utilities
- Prepare the final pipeline plan and profile, including valves, fittings, appurtenances, etc., with notations and coordinate geometry
- Prepare existing utility relocation, replacement, or adjustments
- Show surface restoration requirements
- Show temporary and permanent construction easements
- Prepare detail sheets using the city’s standard details
- Prepare technical specifications using the city’s standard specifications and necessary supplemental specifications
- Prepare quantity take-off and cost estimate
- Apply for permit approvals



- The cost of the project must be within the allocated budget and the improvements should be cost-effective to operate and maintain and provide the expected service life
- Prepare a detailed maintenance of traffic (MOT) plan to minimize traffic flow interruption
- Listen to the thoughts and ideas that are put forth by city staff
- Act on city staff thoughts and ideas
- Construction sequencing to maintain utilities services
- Use of AutoCAD Civil 3D design to avoid conflicts before construction activities commence

There will undoubtedly be other goals and objectives that are important to the city. Once the information collection and preliminary engineering assessments are complete and detailed design is underway, the design workshops with key city staff will be critical to making sure that the city’s goals and success factors are incorporated as the design progresses (before such changes will become impactful to the project schedule and budget). City staff will be encouraged to offer thoughts and suggestions during these workshops. The city has our full commitment that we will be open to considering your concerns and ideas as they are provided throughout this project.

**Procurement Services**

Following the completion of detailed design, CHA will assist the city in preparing the project for advertisement. CHA will provide recommendations for the city to either advertise the project **or utilize the existing as-needed water and reclaimed water repair contract to quickly move from design to construction without delay for the formal procurement process in smaller projects.**

If the city elects to utilize the point repair (Group A) or trenchless (Group B) contractors, CHA will complete the Public Utilities Work Order and coordinate with the contractor to provide a cost estimate. Once the cost estimate is provided by the contractor, CHA will review the cost estimate and submit it to the city’s team for approval. Once reviewed

and approved by the city, CHA will communicate with the contractor to begin work.

If the city elects to formally advertise the project for bid, CHA will coordinate with procurement to provide necessary documentation, including drawings, specifications, and permits. CHA will proactively respond to questions received from bidders and provide responses to be addressed in addenda if required. Following the receipt of bids, CHA will evaluate the submitted bids for recommendation of award to City Council.

**Construction Engineering and Inspection (CEI) Services**

Once the contractor is selected, CHA will continue to work with the city and the contractor to execute a notice-to-proceed (NTP) and to help make sure that the highest quality product will be placed into service at the conclusion of construction. During the construction phase, the CHA team will be involved in a number of activities that are intended to give the city a project that is constructed in accordance with the established design plans and specifications.

We will perform shop drawing reviews, address contractor requests for information (RFIs), perform quality assurance/inspection services throughout construction, issue certificates of substantial and final completion, and complete the project record documents in accordance with the city’s standard procedures. **Our team is familiar with your construction preferences and has existing synergy with your Public Utilities field teams to coordinate connections, confirm preferences, facilitate field questions from the contractor, and document work completed.**

Our construction experience with the city over the past six years, as well as construction management and engineering inspection assignments for other utilities, such as the City of Melbourne’s Pineda Causeway Subaqueous Water Transmission Mains, shows CHA’s capabilities and commitment to the successful completion of critical and high-profile projects. Our team is capable of managing and inspecting and construction project that may arise under this program.



TAB 5

# INNOVATIVE APPROACH

TAB 5  
INNOVATIVE APPROACH



# 5. INNOVATIVE APPROACH

## CHA'S QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROGRAM

CHA uses proactive quality management planning and execution initiated at the earliest possible time in project development and then implemented and monitored throughout design development. Quality does not simply end with the deliverable. CHA will have a vested interest in the project's quality through project construction and closeout.

Before beginning any project work, CHA's project managers prepare a Project-specific Work Plan (PSWP). The PSWP must comply with basic CHA corporate requirements but is then tailored to the specific project requirements at the project manager's discretion. Each PSWP will include identifying project stakeholders, project location and history, scope of services, schedule, budget, Quality Management Plan (QMP), roles and responsibilities of the team, communication style and frequency, file management procedures, and procedures for managing out of scope items.

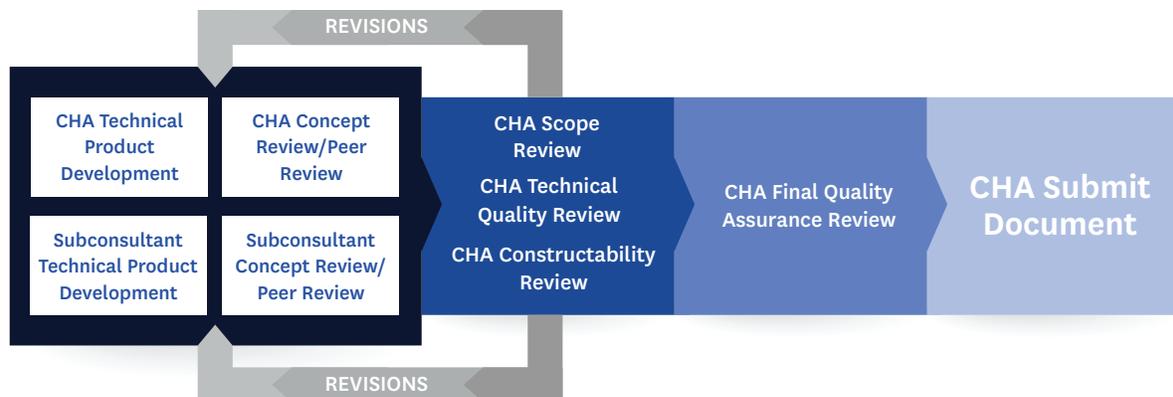
The project-specific QMP will be customized as a collaborative effort involving the project managers and technical leads. CHA's quality manager will be:

1. Available to assist in the QMP preparation should the need arise
2. Responsible for reviewing and certifying the QMP for consistency and compliance before project work begins

CHA uses a "Red, Yellow, Green" ("RYG") quality review process so that work products and deliverables are fully and consistently reviewed, resolved, and recorded. Our professionals who create the design or prepare the work products bear the primary responsibility for completeness, content, form, and technical accuracy.

We require a formal check and review of all work products and deliverables. The "RYG" quality review process follows a consistent workflow sequence whereby each design element/work product is highlighted in **YELLOW** to signify that review has occurred. Any direct corrections are annotated in **RED**, and commentary and/or instructions are annotated in **BLUE** or **BLACK**. The checker signs and dates the review set and returns the documents to the design element/work product originator.

The originator evaluates the checkers' comments and works with the checker to resolve each comment. **GREEN** annotations signify agreement with, or the resolution of, the review comments. Corrections are made to the designs or drawings and are then verified by the checker, who places a QA/QC stamp on each drawing or design. Finally, the originator, checker, corrector, and verifier sign and date each drawing or design to verify that the process has been followed for complete quality compliance. The team does not advance or submit any work products or deliverables until they have satisfied the QMP.



## INITIAL TECHNICAL REVIEW PROCESS

Our team employs a rigorous, multi-tiered technical review process to make sure that all deliverables meet the city’s expectations before submission. Drafts undergo an internal peer review by discipline leads (engineering, hydrogeology, permitting, and construction services), followed by a cross-discipline QA/QC check for consistency, accuracy, and compliance with city standards and regulatory requirements. A designated Program Quality Manager oversees this process, making sure that each deliverable is technically sound, constructible, and aligned with the city’s mission of sustainability and service excellence.



## METHODOLOGIES, TECHNOLOGIES, AND UNIQUE STRATEGIES

CHA applies proven methodologies and advanced technologies to achieve program goals efficiently and at the highest quality:

- **Integrated Program Management** – Centralized coordination of all water, reclaimed water, and hydrogeologic projects provides consistency and avoids duplication of efforts.
- **Hydraulic and Hydrogeologic Modeling** – Use of advanced modeling tools to optimize pipeline design, wellfield performance, and system-wide resiliency.
- **GIS and Asset Management Integration** – Real-time updates to asset records allow the city to track condition, performance, and lifecycle costs.
- **Green Infrastructure and Resiliency Measures** – Incorporation of sustainable design strategies that extend asset life and reduce environmental impacts.
- **Proactive Communication and Stakeholder Coordination** – Regular meetings, collaborative workshops, and transparent reporting keep projects on schedule and responsive to the city’s needs.



These strategies enable streamlined delivery, minimize rework, and provide long-term system sustainability in support of the City of Clearwater’s commitment to resiliency and environmental stewardship.

## PERFORMANCE MEASUREMENT AND KEY PERFORMANCE INDICATORS (KPIs)

Success of the program will be tracked and demonstrated using both quantitative and qualitative measures, including:

- **Schedule Adherence** – Percentage of projects delivered on or ahead of schedule.
- **Budget Performance** – Variance tracking between planned and actual costs.
- **Quality Metrics** – Number of review cycles per deliverable and percentage of submissions accepted without revisions.
- **System Performance Improvements** – Reductions in main breaks, well downtime, or service interruptions as projects are completed. Track the length of pipeline/valves/hydrants/service lines that are designed and constructed.
- **Regulatory Compliance** – Zero permit violations, timely submittal of reports, and full adherence to FDEP and regional standards.
- **Stakeholder Satisfaction** – City staff feedback, smooth coordination with stakeholders, and transparent reporting.



## CONCLUSION

Through disciplined technical review, advanced methodologies, and clear performance tracking, CHA will advance Clearwater’s Water, Reclaimed Water, and Well Program in alignment with the city’s goals for sustainability, resiliency, and service excellence. Our program management approach delivers reliable infrastructure improvements, strengthens regulatory compliance, and supports long-term benefits for residents, businesses, and visitors.

TAB 6

# LITIGATION

# 6. LITIGATION

## LITIGATION STATEMENT

CHA is a large professional engineering firm with over 40 offices throughout the United States and Canada. CHA performs thousands of projects each year. For a firm of its size and diversity, CHA's involvement in legal claims and lawsuits is remarkably infrequent, due chiefly to its competent and well-trained staff and its rigorous and comprehensive Technical Excellence Program. CHA has not been involved in any criminal matters nor had any disciplinary action taken against the firm or any of its officers. Nor has the firm had any civil judgments entered against it. However, claims against CHA do occur, and CHA has, over the past three years, been involved in ordinary civil litigation in the course of its business. CHA is confident in its ability to successfully defend, or settle on favorable terms, all such outstanding claims. Furthermore, for the protection of CHA and its clients, CHA always maintains a comprehensive insurance program that includes professional liability, workers' compensation, comprehensive general liability, automobile and umbrella policies, with limits sufficient to cover the defense and payment of all outstanding claims against CHA. In the opinion of CHA's management, no claim or lawsuit currently pending against CHA will materially affect CHA's ability to perform any ongoing or potential future project.

- **Complete list of convictions or fines of any state or federal law within the last three years:**
  - Not applicable
- **Complete list of all litigation involving a construction project or contract (excluding personal injury and workers' comp) either pending or concluded within the last three years:**
  - Niagara Frontier Transportation Authority v. CHA Consulting Inc., et al.
  - Seminole County v. Benchmark Construction and Liberty Mutual v. CHA Consulting, Inc.
  - Super 11, LLC v. City of Cohoes, et al.
  - Pike Construction Services, Inc. v. Quinlivan, Pierik & Krause Architects/Engineers, LLP, et al.
  - Trustees of Boston University v. Clough, Harbour & Associates, LLP
- **Complete list of all administrative proceedings within the last three years:**
  - Not applicable
- **Complete list of all arbitrations within the last three years:**
  - Not applicable

**PREPARED FOR:**

**City of Clearwater**  
Procurement Division  
PO Box 4748  
Clearwater, FL 33758-4748

**FOR MORE INFORMATION, PLEASE CONTACT:**

**Weston Haggen, PE, DBIA, ENV SP, PMP**  
Program Manager  
T: (727) 599-6071  
E: WHaggen@chasolutions.com

**CHA. CONTINUITY YOU CAN COUNT ON.**



SCRUTINIZED COMPANIES FORMS

SCRUTINIZED COMPANIES AND BUSINESS OPERATIONS WITH CUBA AND SYRIA CERTIFICATION FORM

IF YOUR BID/PROPOSAL IS \$1,000,000 OR MORE, THIS FORM MUST BE COMPLETED AND SUBMITTED WITH THE BID/PROPOSAL. FAILURE TO SUBMIT THIS FORM AS REQUIRED MAY DEEM YOUR SUBMITTAL NONRESPONSIVE.

The affiant, by virtue of the signature below, certifies that:

- 1. The vendor, company, individual, principal, subsidiary, affiliate, or owner is aware of the requirements of section 287.135, Florida Statutes, regarding companies on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or engaging in business operations in Cuba and Syria; and
2. The vendor, company, individual, principal, subsidiary, affiliate, or owner is eligible to participate in this solicitation and is not listed on either the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Sector List, or engaged in business operations in Cuba and Syria; and
3. Business Operations means, for purposes specifically related to Cuba or Syria, engaging in commerce in any form in Cuba or Syria, including, but not limited to, acquiring, developing, maintaining, owning, selling, possessing, leasing or operating equipment, facilities, personnel, products, services, personal property, real property, military equipment, or any other apparatus of business or commerce; and
4. If awarded the Contract (or Agreement), the vendor, company, individual, principal, subsidiary, affiliate, or owner will immediately notify the City of Clearwater in writing, no later than five (5) calendar days after any of its principals are placed on the Scrutinized Companies with Activities in Sudan List, the Scrutinized Companies with Activities in the Iran Petroleum Sector List, or engaged in business operations in Cuba and Syria.

[Handwritten Signature]
Authorized Signature

Thomas D. Titsworth
Printed Name

Assistant Secretary
Title

CHA Consulting, Inc.
Name of Entity/Corporation

STATE OF New York

COUNTY OF Albany

The foregoing instrument was acknowledged before me by means of [X] physical presence or [ ] online notarization on, this 18th day of September, 2025, by Thomas D. Titsworth (name of person whose signature is being notarized) as the Assistant Secretary (title) of CHA Consulting, Inc. (name of corporation/entity), personally known X, or produced N/A (Personally Known) (type of identification) as identification, and who did/did not take an oath.

JONATHAN H. BARD
NOTARY PUBLIC, STATE OF NEW YORK
Registration No. 02BA0000673
Qualified in Dutchess County
Commission Expires February 3, 2027

[Handwritten Signature]
Notary Public
Jonathan H. Bard
Printed Name

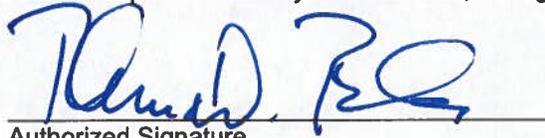
My Commission Expires: 2/3/2027
NOTARY SEAL ABOVE

**SCRUTINIZED COMPANIES FORMS**

**SCRUTINIZED COMPANIES THAT BOYCOTT ISRAEL LIST CERTIFICATION FORM**  
**THIS FORM MUST BE COMPLETED AND SUBMITTED WITH THE BID/PROPOSAL.**  
**FAILURE TO SUBMIT THIS FORM AS REQUIRED MAY DEEM YOUR SUBMITTAL**  
**NONRESPONSIVE.**

The affiant, by virtue of the signature below, certifies that:

1. The vendor, company, individual, principal, subsidiary, affiliate, or owner is aware of the requirements of section 287.135, Florida Statutes, regarding companies on the Scrutinized Companies that Boycott Israel List, or engaged in a boycott of Israel; and
2. The vendor, company, individual, principal, subsidiary, affiliate, or owner is eligible to participate in this solicitation and is not listed on the Scrutinized Companies that Boycott Israel List, or engaged in a boycott of Israel; and
3. "Boycott Israel" or "boycott of Israel" means refusing to deal, terminating business activities, or taking other actions to limit commercial relations with Israel, or persons or entities doing business in Israel or in Israeli-controlled territories, in a discriminatory manner. A statement by a company that it is participating in a boycott of Israel, or that it has initiated a boycott in response to a request for a boycott of Israel or in compliance with, or in furtherance of, calls for a boycott of Israel, may be considered as evidence that a company is participating in a boycott of Israel; and
4. If awarded the Contract (or Agreement), the vendor, company, individual, principal, subsidiary, affiliate, or owner will immediately notify the City of Clearwater in writing, no later than five (5) calendar days after any of its principals are placed on the Scrutinized Companies that Boycott Israel List, or engaged in a boycott of Israel.



Authorized Signature

Thomas D. Titsworth

Printed Name

Assistant Secretary

Title

CHA Consulting, Inc.

Name of Entity/Corporation

STATE OF New York

COUNTY OF Albany

The foregoing instrument was acknowledged before me by means of  physical presence or  online notarization on, this 18th day of September, 2025, by Thomas D. Titsworth (name of person whose signature is being notarized) as the Assistant Secretary (title) of CHA Consulting, Inc. (name of corporation/entity), personally known X, or produced N/A (Personally Known) (type of identification) as identification, and who ~~did not~~ take an oath.

**JONATHAN H. BARD**  
NOTARY PUBLIC, STATE OF NEW YORK  
Registration No. 02BA0000673  
Qualified in Dutchess County  
Commission Expires February 3, 2027



Notary Public  
Jonathan H. Bard  
Printed Name

My Commission Expires: 2/3/2027  
NOTARY SEAL ABOVE

## Compliance with Anti-Human Trafficking Laws

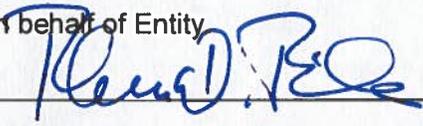
Pursuant to Section 787.06 (13), Florida Statutes, this form must be completed by an officer or representative of a non-governmental entity when a contract is executed, renewed, or extended between the non-governmental entity and the City of Clearwater.

The undersigned, on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury that:

Entity does not use coercion for labor or services as defined in Section 787.06, Florida Statutes.

The undersigned is authorized to execute this form on behalf of Entity

Date: September 18, 2025

Signed: 

Entity: CHA Consulting, Inc.

Name: Thomas D. Titsworth

Title: Assistant Secretary

**TRUTH-IN-NEGOTIATION CERTIFICATE**

In compliance with the Consultants' Competitive Negotiation Act, Section 287.055,  
Florida Statutes, and The Truth in Negotiations Act (TINA),

CHA Consulting, Inc. hereby certifies  
*Contractor*

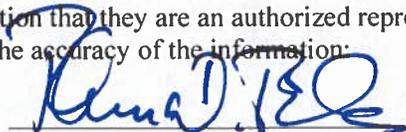
that wage rates, fringe rates and other factual unit costs supporting the compensation

for the Consulting and Engineering services of CHA Consulting, Inc.

to be provided under this Agreement, concerning the Water, Reclaimed Water, and Well Program

are accurate, complete and current as of the time of contracting.

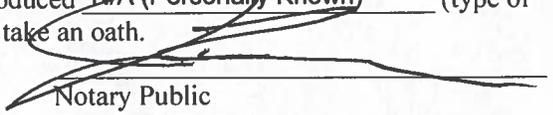
The hereby undersigned representative submits this certification that they are an authorized representative of the proposer who may legally bind the proposer attest to the accuracy of the information:

  
Authorized Signature  
Thomas D. Titsworth  
Printed Name  
Assistant Secretary  
Title  
CHA Consulting, Inc.  
Name of Entity/Corporation

STATE OF New York  
COUNTY OF Albany

The foregoing instrument was acknowledged before me by means of  physical presence or  online notarization on, this        day of September, 2025, by Thomas D. Titsworth (name of person whose signature is being notarized) as the Assistant Secretary (title) of CHA Consulting, Inc. (name of corporation/entity), personally known X, or produced N/A (Personally Known) (type of identification) as identification, and who did did not take an oath.

**JONATHAN H. BARD**  
NOTARY PUBLIC, STATE OF NEW YORK  
Registration No. 02BA0000673  
Qualified in Dutchess County  
Commission Expires February 3, 2027  
~~My Commission Expires 2/3/2027~~

  
Notary Public  
Jonathan H. Bard  
Printed Name

NOTARY SEAL ABOVE

# Request for Taxpayer Identification Number and Certification

Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

**Give form to the  
requester. Do not  
send to the IRS.**

**Before you begin.** For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

<b>Print or type. See Specific Instructions on page 3.</b>	<p><b>1</b> Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)</p> <p style="font-size: 1.2em; font-weight: bold;">CHA Consulting, Inc.</p>	
	<p><b>2</b> Business name/disregarded entity name, if different from above.</p>	
	<p><b>3a</b> Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only one of the following seven boxes.</p> <p> <input type="checkbox"/> Individual/sole proprietor                    <input checked="" type="checkbox"/> C corporation                    <input type="checkbox"/> S corporation                    <input type="checkbox"/> Partnership                    <input type="checkbox"/> Trust/estate  <input type="checkbox"/> LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership)                  Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.  <input type="checkbox"/> Other (see instructions) _____             </p>	<p><b>4</b> Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):</p> <p>Exempt payee code (if any) _____</p> <p>Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____</p> <p style="text-align: right;"><i>(Applies to accounts maintained outside the United States.)</i></p>
	<p><b>3b</b> If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . <input type="checkbox"/></p>	
	<p><b>5</b> Address (number, street, and apt. or suite no.). See instructions.</p> <p style="font-size: 1.2em; font-weight: bold;">3 Winners Circle</p>	<p>Requester's name and address (optional)</p>
	<p><b>6</b> City, state, and ZIP code</p> <p style="font-size: 1.2em; font-weight: bold;">Albany, NY 12205-1161</p>	
	<p><b>7</b> List account number(s) here (optional)</p>	

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

	<p><b>Social security number</b></p> <table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table> <p>or</p> <p><b>Employer identification number</b></p> <table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 12.5%;">1</td> <td style="width: 12.5%;">6</td> <td style="width: 12.5%;">-</td> <td style="width: 12.5%;">0</td> <td style="width: 12.5%;">9</td> <td style="width: 12.5%;">6</td> <td style="width: 12.5%;">6</td> <td style="width: 12.5%;">2</td> <td style="width: 12.5%;">5</td> <td style="width: 12.5%;">9</td> </tr> </table>					1	6	-	0	9	6	6	2	5	9
1	6	-	0	9	6	6	2	5	9						

**Part II Certification**

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

<b>Sign Here</b>	<p>Signature of U.S. person </p>	<p>Date <u>2/7/25</u></p>
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## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

## What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

## Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they