

City of Cocoa Task Order 2020-07

AWIA Section 2013 Compliance Support

Objective

The purpose of this task order (TO) is to provide assistance to the City of Cocoa to meet the America's Water Infrastructure Act (AWIA) requirements. This task order is intended to include the estimated level of effort to provide the above described services on a time and materials basis compensation method for the period from January 1, 2020 through September 30, 2020. Services proposed by JACOBS Engineering Group (JACOBS) in this Task Order will be performed in accordance with RFQ #20-03-COC awarded by the City of Cocoa on November 13, 2019.

Background

On October 23, 2018, the America's Water Infrastructure Act (AWIA) was enacted, requiring community water systems (including wholesale water providers) serving a population of over 3,300 to conduct a Risk and Resilience Assessment (RRA) and develop or update an Emergency Response Plan (ERP) in accordance with requirements in Section 2013, Community Water System Risk and Resilience. The AWIA replaces the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188, Title IV – Drinking Water Security and Safety) that required water systems to conduct a vulnerability assessment (VA) and develop an ERP.

This TO describes the scope of services that Jacobs will provide to perform an RRA for the City's water utility and update the City's water utility ERP to meet the AWIA requirements and enable the City of Cocoa to certify compliance by the applicable due dates. Because the customer population served by the City of Cocoa water system is greater than 100,000, the City of Cocoa must certify completion of the RRA to the U.S. Environmental Protection Agency (EPA) by March 31, 2020. Certification for completion of an ERP must be submitted by September 30, 2020.

All information collected as part of this assessment will be kept confidential within the core RRA team at Jacobs and not shared outside of the core RRA team as we are aware of the sensitivity of this information.

Notwithstanding anything to the contrary in the task order or any agreement or work order for these services, Jacobs will have no liability for any damages resulting from a security breach.

Scope of Services

The scope of services to be provided by Jacobs under this TO includes the following activities:

- Task 1 – Project Initiation
- Task 2 – Risk and Resilience Assessment
- Task 3 – Emergency Response Plan Update

Each task is described in further detail in the following subsections.

Task 1: Project Initiation

Upon Notice to Proceed (NTP), the Project Manager will plan and schedule a kick-off meeting as a webinar to introduce the project team, review the scope of services, and discuss expectations for the project including the participation of staff from the City of Cocoa at the various workshops.

Prior to the kick-off meeting, the Project Manager will coordinate project planning, including schedule, communication protocol, and data/information needs. Jacobs will assemble and review the information

and data currently available based on our working knowledge of the City of Cocoa water system. The Project Manager will coordinate with the City of Cocoa to address any additional information and data needs for the project as the project progresses.

Deliverables

The following deliverables will be submitted to the City of Cocoa as part of this task:

- Project kick-off meeting agenda
- Meeting summary

Meetings

- Project kick-off meeting

Assumptions

The following assumptions are included as part of this task:

- City of Cocoa can make the existing VA available for review onsite.
- Access to existing information will be readily available to enable planning for the onsite project activities of the RRA and ERP update. This information will focus on the differences between the original VA (circa 2002) and the requirements of the RRA including:
 - Any new facilities added since the last VA was performed
 - Any natural hazards risk identification previously performed
 - Any cybersecurity VA, policies, emergency response procedures, etc.
 - Any financial resilience analysis

Task 2: Water System Risk and Resilience Assessment

Section 2013 of the AWIA of 2018 includes requirements for conducting the RRA. These requirements are broader and more in-depth than the Bioterrorism Act of 2002 requirements for conducting a VA. Specific RRA elements required include the following:

- Risk to the system from malevolent acts and natural hazards
- The resilience of the pipes/conveyances, physical barriers, source water, water collection/intake, pretreatment, treatment, storage/distribution facilities, and electronic/computer (including their security) systems
- Monitoring practices
- Financial infrastructure
- Use, storage, or handling of chemicals
- Operation and maintenance of the system
- Capital and operational needs for risk and resilience management of the system (optional)

The RRA will be conducted using the currently accepted industry standard for risk analysis: the American Water Works Association (AWWA) Risk and Resilience Management of Water and Wastewater Systems J100-10 standard (2010). The J100-10 standard provides a method for community water systems to assess risk and resilience associated with threats from malevolent acts, natural hazards, dependency hazards, and proximity hazards to critical infrastructure assets. The J100-10 methodology consists of successive steps that identify mission-critical assets, the vulnerability of those assets, the likelihood of threats to those assets, and the consequences with regard to the failure of those assets. These components provide the basis for the risk and resilience analysis of critical threat-asset pairs. While the

J100-10 approach comprises seven steps, the final step—Risk/Resilience Management—will not be performed as it isn't required for AWIA compliance.

The Jacobs RRA project team will initially work with other Jacobs staff familiar with the City of Cocoa water system to identify critical water facilities/assets, perform a preliminary analysis, and prepare for a series of onsite workshops, interviews, and physical site inspections.

Onsite RRA Activities

The Jacobs RRA project team will be onsite for three (3) days for the following activities:

- **Project Introduction Presentation.** A presentation will be provided to all stakeholders introducing the AWIA, its requirements, the RRA and ERP update processes, the AWIA project schedule, and the activities to be undertaken during the onsite period.
- **Workshops.** Workshops will be undertaken during the onsite period to address the following:
 - Asset prioritization and threat review
 - Threat-asset list review
 - Consequence criteria review
 - Consequence scoring

The workshops will focus on reviewing the preliminary analyses and completing the initial sections of the Jacobs RRA analysis tool. Involvement of Cocoa stakeholders in these workshops is critical to confirm the RRA team's assumptions. This constitutes the review of the information used to generate the RRA findings.

- **Stakeholder Interviews.** To gain a deeper understanding of the system, a series of stakeholder interviews will be conducted with key personnel. These interviews will be conducted during the onsite period based on availability of staff to capture details of specific RRA elements. Where these RRA elements are considered to have been adequately captured during workshop discussions, separate interviews may not be required. Interview sessions may include:
 - **Natural Hazards** – A review of historical impacts and resilience building activities for the utility's facilities and assets to natural hazards related to severe weather and climate change, including flooding, high wind, extreme heat and wildfire events.
 - **Supply Chain Impacts** – A review of the reliability and potential impacts of the utility's supply chain including chemicals, parts, fuel, power, etc.
 - **Water Quality, Pressure, and Flow Monitoring** – A review of water quality, pressure, and flow monitoring (including online monitoring) in place at the utility.
 - **Financial Resilience** – A review of the resilience of the utility's financial elements including billing, collection, and financial contingencies.
 - **Chemical Use, Storage, and Handling** – A review of the chemicals, their use, storage, and handling at the utility's water facilities.
 - **Operations and Maintenance** – A review of utility water operations, operational needs, and maintenance procedures in place. (If this topic has been captured in adequate detail during the workshops, this review may not be required.)

Cybersecurity Workshop. In conjunction with the J100-10 methodology, Jacobs will use the Department of Homeland Security/Industrial Control System - Computer Emergency Response Team (DHS/ICS-CERT) Cyber Security Evaluation Tool (CSET v8.1) to evaluate the risk to IT networks and to ICS/SCADA networks (cyber security monitoring practices). The CSET utilizes network diagram assessment combined with a series of security standards-based questions to provide understanding and

context, which enables the assessor in identifying security shortfalls and identifying best practices for programs and processes.

The CSET produces a Cyber Risk Score, which Jacobs aligns to the Department of Energy (DoE) Cybersecurity Capability Maturity Model (C2M2) to provide a relative understanding of the assessed level of operational and infrastructure cyber risk and a pathway forward for mitigation of the identified risk. This approach does not include penetration testing or active network probing. The results of this assessment will be incorporated into the Jacobs RRA analysis tool.

Critical Facilities/Assets Site Visits. Jacobs already has intimate knowledge of the water utility facilities, however critical facilities and assets identified during the workshops may be visited by RRA project team members (including natural hazard, physical security, and cybersecurity subject matter experts) along with utility plant managers and staff with direct knowledge of the utility's source water, treatment, and distribution facilities. Site visits of representative critical drinking water system facilities will be conducted using checklists.

RRA Onsite Visit Debrief. At the completion of the onsite activities, a debrief meeting will be held to discuss the preliminary findings from the workshops, stakeholder interviews, and site visits. Comments and concerns from City of Cocoa staff will be addressed as part of the RRA summary of findings.

RRA Reporting

On completion of the RRA analysis, a summary of the findings will be documented in a technical memorandum and an electronic copy will be delivered to the City of Cocoa no later than March 20, 2020 to meet the corresponding AWIA deadline. These findings provide input to the ERP update.

The City of Cocoa is responsible for certifying RRA compliance to EPA by the due date (March 31, 2020).

Deliverables

The following deliverables will be submitted to JEA as part of this task:

- Overview agenda for the onsite activities
- Technical memorandum providing a summary of the findings of the RRA

Meetings

- Project Introduction (1 hour)
- Workshops (four at 3-4 hours each)
- Stakeholder Interviews (six at 1 hour each)
- Cybersecurity Workshop (4 hours)
- Site Visits
- Site Visit Debrief (1 hour)

Assumptions

The following assumptions are included as part of this task:

- Jacobs will provide the City of Cocoa with a list of data, information, and document needs prior to the site visit.
- The City of Cocoa will provide relevant data, information, and documents requested prior to the site visit. Access to plans and data as requested by Jacobs will be available and provided by the utility in a timely manner. Jacobs will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by the utility. The utility does not guarantee that all records and data requested by Jacobs are available.

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- Jacobs onsite staff will meet with the utility point of contact for approximately 1 hour in the morning of the first day on-site to discuss project logistics including document security, contact information for IT/OT staff, operations and maintenance supervisor contact information, and any site security and safety plan information.
- Jacobs will manage the health, safety, and environmental activities of its staff to achieve compliance with applicable health and safety laws and regulations.
- The City of Cocoa will provide knowledgeable staff to participate in workshops, interviews, and site visits to selected facilities/assets.
- The City of Cocoa will provide Jacobs staff on the project access to its facilities, as required, for performance of the RRA activities. The City of Cocoa will provide interview rooms and conference rooms as needed for interviews, workshops, and site visit debriefing. It is assumed the site visits will not require confined space entry, vertical ladder climbing needing fall protection, or other areas requiring special training. It is assumed only minimal personal protective equipment (PPE) will be required, including safety vests and hard hats.
- All electronic deliverables will be provided to City of Cocoa via email or via an ftp site, as needed.

Task 3: Emergency Response Plan Update

Section 2013 of the AWIA includes requirements for developing or updating the ERP. These requirements are broader and more in-depth than the Bioterrorism Act of 2002 requirements for an ERP. Specific ERP requirements include the following:

- Incorporate the findings of the RRA.
- Include strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system.
- Include plans and procedures that can be implemented, and identify equipment that can be utilized, in the event a malevolent act or natural hazard threatens the ability of the community water system to deliver safe drinking water.
- Include actions, procedures, and equipment that can obviate or significantly lessen the impact of a malevolent act or natural hazard on the public health and the safety and supply of drinking water provided to communities and individuals, including the development of alternative source water options, relocation of water intakes, and construction of flood protection barriers.
- Include strategies that can be used to aid in the detection of malevolent acts or natural hazards that threaten the security or resilience of the system.

The updated version of the ERP will be developed in accordance with the AWIA and current guidelines associated with National Incident Management System (NIMS) standards, the National Response Framework (NRF), the National Infrastructure Protection Plan (NIPP), EPA, Federal Emergency Management Agency (FEMA), and DHS. The City of Cocoa's existing ERP will be considered and incorporated, as appropriate, in the updated ERP for the drinking water system. In addition, the ERP will consider current utility Emergency Management procedures, policies, and information related to emergency response. The ERP team lead will be an emergency planning and response plan expert with experience developing plans for water systems and utilities in accordance with industry standard guidance and resources. The ERP will outline strategies and resources to improve response and resilience to anticipated threats based on the RRA.

The following subsections describe the approach taken to update the ERP.

Data Collection and Review

Jacobs will review the current water system ERP and related documents such as the Disaster Recovery plan, emergency planning/response policies, training and exercise plans, equipment lists, alternative water source information, community emergency plans, and mutual aid agreements.

Based on this review, a table will be compiled that compares the current ERP with requirements and components of a water system ERP based on the AWIA requirements and guidance. This table will be provided to City of Cocoa in electronic form to assist with efficient delivery of a water system ERP that incorporates all requirements under Section 2013 of the AWIA, making the best use of available information.

Site Visit and Interviews

Information and current resources needed to complete the draft water system ERP will be obtained during an onsite visit through interviews and discussions with City of Cocoa staff, emergency management and response resources, and other entities, as applicable. ERP elements that require utility staff consensus and verification of information such as Incident Command System (ICS) roles and responsibilities, ERP activation criteria, action levels, and other applicable elements will be completed during a one-hour workshop with City of Cocoa on day one of the site visit. The site visit for ERP-related information needs will be completed by one water system ERP expert and one local engineer in coordination with the Project Manager. The ERP expert and local engineer will be onsite for 2 days. A 30-minute close-out presentation of key site visit events and information will be provided on day two of the site visit to utility staff. Additional information collection needs identified as the project progresses will be coordinated with City of Cocoa by the Jacobs Project Manager.

Draft ERP

A draft ERP will be developed in accordance with the AWIA requirements and appropriate industry guidance. This includes utilizing the NIMS/ICS as the framework for responding to emergencies. This will assist City of Cocoa with coordination and support of local, State, and Federal response agencies as appropriate. NIMS is a comprehensive, national approach to incident management that is applicable at all jurisdictional levels and across functional disciplines. The intent of NIMS is to provide a response structure that is applicable across a full spectrum of potential incidents and hazard scenarios, regardless of size or complexity and to improve coordination and cooperation between public and private entities in a variety of domestic incident management activities.

NIMS provides a framework for communication interoperability and compatibility by balancing flexibility and standardization. It provides a flexible framework that facilitates government and private entities at all levels working together to manage domestic incidents. This flexibility applies to all phases of incident management, regardless of cause, size, location, or complexity. NIMS also provides a set of standardized organizational structures, as well as requirements for processes, procedures, and systems designed to improve interoperability.

The ERP addresses facility emergencies that will be managed primarily by the utility as well as support and cooperation with other agencies during large-scale emergencies. The goal of the ERP is to help protect the health and safety of utility employees, customers, and the general public.

Preparation of the ERP will accomplish the following:

- Develop an Incident Management Team (IMT) and identify responsibilities for each team member including participation in a regional Unified Command structure during a sustained event involving the utility.
- Establish procedures for internal and external notification and crisis communications.
- Assist the utility in minimizing the impact of an emergency on its facilities by developing response actions and procedures and providing critical response information.

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- Help protect the health and safety of utility employees, customers, and the general public.
- Develop training and exercise guidelines and brief schedule to enhance emergency preparedness.
- Provide preparation of guidelines for distribution, revision, and updates of the ERP.
- The draft ERP will be provided electronically to City of Cocoa for review via email or via an ftp site, as needed.

Final ERP

The City of Cocoa will review and provide comments to the Jacobs team within two weeks of receiving the draft ERP. The Jacobs team will conduct a 2-hour webinar to receive comments and address questions. Following the webinar, the Jacobs team will make requested changes and edits to address utility comments and produce the draft final ERP. A draft final ERP will be submitted for review and approval by the utility that addresses comments within 30 days of comment receipt. An electronic copy of the Final water system ERP will be transmitted securely to City of Cocoa no later than September 18, 2020 to meet the corresponding AWIA deadline. The City of Cocoa is responsible for submitting ERP compliance certification to EPA by the due date (September 30, 2020).

Deliverables

The following deliverables will be submitted to the City of Cocoa as part of this task:

- Draft City of Cocoa water system ERP
- Final City of Cocoa water system ERP

Meetings

- Site visit ERP workshop
- Site visit close-out presentation
- Draft ERP review webinar

Assumptions

The following assumptions are included as part of this task:

- Jacobs will provide City of Cocoa with a list of data, information, and document needs prior to the site visit.
- The City of Cocoa will provide relevant data, information, and documents requested prior to the site visit. Access to plans and data as requested by Jacobs will be available and provided by City of Cocoa in a timely manner. Jacobs will reasonably rely upon the accuracy, timeliness, and completeness of the information provided by the City of Cocoa. The City of Cocoa does not guarantee that all records and data requested by Jacobs are available.
- Jacobs staff will meet with the utility point of contact for approximately one hour in the morning of the first day onsite to discuss project logistics including document security, contact information for relevant staff to be interviewed, and any site security and safety plan information.
- At a minimum, the City of Cocoa will make accessible the following data and records that are available:
 - Current emergency response related plans and standard operating procedures (SOPs)/written procedures/checklists not already included in ERP(s)
 - Current emergency response mutual aid agreements
 - Organizational charts

- List and contact information for vendors
- Interdependent utilities and contractors
- Equipment lists
- City of Cocoa and relevant contact lists
- Facility maps, evacuation routes, and records of past training whether in-house or with external emergency response partners
- The City of Cocoa will provide knowledgeable staff for data collection and interview activities.
- The utility will provide Jacobs access to its facilities, as required, for performance of the services. The utility will provide staff and interview areas and conference rooms for site visit meetings.
- The City of Cocoa will provide comments on the Draft ERP within 2 weeks of submittal.

General Assumptions

The scope of work and level of effort are based on the task durations included in the Compensation sections and the breakdown of labor and expenses shown in Table 1. Specific assumptions for each task are provided within the task description.

Compensation

Compensation for the services authorized under this task order will be provided using the time and materials basis method with budgets between the tasks and expenses being interchangeable as needed. Costs are summarized below by task.

Table 1. AWIA Section 2013 Compliance Support

| Task | Hours | Fee |
|---------------------------------------|--------------|------------------|
| TASK 1 Project Initiation | 62 | \$11,560 |
| TASK 2 Risk and Resilience Assessment | 415 | \$77,960 |
| TASK 3 Emergency Response Plan Update | 494 | \$87,444 |
| EXPENSES | N/A | \$11,950 |
| Grand Total | 971 | \$188,914 |

Levels of effort for tasks are estimates based on the best information available at the time of task order development. As projects scopes are better defined, actual levels of effort required and associated fees might differ and require coordination between the PMT and the City.

Schedule

It is anticipated that the contract duration for Jacobs' services beginning at the notice to proceed is approximately 8 months to meet the AWIA certification dates.

Attachments

Attachment A –Estimated Fee Matrix

Attachment B – Jacobs Engineering Group Rate Schedule

Acceptance

This Task Order shall become part of the Agreement upon execution by both parties.

Approved for City of Cocoa

Accepted for JACOBS Engineering Group

By _____

By  _____

Francois Didier Menard

Title _____

Title Vice President

Date _____

Date January 28, 2020

Attachment A

Estimated Fee Matrix

Attachment B

Jacobs Engineering Group Rate Schedule

EXHIBIT "A"**Jacobs Engineering Group Rate Schedule**

| Classification | Description | Rate |
|-----------------------|--|-------------|
| Engineer 9 | Principal | \$235 |
| Engineer 8 | Senior Reviewer/Consultant | \$235 |
| Engineer 7 | Senior Project Manager | \$235 |
| Engineer 6 | Senior Professional Engineer/Scientist/Consultant | \$218 |
| Engineer 5 | Mid-Level Professional Engineer/Scientist/Consultant/Project Manager | \$199 |
| Engineer 4 | Professional Engineer/Scientist/Consultant/Project Manager | \$169 |
| Engineer 3 | Junior Professional Engineer/Scientist/Consultant | \$142 |
| Engineer 2 | Project Engineer/Scientist/Consultant | \$120 |
| Engineer 1 | Junior Project Engineer/Scientist/Consultant | \$110 |
| Engineer 0 | Engineering Intern | \$95 |
| | | |
| Technician 5 | Senior Construction Manager/Senior Designer | \$169 |
| Technician 4 | Construction Manager/Senior Technician | \$142 |
| Technician 3 | Senior Construction Inspector | \$120 |
| Technician 2 | Construction Inspector/Technician | \$110 |
| Technician 1 | Junior Construction Inspector/Junior Technician | \$85 |
| Technician Aide | Technical Aide | \$80 |
| | | |
| Office | Office/Project Administration | \$85 |

Notes:

1. Billing rates for the City of Cocoa are designated for the length of this Agreement from January 2020 through January 2023.
2. These rates do not include other direct expense cost. Reimbursable other direct expenses shall be billed in accordance with the terms of the contract.
3. Billing rate schedule is for time basis work order and the City will be billed based on actual hours by category designated for an individual employee.
4. Jacobs reserves the right to request rate modifications for any future extensions to this agreement. Rate modifications must be established and agreed upon by both parties.
5. All copies, reproduction, subconsultant work, materials or equipment purchased or other direct costs shall be pass-thru cost without any mark-up.
6. Travel is reimbursable at the IRS rate for employees and specialists outside the Orlando office only.