

# CITY OF HIGH POINT

## AGENDA ITEM



<b>TITLE:</b> Consideration of a Task Order with CDM Smith, Inc.	
<b>FROM:</b> Robby Stone – Public Services Director Derrick Boone – Asst. Public Services Director	<b>MEETING DATE:</b> December 16, 2024
<b>PUBLIC HEARING:</b> N/A	<b>ADVERTISED DATE/BY:</b> Master Agreement - Task Order
<b>ATTACHMENTS:</b> Scope of Services	

**PURPOSE:** To contract with CDM Smith to perform Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP) updates for compliance with America’s Water Infrastructure Act (AWIA) of 2018. The City has a master agreement for professional services with CDM Smith.

**BACKGROUND:** The Safe Drinking Water Act (SDWA) section 1433, which was amended by America's Water Infrastructure Act (AWIA) section 2013, requires community water systems (CWSs) serving more than 3,300 people to prepare or revise risk and resilience assessments (RRAs) and emergency response plans (ERPs) and to certify to the U.S. Environmental Protection Agency (EPA) that this work has been completed. CWSs must review, revise (where applicable), and recertify their RRA and ERP to EPA every five years from the original deadlines specified in the law.

The City of High Point completed and certified the risk and resilience assessments and emergency response plans in 2020. The scope of the project will be for CDM Smith to update the 2020 AWIA RRA and ERP performed for High Point and conduct a current assessment of the existing vertical and horizontal (above-ground and below-ground) assets as well as business enterprise and cybersecurity processes. CDM Smith will combine results from the previous RRA and ERP with any new information or changes to the systems since completion of the initial AWIA compliance cycle.

**BUDGET IMPACT:** Funds for this project are available in the FY 2024-2025 budget.

**RECOMMENDATION/ACTION REQUESTED:** City Council is requested to consider a task order with CDM Smith, Inc. in the amount of \$139,800 for professional engineering services to perform Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP) updates and authorize the appropriate city staff or officials to execute all necessary documents.





4600 Park Road, Suite 240  
Charlotte, North Carolina 28209  
tel: 704-342-4546

November 25, 2024

Mr. Derrick Boone  
Assistant Public Services Director  
City of High Point  
211 S. Hamilton Street  
High Point, North Carolina

Subject: Compliance with America's Water Infrastructure Act (AWIA) of 2018  
Proposal for Engineering Services

Dear Mr. Boone:

CDM Smith Inc. (CDM Smith) is pleased to submit this Proposal for Engineering Services to the City of High Point (COHP) for providing Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP) updates per the Background Section presented below.

## A. BACKGROUND

The second compliance cycle for AWIA's RRA and ERP updates is approaching, requiring all water systems serving greater than 3,300 people to comply. COHP has requested support from CDM Smith in compliance with AWIA requirements and updating previously developed RRA and ERPs.

The overall goal of the project is to update the prior AWIA RRA and ERP performed and conduct a current assessment of the existing vertical and horizontal (above-ground and below-ground) assets as well as business enterprise and cybersecurity processes. CDM Smith will combine results from the previous RRA and ERP (completed by others) with any new information or changes to the systems since completion of the initial AWIA compliance cycle.

Potential changes that may impact RRA results include increased asset specific replacement costs, new hazards or critical assets that were not considered previously, or any mitigation activities or system changes implemented over the past five years. Updates to existing RRAs must be certified with the Environmental Protection Agency (EPA) by the deadlines included in **Table 1**. CDM Smith will provide the RRA to the COHP, who will be responsible for certifying the RRA with the EPA once the review and updates have been conducted. The ERP will then be updated to address findings of the RRA within six months following certification of the RRA.





Mr. Derrick Boone  
November 25, 2024  
Page 2

**Table 1 AWIA Round Two Deadlines**

Population Served	RRA Update Certification Deadline	ERP Update Certification Deadline
≥100,000	March 31, 2025	September 30, 2025

CDM Smith’s proposed scope of services to support COHP’s AWIA compliance updates is detailed below.

## **B. SCOPE OF SERVICES**

### **Task 1: Project Kickoff and Overall Project Management**

This task will include an initial kickoff meeting to orient project team members to the project goals, structure of project execution and expectations from participants. The task also includes initial data reviews, project management duties, and overall coordination with the COHP for the project duration.

#### **Task 1.1 Project Kickoff**

CDM Smith will schedule an in-person project kickoff meeting with the COHP to review the project scope, deliverables, schedule, and other pertinent information related to the project. The meeting will include an overview of the initial AWIA RRA and ERP process and provide an opportunity for the team to discuss their experience during the initial AWIA RRA process to identify areas for improvement for this effort. Kickoff meeting minutes will be prepared by CDM Smith and distributed to attendees.

The following items will be discussed during the meeting:

- Identification of project participants and who should be involved in project meetings or workshops,
- Coordination of information flow and the approval process for the project.
- Request of any outstanding data or information gaps to support the RRA update.

Participants should include, but are not limited to, the key management and senior staff in the areas of safety and risk, communications, planning and engineering, finance, human resources, production, transmission/distribution, operations and maintenance, customer service, laboratory, electrical, process control and Information Technology (IT)/Operational Technology (OT). Field staff representation is also helpful on the RRA team.

#### **Task 1.2 Project Management**

CDM Smith will regularly coordinate with the COHP throughout the duration of the project.



Mr. Derrick Boone  
November 25, 2024  
Page 3

#### Task 1 Deliverables

- Project Kickoff Meeting Agenda
- Project Kickoff Meeting Minutes

#### **Task 2: Data Gathering/Review of Existing Materials**

Following the project kickoff, CDM Smith shall continue reviewing existing data and information from the previous RRA and ERPs. CDM Smith will also review other relevant data and information such as updated hazard mitigation plans and local emergency planning committee (LEPC) materials. Upon completion of initial data gathering, CDM Smith will provide a data gap questionnaire to populate. Potential data and information requests may include:

- Summary of infrastructure and operational changes over the past five years
- Updated incident reports (if any)
- Changes in personnel or contact information
- Information about any new mitigation activities implemented over the past five years

Information gathered during this task will be incorporated into CDM Smith's RRA Tool which is a Microsoft Excel based tool that follows the RAMCAP method in the AWWA J100 guidance. Updated threat-asset matrices will be developed under this task and further refined during workshops to be conducted as part of Task 3.

COHP shall be responsible for, and CDM Smith may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by COHP to CDM Smith pursuant to this Agreement. CDM Smith may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement. CDM Smith's scope of work does not include verifying COHP Provided Information for accuracy or completeness. CDM Smith shall be entitled to an adjustment in price and schedule to the extent that any corrective action in CDM Smith's Services arises out of inaccurate COHP Provided Information.

#### Task 2 Deliverables

- Data Gaps Questionnaire
- Updated Threat-Asset Matrix

#### **Task 3: AWIA RRA Workshops**

CDM Smith will facilitate two separate workshops (up to 4 hours each) that will be conducted virtually. Workshop participants should include leadership teams and subject matter experts from

Mr. Derrick Boone  
November 25, 2024  
Page 4

appropriate departments. These half-day workshops are anticipated to take place after the CDM Smith team has completed initial data reviews of information gathered during Tasks 1 and 2.

At each workshop, management and engineering groups will review existing data and information and qualitatively conduct the initial updates to the RRA threat-asset pairings. Workshops will begin with a review of critical assets evaluated during the first AWIA RRA to confirm all critical assets throughout the water systems are being captured. It is during these workshops that new assets can be added, or old assets can be removed from the analysis.

The teams will also review existing vulnerabilities and potential worst-case consequence scenarios identified during the initial RRA and discuss potential revisions to previous assumptions. CDM Smith will prepare and distribute the agenda and updated threat-asset matrices prior to the workshops and will distribute draft minutes within two weeks of workshop completion. The deliverable from this workshop is a finalized risk matrix for “all-hazards” and critical assets which will provide the basis for updating the RRA that will be further evaluated in subsequent tasks.

#### Task 3 Deliverables

- Workshop Agenda
- Workshop Minutes
- Final Threat-Asset Matrix

#### **Task 4: Risk Calculations and RRA Update**

After the workshops, CDM Smith will update the risk calculations and RRA. This will be conducted within CDM Smith’s RRA Tool which is a Microsoft Excel based tool that follows the facilitated implementation of the RAMCAP method in the AWWA J100 guidance to calculate risk scores in a consistent manner using the data and information gathered under Tasks 1 through 3. The final product will include a draft and final RRA update report detailing the results.

Specific tasks during the assessment include:

- **Step 1** – Finalize updates to the asset and threat characterizations based on COHP priorities and information gathered during data collection and workshops to identify, rank, and record the critical assets. The goal of this step is to validate critical and high-consequence facilities/assets identified in 2020-2021 and the potential threats that may impact them. These “threat-asset pairs”, which are the focus of the RRA, may be revised to include additional threats or assets, or to remove threat-asset pairs as appropriate. The high-priority threat-asset pairs will move on to the Consequence Analysis, Vulnerability Assessment, and Threat Analysis stages described in Step 2.

- **Step 2** – In order to conduct the Consequence, Vulnerability, and Threat Calculations for high-priority threat-asset pairs, the following will be performed:
  - **Consequence Analysis:** Validate or refine consequence metrics or criteria (such as financial, casualties, loss of revenue, or regional economic impact) using the most up to date information. The RAMCAP methodology is used to define ranges of consequence and analyze based on the consequence metrics for each threat-asset pair. A number of external resources will also be leveraged to evaluate consequences for updated threat-asset pairs, including EPA’s Water Health and Economic Analysis Tool (WHEAT) and data from recent U.S. Census Bureau updates. Consequence scores are measured in dollars.
  - **Vulnerability Assessment:** For each critical threat-asset pair, the vulnerability is determined by evaluating the existing preparation, recovery, and response processes that are currently in place. During the workshops, these processes will be reviewed in more detail and any changes to those processes will be discussed. The output of a vulnerability analysis to malevolent incidents is the likelihood of success of the adversary for each specified attack scenario on each threat–asset pair, given that the attack is carried out. The parallel concept for natural hazards is the likelihood that the hazard will produce the consequences already estimated, given that the hazard occurs. This is expressed in a numerical value from zero (the threat is unlikely to occur and produce the consequence) to one (the threat is very likely to occur and produce the consequence).
  - **Threat Likelihood Analysis:** Conduct the threat analysis using the J100 guidance to estimate the likelihood or frequency of malevolent threats using the proxy measure, best estimate, or conditional assignment and the probability of natural hazards and likelihood of dependency or proximity hazards. The EPA’s 2024 updates to baseline threat likelihoods for malevolent acts will be used for calculations, along with recent climate and weather data from the past five years using local hazard mitigation plans and historical records for natural hazards. This is expressed in a numerical value from nearly zero (the threat is unlikely to occur) to one (the threat is certain to occur).
- **Step 3** – In order to conduct the RRA, the following will be performed:
  - Calculate risk for each threat-asset pair based on the results from updated Consequence, Vulnerability, and Threat Analyses, using the following equation:

$$\text{Risk} = \text{Consequences} \times \text{Vulnerability} \times \text{Threat Likelihood} \mid R = C \times V \times T$$

- Update the Utility Resilience Index (URI) as outlined in J100 as:

- **Operational:** *These indicators reflect the tactical capacity of the utility to react quickly and/or cope with various incidents that have the potential to disrupt services*
- **Financial:** *These indicators reflect the fiscal capacity of the utility and supporting community to react quickly and/or cope with various incidents that have the potential to disrupt revenue*
- Each of these indicators are numerical values from zero (not resilient) to one (highly resilient) designed to reflect the resilience of the utility as a whole. They help to further focus the COHP toward areas that need further attention to reduce risk and improve resilience. This will be presented in easy-to-understand dashboards as it applies to each critical asset.
- **Step 4** – The methodology, findings, costs, and recommendations of the updated RRA process will be documented in a report format. An electronic copy of the draft RRA Update Report will be provided to the COHP for review. CDM Smith will incorporate COHP’s written comments on this draft report into a final RRA Update Report.
- **Step 5** – CDM Smith will assist the COHP in completing the EPA certification process. The certification details are available from EPA, and require the water system name, PWSID#, the date certified, and a statement from that the system has conducted, reviewed (and revised as needed) the RRA. CDM Smith will provide the COHP with the needed documentation for review 30 days prior to the RRA certification deadlines with the understanding that the COHP will review and return a consolidated set of comments and modifications within 14 days to allow time for finalizing any documents to meet final certification deadlines.

#### Task 4 Deliverables

- Draft RRA Report
- Final RRA Report

#### **Task 5: ERP Updates**

As part of this task, CDM Smith will review and update the current ERP for COHP to incorporate findings from the RRA updates and additional items from the AWIA not currently covered in the plans. No new ERPs will be developed. This will build upon existing documentation with a summary of changes included for record. The ERP will be updated based on the most current AWWA and EPA standard and will include updates to:

- Strategies and resources to improve resilience, including physical security and cybersecurity;
- Plans, procedures, and equipment for responding to a malevolent act or natural hazard;



Mr. Derrick Boone  
 November 25, 2024  
 Page 7

- Actions, procedures, and equipment to lessen the impact of a malevolent act or natural hazard, including alternative source water, relocation of intakes, and flood protection barriers;
- Strategies to detect malevolent acts or natural hazards.

An electronic copy of the updated draft ERP will be provided for COHP review 30 days prior to the designated EPA deadline. COHP will review and return a consolidated set of comments and modifications to CDM Smith within 14 days, and CDM Smith will incorporate written comments on draft ERPs into final ERP formats to be provided to COHP in time to meet EPA certification deadlines.

Task 5 Deliverables

- Draft ERP updates
- Final ERP updates

**C. SCHEDULE**

Work will begin within 1 week of notice to proceed (NTP). **Table 2** below lists schedule milestones.

**Table 2 Project Schedule**

System Size	Project Kickoff Meeting	Initial Threat-Asset Matrices	RRA Workshop	Draft RRA Report	Final RRA Report	Draft ERP Updates	Final ERP Updates
≥100,000	1 week from NTP	January 10, 2025	Week of January 13 <sup>th</sup>	March 1, 2025	March 31, 2025	September 1, 2025	September 30, 2025

**D. COMPENSATION**

For Tasks 1 through 5 services performed by CDM Smith under Section B of this Task Order, the COHP agrees to pay a lump sum fee of \$139,800. In addition to this compensation, the COHP reserves the right to amend this Contract, so that CDM Smith may furnish additional services as needed. Payments shall be made by the COHP monthly in proportion to the percentage of work completed, with the balance of payment made when the work is complete.

Thank you for the opportunity for CDM Smith to serve the COHP and your customers. We look forward to further discussing this proposal with you. If you have any questions or need any additional information, please let us know.







Mr. Derrick Boone  
November 25, 2024  
Page 8

Sincerely,

A handwritten signature in blue ink that reads "Laurin B. Kennedy".

Laurin B. Kennedy, PE, PMP  
CDM Smith Inc.

cc: Robby Stone, Public Services Director, City of High Point  
Glendon Fetterolf, CDM Smith  
Larry Mitchell, CDM Smith

