

**HIGHLINE WATER DISTRICT  
King County, Washington**

**RESOLUTION 21-2-3C**

**RESOLUTION AUTHORIZING AMENDMENT #1 TO CONTRACT #20-60-04 WITH CAROLLO ENGINEERS, INC. FOR TASKS 1 THROUGH 3 FOR AMERICA'S WATER INFRASTRUTURE ACT OF 2018 PHASE II: EMERGENCY RESPONSE PLAN UPDATE**

**WHEREAS**, by passage of Resolution 20-3-18A, the Board of Commissioners authorized Contract #20-60-04 to complete Phase 1 of the Risk and Resilience Assessment and Emergency Response Plan Update per the requirements of America's Water Infrastructure Act (AWIA) of 2018, and

**WHEREAS**, Carollo Engineers, Inc, submitted their Scope of Services for Tasks 1 through 3 that are necessary to comply with the AWIA requirements:

- Task 1     Project Management and Progress Meetings
- Task 2     Emergency Response Plan Updates
- Task 3     EPA Compliance Documentation

**WHEREAS**, the General Manager and District Engineer have reviewed the Scope of Services, submitted by Carollo Engineers, Inc. and recommend approval of this resolution (Exhibit A, attached and incorporated herein by this reference).

**NOW, THEREFORE, BE IT RESOLVED:**


1. The Board of Commissioners approves Amendment #1 to Contract #20-60-04 with Carollo Engineers, Inc., for a not-to-exceed amount of \$54,343.00 (referenced as Attachment 1 and incorporated herein).
2. The General Manager or designee is authorized to execute Amendment #1 for Tasks 1 through 3 as referenced above.
3. The General Manager and/or the District's legal counsel are authorized to make minor changes to Amendment #1 if required.


**HIGHLINE WATER DISTRICT  
King County, Washington**

**RESOLUTION 21-2-3C**


**ADOPTED BY THE BOARD OF COMMISSIONERS** of Highline Water District, King County, Washington, at an open public meeting held on this **3rd** day of **February 2021**.

**BOARD OF COMMISSIONERS**

  
\_\_\_\_\_  
**Todd Fultz**, President

  
\_\_\_\_\_  
**Daniel Johnson**, Commissioner

  
\_\_\_\_\_  
**Kathleen Quong-Vermeire**, Commissioner

  
\_\_\_\_\_  
**Polly Dagle**, Secretary

  
\_\_\_\_\_  
**Vince Koester**, Commissioner



**AMENDMENT #1**

**CONSULTANT AGREEMENT FOR SERVICES  
CAROLLO ENGINEERS, INC. – CONTRACT # 20-60-04  
AWIA 2018 PHASE II: EMERGENCY RESPONSE PLAN UPDATE**

Carollo Engineers, Inc. has requested the following additional compensation (Exhibit A-Table 1).

<b>Task</b>	<b>Description</b>	<b>Amount</b>
1	Project Management and Progress Meetings	\$ 5,655.00
2	Emergency Response Plan Updates	\$ 48,068.00
3	EPA Compliance Documentation	\$ 620.00
Contract Revision Total		\$ 54,343.00
Previous Contract Amount		\$ 149,993.00
<b>Revised Contract Amount</b>		<b>\$ 204,336.00</b>

The same standard general terms and conditions will apply as agreed to in Contract #20-60-04 dated 3/24/20.

**Effective Date.** The effective date of this Amendment shall be the date signed by an authorized representative of the District.

**HIGHLINE WATER DISTRICT**

**CAROLLO ENGINEERS, INC.**

By: \_\_\_\_\_  
 Name Matt Everett  
 Title General Manager  
 Date \_\_\_\_\_

By: \_\_\_\_\_  
 Name Lara R. Kammereck, PE., PMP  
 Title VP, Senior Project Manager  
 Date \_\_\_\_\_

By: \_\_\_\_\_  
 Name Brian R. Matson, PE  
 Title Senior Vice President  
 Date: \_\_\_\_\_

**HIGHLINE WATER DISTRICT**

**AMERICA'S WATER INFRASTRUCTURE ACT OF 2018 PHASE II:  
EMERGENCY RESPONSE UPDATE**

**SCOPE OF SERVICES**

DRAFT: January 27, 2021

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**INTRODUCTION**

The following Scope of Services has been developed to assist the Highline Water the District (District) with updating their emergency response plan (ERP) to meet the requirements of the America's Water Infrastructure Act (AWIA) of 2018. The tasks under this Scope of Services are based on Carollo Engineers Inc. (Carollo) current understanding of the proposed project and discussions with District staff.

**BACKGROUND**

The District serves a population of approximately 75,000 customers within seven different cities, including unincorporated King County. District water supplies include four local wells and interties with Seattle Public Utilities' Cedar River Pipeline. The average day demand is approximately 6.5 mgd with a maximum day demand of 11 mgd.

The District's water system has two main pressure zones that, in turn, supply ten smaller pressure zones through booster pumps and pressure reducing valves. Nine reservoirs provide storage and maintain the hydraulic grade line of the main pressure zones.

As part of this project, Carollo and its subconsultants (referred to as the Carollo Team) will complete an ERP update for the District. This effort is being undertaken to assist the District in complying with the requirements of the AWIA 2018.

The U.S. Environmental Protection Agency (EPA) will require certification from the District stating that your ERP is complete by June 30, 2021. The work completed under this scope will provide the District with the documentation required to meet these deadlines.

**TASKS**

The effort encompasses three tasks that are required for AWIA compliance. In addition, Carollo recommends several supplementary services which are detailed as optional tasks 4-7.

Tasks 1 through 3 represent the scope of work necessary to comply with the AWIA requirements.

- Task 1 – Project Management and Progress Meetings.
- Task 2 – Emergency Response Plan Updates.
- Task 3 – EPA Compliance Documentation.

Optional Tasks 4-7 represent supplementary services that add definition to specific aspects of the project and/or add value to the District, but are not required for AWIA compliance. These optional tasks would only be completed at the direction of and following written approval by the District.

- Task 4 – RRA Recommendation Implementation (Optional Task).
- Task 5 – Additional Engineering Services (Optional Task).
- Task 6 – ERP Testing/Validation (Optional Task).
- Task 7 – Distribution System Security Enhancement Study (Optional Task).

## **MEETINGS AND WORKSHOPS**

The Carollo Team recognizes the need to collaborate with the District's staff in the development of the ERP. Our previous experience has proven that the process of creating and implementing the plan is often just as important and beneficial to the organization as the plan itself.

Meetings will be conducted via Microsoft Teams, unless in person meetings can be accommodated. The proposed meetings and workshops listed below are described in detail in the Scope of Services Section. This summary list does not include meetings and workshops associated with optional tasks 4-7.

- Monthly Progress Meetings.
- Meeting 1 – Risk Mitigation Review Meeting.
- Meeting 2 – ERP Update Review Meeting.

## **DELIVERABLES**

The deliverables associated this effort include the following. This summary list does not include meetings and workshops required for optional tasks 4-7.

- Monthly progress reports (electronic).
- Meeting agendas, materials, and minutes.
- Data Request Log.
- Draft and Final Mitigation Measures Technical Memorandum (TM).
- Draft and Final ERP Updates.
- ERP Compliance Letter.

## **SCOPE OF SERVICES**

### **TASK 1: PROJECT MANAGEMENT AND PROGRESS MEETINGS**

Carollo will conduct project management activities, and coordinate project meetings, to support the successful delivery of the water system ERP update for the District.

#### **1.1. Project Administration and Management**

This task includes project management activities, submittal of monthly progress reports, and overall coordination and assistance. In addition to production and implementation of the project plan and management of the project schedule and budget, this task also includes preparation and submittal of monthly progress reports showing current project status and identifying key issues or elements of the project that will need to be addressed in the proceeding weeks. The monthly progress reports will be submitted electronically via email with invoice.

#### **1.2. Progress Meetings**

Carollo will conduct progress meetings on a periodic basis (e.g., approximately monthly, depending on other scheduled workshops/meetings) to discuss the project status including plan development, required decisions, upcoming activities, budget status, and overall project schedule. General progress meetings will typically be conducted virtually, unless the meeting can be coordinated with another on-site project related meeting to promote efficiency. Up to four (4) meetings are planned as part of this task.

#### **Task 1 Deliverables**

- Monthly progress reports (electronic).

### **TASK 2: EMERGENCY RESPONSE PLAN UPDATES**

The District has an existing ERP that will require updates to meet the requirements of AWIA. The updates will be based on the information gathered as part of the RRA development. This task will include identifying recommended modifications to the existing ERP.

#### **2.1. Risk Management and Mitigation**

As part of the previous RRA scope (see Task 3.7), the Carollo team collaborated with the District to identify opportunities to mitigate risk and create appropriate resilience.

The previous efforts represented a variety of tasks focused on development of the following:

- Strategies and resources to improve the resilience of the system, including the physical security and cybersecurity of the system.

- Plans and procedures that can be implemented, and identification of equipment that can be utilized in the event a malevolent act or natural hazard threatens the ability of the District to deliver safe drinking water.
- Actions, procedures, and equipment that can significantly lessen the impact of a malevolent act or natural hazard on the public health, safety and supply of drinking water provided to communities.
- 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.

As part of this task, the Carollo team will meet with the District to review the proposed mitigation measures and associated costs and benefits developed as part of the previous effort to promote concurrence on the approach. Following review, Carollo will develop a TM to document the risk mitigation strategy and support future Implementation Plan development.

While this task is not directly required for AWIA compliance, it is a critical piece in identifying the upgrades required as part of the ERP update efforts and supporting implementation planning. The countermeasures for mitigation speak directly to the ERP update requirements.

## **2.2. Data Collection**

Carollo will submit a data request in support of facilitating ERP updates. The request may include documentation related to security (physical, cyber, etc.), emergency, disaster response planning, master plans, resilience plans, or business continuity plans. The data request will be discussed during the kickoff meeting and will likely lead to follow-up discussions and additional data requests. This information will be critical to promoting efficiency and facilitating discussions with project stakeholders.

## **2.3. ERP Updates**

Following completion of the risk mitigation evaluation, the team will initiate an update of the District's existing ERP to support compliance with AWIA and best practices. The Carollo team will generate a comparison document to illustrate the District's existing ERP compliance with the requirements of AWIA. This document will serve as a guidance document for completing updates and will assist in demonstrating consistency with the AWIA requirements (to support compliance).

The team will utilize information from the existing ERP and Hazard Identification and Risk Assessment (HIRA) plan (if applicable) and complete interviews with selected District staff and emergency responders to gather information regarding their current capability to react to emergency situations. The team will also review the assessment of the risks resulting from malevolent threats and natural hazards developed as part of the RRA to understand and develop critical system dependencies. The results of the analysis will be used to provide updates to the existing ERP document, specific to the water system assets.

In addition, the Carollo team will review the existing ERP against industry best practices to identify potential areas for improvement, beyond the AWIA requirements. The Carollo team will implement these additional improvements after review and acceptance by the District.

The Draft ERP Updates will be submitted to the District for review. A meeting will be facilitated to review the draft document and receive comments. Comments will be incorporated into the final ERP Report.

The District may have other documents/plans, including a Pandemic Plan, Continuity of Operations Plan (COOP), Risk Management Plans (RMPs), Business Continuity Plan (BCP), etc. that are related to emergency response during events. While Carollo may review these documents as part of the ERP update efforts, an update of these ancillary documents is not included in this scope.

#### **2.4. Meetings**

The Carollo team will facilitate, prepare an agenda, prepare presentation materials, and document discussions, including action items and decisions, in meeting minutes for the following meetings:

- a) Meeting 1 – Risk Mitigation Review Meeting: Review the proposed mitigation measures and associated costs and benefits developed as part of the previous effort to promote concurrence on the approach.
- b) Meeting 2 – ERP Update Review Meeting: Present the draft ERP update and discuss District comments.

#### **Task 2 Carollo Deliverables**

1. Meeting agendas, materials, and minutes (electronic PDF).
2. Data request log (electronic PDF).
3. Draft and Final Risk Management TM (electronic PDF).
4. Draft and Final updated ERP (electronic PDF).
5. Updated ERP comment log.

#### **Task 2 District Deliverables**

1. Information outlined as part of the Data Request.
2. Current ERP in editable electronic format.
3. Comments on draft updated ERP.

### **TASK 3: EPA COMPLIANCE DOCUMENTATION**

#### **3.1. EPA Compliance Support**

The intent of this task is to develop the documentation for the District to meet the requirements for compliance with AWIA 2018. Note that EPA recommends that utilities utilize an electronic submittal certification process for both the RRA and ERP. This process provides immediate confirmation and a



record of compliance for the utility. While the District will need to complete the on-line process, the Carollo team will assist, as required, and provide a letter confirming ERP compliance for reference, prior to the AWIA completion deadline. The Carollo Team recommends that the District postpone submitting the associated letters until the June 30, 2021 deadline as the 5-year update clock begins upon submittal. Letters will be provided to the District for approval and comment prior to finalization.

### **Task 3 Carollo Deliverables**

1. ERP compliance letter for District records.

### **Task 3 District Deliverables**

1. The District will self-certify AWIA compliance with the EPA.

## **TASK 4: RRA RECOMMENDATION IMPLEMENTATION (OPTIONAL – NOT REQUIRED FOR AWIA COMPLIANCE)**

### **4.1. Develop Implementation Recommendations**

As part of this optional task, the Carollo Team will utilize the results of the RRA, Risk Management TM, and ERP to develop an implementation plan for any site/asset specific and organization-wide recommendations to address the identified risk and resilience gaps. Recommendations will address physical, electronic, operational, and cyber security, as well as resilience related gaps which were identified as part of the AWIA planning efforts.

### **4.2. Develop Cost Models**

This subtask includes development of planning-level cost estimates for the identified recommendations to assist in capital improvement planning. Carollo will work with the District to identify available funding and prioritize recommendations to provide an implementation plan consistent with budget constraints. The level of detail associated with the cost models will be based on the needs of the District and will be established prior to finalizing the associated level of effort.

### **4.3. Develop Implementation Scheduling/Budget**

This subtask includes development of a recommended implementation schedule with accompanying budget documents for implementing new or upgraded security and resilience improvements to key water facilities and assets.

### **Task 4 Deliverables**

- Cost models (PDF and Excel).
- Implementation schedule and budget documents (to be added as an appendix to the RRA Report).

**TASK 5: ADDITIONAL ENGINEERING SERVICES  
(OPTIONAL – NOT REQUIRED FOR AWIA COMPLIANCE)**

**5.1. Additional Engineering Services**

As part of this optional task, and up to the budget level of effort allocated for this task, Carollo will provide supplementary engineering services during the contract period to develop additional detail on specific risk and resilience assessment items, as requested by the District. The scope and cost of the services will be negotiated as the need is identified and shall be based on the same cost parameters used to negotiate this contract.

**TASK 6: ERP TESTING/VALIDATION  
(OPTIONAL – NOT REQUIRED FOR AWIA COMPLIANCE)**

**6.1. ERP Testing/Validation**

To be effective, Emergency Response Plans must be validated against realistic conditions and embedded in organizational culture. Doing this allows emergency plans to remain alive and empowers staff to take appropriate emergency actions quickly, thereby reducing the potential impact or intensity of a hazard. Additionally, regular and realistic validation of emergency plans provides the opportunity for continuous improvement of response capacities and transfer of lessons learned amongst stakeholders, increases the likelihood of positive outcomes during real incidents, and ultimately improves organizational resilience.

If emergency plans have not been validated against realistic conditions, an organization cannot have confidence in its ability to implement the plan and meet its core mandates.

As part of this task, Carollo recommends three efforts to validate the proposed ERP:

- Phase I - Planning Design and Development – may include mock scenario development, inject development, planning conferences, development of exercise materials, and development of audit procedures.
- Phase II – Conduct Exercises – includes conducting mock planning exercises identified and developed as part of Phase I.
- Phase III – Post Exercise Review and Reporting – includes debriefs and post exercise report development.

## **TASK 7: DISTRIBUTION SYSTEM SECURITY ENHANCEMENT STUDY (OPTIONAL – NOT REQUIRED FOR AWIA COMPLIANCE)**

As a supplemental task to the AWIA effort, Carollo can assist the District in the development of a water security enhancement program designed to minimize the impacts of accidental or malicious contamination of the distribution system. The tasks associated with this effort generally include:

- Study Coordination Workshop.
- Sensor Placement Optimization Study.
- Monitoring Technology Evaluation.

### **7.1. Study Coordination Workshop**

The Carollo Team will prepare for and conduct a Study Coordination Workshop to define the County's security monitoring and operational/system recovery goals, and establish the framework for the program. Through the workshop, the Carollo team will gather pertinent information relative to the District's existing distribution system. Monitoring and system recovery goals will be defined and evaluation criteria will be developed for the Technology Evaluation work effort (Task 7.3). Note that this workshop can be conducted during the same timeframe as other project workshops to minimize associated costs.

A portion of the workshop will focus on identifying and gathering critical data for enhancement of the District's existing distribution system model (if required) and distribution system security monitoring. These data include, but are not limited to, general information on the District's distribution system, system vulnerabilities, water production and distribution facility details, general water quality, and SCADA communication capabilities. Before evaluating distribution system security monitoring technologies, it is critical to understand and document the District's monitoring goals. Goals can be focused primarily on security, or a combination of security and water quality/operations (i.e. developing a model capable of validating proposed responses to emergency events in the system prior to implementation – also referred to as a "Digital Twin" model). Different technologies will apply to address each of these goals. A portion of the workshop will be dedicated to evaluating and developing consensus on the monitoring goals.

### **7.2. Sensor Placement Optimization Study**

A Sensor Placement Optimization Study will be conducted to optimize the location and the number of security monitoring systems to be located within the District's water distribution system. InfoWater SA SLM, an industry standard software tool for sensor placement optimization, will be utilized in conjunction with the District's existing InfoWater hydraulic model. Note that an Extended Period Simulation (EPS) hydraulic model in EPA-NET format is required for sensor optimization analyses. The model should be calibrated to match target operations. For the purposes of this scope, it is assumed that the District will provide calibrated InfoWater or EPA-NET model results for up to three (3) demand scenarios identified by Carollo for use in the analyses. Required model modifications will be completed

by District staff with input from Carollo. Study results will include a GIS-based map showing optimum locations for, and data to indicate, the optimum number of real-time monitoring systems in the distribution system.

Carollo will develop a conceptual (Level 5) cost estimate outlining equipment pricing and installation costs. Design efforts for the associated installations are not included in this scope of work.

Carollo will provide the District with a copy of the InfoWater SA SLM User's Manual and up to four (4) hours of training in a single on-line training session (e.g. WebEx).

### **7.3. Monitoring Technology Evaluation**

Water distribution system monitoring technology (commonly referred to as Contamination Warning Systems (CWS)) has developed rapidly over recent years and new systems are currently being introduced to the marketplace. Based on the goals established at the study coordination workshop, various "classes" of real-time monitoring technologies will be considered. These include physical/chemical based on analytical instruments, biosensors, and event detection systems. Monitoring systems can be single or multi-parameter systems, which can be tailored to meet the District's needs.

When evaluating developing technologies, independent validation and testing results are critical. The EPA has developed a program for independently validating developing technologies called Environmental Technology Verification (ETV). This Technology Evaluation Task will focus on up to five technologies that have undergone ETV testing, or other independently verified pilot testing program.

Based on the goals established during the study coordination workshop, the Carollo Team will recommend the system that best meets the District's goals.

#### **Task 7 Deliverables**

- Draft Distribution System Security Enhancement Study (1 electronic PDF).
- Final Distribution System Security Enhancement Study (1 electronic PDF).

Each of these optional tasks (Tasks 4 through 7) would be developed in additional detail to meet the needs of the District prior to implementation.

## **SCHEDULE**

The scope of services described herein is anticipated to be completed within approximately 180 calendar days from receipt of a Purchase Order or notice to proceed. This includes submittal of the Final ERP Updates and EPA compliance letter by June 25, 2021.

## **GENERAL PROJECT ASSUMPTIONS**

The scope and fee for this planning effort is based on the following assumptions:

- The Highline Water District and its staff are referred to as the "District" throughout this document.

- Carollo Engineers, Inc. and partner subconsultants are referred to as “Carollo” or the “Carollo Team” throughout this document.
- The District will provide electronic copies of all existing security, risk management, emergency response, and disaster planning information, as well as all other requested data to Carollo within 10 business days of the kickoff meeting.
- The District will provide site plans of all assets for use in creating figures to support the planning reports in native or PDF format.
- The District will assist Carollo in scheduling workshops and meetings with all relevant project stakeholders.
- District staff will provide comments on all draft documents within 10 business days of receipt. The District will consolidate comments from multiple reviewers into a single set and resolve any internal conflicting comments prior to providing to Carollo.
- Carollo will establish a secure file transfer system for document management for the project.
- Carollo will determine what is missing from the District’s ERP to meet the requirements of AWIA. The District is responsible for making sure information in the existing ERP is accurate.
- A Continuity of Operations Plan (COOP) update is not included in this scope of services.
- Deliverables will be provided in electronic copy (.pdf and .docx) and transmitted via email or secure file transfer.
- Notwithstanding any contrary language in Section 9 of the Agreement, Carollo shall be entitled to keep one (1) copy of all written or graphic materials received from District and used by Carollo as well as any work project, in accordance with the standard of care delineated in Section 10 of the Agreement.
- The District will print and produce additional copies of all documents as necessary for its use.
- In providing opinions of probable construction cost (OPCC), financial analyses, economic feasibility projections, and schedules for potential projects, Carollo has no control over cost or price of labor and material; unknown or latent conditions of existing equipment or structures that may affect operation and maintenance costs; competitive bidding procedures and market conditions; time or quality of performance of third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate project cost or schedule. Therefore, Carollo makes no warranty that the District’s actual project costs, financial aspects, economic feasibility, or schedules will not vary from Carollo’s opinions, analyses, projections, or estimates.
- All OPCC shall be a Class 5 level, as defined by American Association of Cost Engineering (AACE).
- The District shall furnish Carollo available studies, reports and other data pertinent to Carollo’s services; obtain or authorize Carollo to obtain or provide additional reports and data as required; furnish to Carollo services of others required for the performance of Carollo’s services hereunder, and Carollo shall be entitled to use and rely upon all such information and services provided by the District or others in performing Carollo’s services under this Agreement.
- Carollo shall perform the services required hereunder in accordance with the prevailing engineering standard of care by exercising the skill and ability ordinarily required of engineers performing the same or similar services, under the same or similar circumstances.

## FEE

Compensation for services is summarized in Table 1. The total compensation for this task authorization will be on a time and materials basis with a not to exceed cost of **\$54,343**. Optional tasks' fee amount will be in addition to the AWIA Compliance Tasks (1-3) total (costs for each are also summarized in Table 1). Services will be invoiced on a monthly basis. This fee estimate was developed from the quantities for labor and other direct costs.

<b>Table 1 Compensation Terms Risk and Resilience Assessment and Emergency Response Plan per the Requirements of AWIA 2018</b>		
<b>Description</b>	<b>Compensation Terms</b>	<b>Budget</b>
<b>AWIA COMPLIANCE TASKS</b>		
Task 1 – Project Management and Progress Meetings	Time and Materials	\$5,655
Task 2 – Emergency Response Plan Updates	Time and Materials	\$48,068
Task 3 – EPA Compliance Documentation	Time and Materials	\$620
<b>AWIA COMPLIANCE TASKS (1-3) TOTAL</b>		<b>\$54,343</b>
<b>OPTIONAL TASKS</b>		
Task 4 – RRA Recommendation Implementation		\$32,940
Task 5 – Additional Engineering Services		TBD
Task 6 – ERP Testing/Validation		61,639
Task 7 – Distribution System Security Study		\$28,748
<b>OPTIONAL TASKS (4-7) TOTAL</b>		<b>\$123,327</b>
<b>TOTAL</b>		<b>\$177,670</b>



**HIGHLINE WATER DISTRICT  
AIWIA 2018 PHASE II: ERP UPDATE  
LEVEL OF EFFORT**

DRAFT: 27-Jan-21

TASK / DESCRIPTION	CAROLLO LABOR HOURS AND COSTS										SUBCONSULTANT COSTS				DIRECT EXPENSE			TOTAL COST
	Principal in Charge Principal Professional	Project Manager Lead Professional	Quality Manager Principal Professional	Regulatory Evaluations Lead Professional	Security Engineer Professional	CAD/ Graphics CAD Tech	Technical Editor Document Processing	Total Hours	Labor Cost	Enterpris Protection Associates	Total Sub Markup 5%	Total Sub	Carollo Other Direct Charges	PECE @ \$/hr \$ 12.00	Total Direct Charges			
																Professional	George Whitten	
<b>Task 1 - Project Management and Meetings</b>																		
1.1 Project Administration and Management	2	20	0	0	0	0	4	4	\$ 4,524	\$ 780	\$ 39	\$ 819	\$ -	\$ 312	\$ 5,655			
1.2 Progress Meetings	2	16	0	0	0	0	4	4	\$ 3,804	\$ -	\$ -	\$ -	\$ -	\$ 284	\$ 4,088			
1.3 Progress Meetings	0	4	0	0	0	0	4	4	\$ 720	\$ 780	\$ 39	\$ 819	\$ -	\$ 48	\$ 1,567			
<b>Task 2 - Emergency Response Plan Updates</b>																		
2.1 Risk Management and Navigation	1	28	15	62	54	4	9	173	\$ 29,612	\$ 15,600	\$ 780	\$ 16,380	\$ -	\$ 2,076	\$ 48,068			
2.2 Data Collection	0	8	3	30	30	0	4	75	\$ 12,408	\$ 4,880	\$ 234	\$ 4,914	\$ -	\$ 900	\$ 18,220			
2.3 ERP Updates	0	4	0	4	4	0	0	12	\$ 2,024	\$ 1,560	\$ 78	\$ 1,638	\$ -	\$ 144	\$ 3,806			
2.4 Meetings	1	8	8	8	8	0	0	33	\$ 6,408	\$ 1,560	\$ 78	\$ 1,638	\$ -	\$ 396	\$ 8,440			
<b>Task 3 - EPA Compliance Documentation</b>																		
3.1 EPA Compliance Support	0	1	0	0	2	0	1	4	\$ 572	\$ -	\$ -	\$ -	\$ -	\$ 48	\$ 620			
<b>Task 4 - RRA Recommendation Implementation (opt.)</b>																		
4.1 Develop Implementation Recommendations	1	24	24	24	54	4	8	139	\$ 24,310	\$ 6,630	\$ 332	\$ 6,962	\$ -	\$ 1,668	\$ 32,940			
4.2 Develop Cost Models	0	8	8	8	20	0	0	44	\$ 7,896	\$ 2,340	\$ 117	\$ 2,467	\$ -	\$ 528	\$ 10,861			
4.3 Develop Implementation Scheduling/Budget	1	8	8	8	18	0	0	42	\$ 7,804	\$ 1,960	\$ 98	\$ 2,048	\$ -	\$ 504	\$ 10,168			
<b>Task 5 - Additional Engineering Services (opt.)</b>																		
5.1 Additional Engineering Services	0	0	0	0	0	0	0	0	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
<b>Task 6 - ERP Testing/Validation (opt.)</b>																		
6.1 ERP Testing/Validation	2	8	8	8	20	8	0	46	\$ 7,852	\$ 50,700	\$ 2,535	\$ 53,235	\$ -	\$ 562	\$ 61,639			
<b>Task 7 - Distribution System Security Enhancement Study (opt.)</b>																		
7.1 Study Coordination Workshop	0	14	10	0	108	48	4	184	\$ 25,540	\$ -	\$ -	\$ -	\$ -	\$ 2,208	\$ 28,748			
7.2 Sensor Placement Optimization Study	0	4	4	0	8	0	0	16	\$ 2,536	\$ -	\$ -	\$ -	\$ -	\$ 192	\$ 3,128			
7.3 Monitoring Technology Evaluation	0	8	4	0	60	32	0	104	\$ 14,736	\$ -	\$ -	\$ -	\$ -	\$ 1,248	\$ 16,984			
<b>TOTAL</b>	<b>6</b>	<b>95</b>	<b>57</b>	<b>86</b>	<b>238</b>	<b>64</b>	<b>26</b>	<b>572</b>	<b>\$ 93,410</b>	<b>\$ 73,710</b>	<b>\$ 3,686</b>	<b>\$ 77,386</b>	<b>\$ -</b>	<b>\$ 8,864</b>	<b>\$ 177,670</b>			

**Agenda Item No.:** 5.3  
**Agenda Date:** 02/03/21  
**Reviewed By:** *AD*

**RE:** Authorize Amendment #1 – Carollo Engineers, Inc. - Contract #20-60-04  
AWIA 2018 Phase II: Emergency Response Plan Update

CATEGORY	
<i>Executive</i>	<input type="checkbox"/>
<i>Administrative</i>	<input type="checkbox"/>
<i>Engineering/Operations</i>	<input checked="" type="checkbox"/>

FINANCIAL						
<i>Expenditures?</i>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	N/A	<input type="checkbox"/>
<i>Budgeted?</i>	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	N/A	<input type="checkbox"/>
<i>Estimated Amount:</i>		\$		<u>54,343.00</u>		
<small>Excludes sales tax</small>						

**ATTACHMENTS:**

1. Resolution 21-2-3C w/Attachment 1

**COMMENTS:**

Carollo Engineers, Inc, submitted their Scope of Services for Tasks 1 through 3 that are necessary to comply with the AWIA requirements:

- Task 1 Project Management and Progress Meetings
- Task 2 Emergency Response Plan Updates
- Task 3 EPA Compliance Documentation

The District Engineer and General Manager have reviewed the Scope of Services, submitted by Carollo Engineers, Inc. and recommend approval of this resolution.