



CITY OF CAMAS PROFESSIONAL SERVICES AGREEMENT

616 NE 4th Avenue
Camas, WA 98607

Project No. W1032

Resilience Assessment and Emergency Response

THIS AGREEMENT is entered into between the **City of Camas**, a municipal corporation, hereinafter referred to as "the City", and **Tetra Tech** hereinafter referred to as the "Consultant", in consideration of the mutual benefits, terms, and conditions hereinafter specified.

1. Project Designation. The Consultant is retained by the City to perform professional services in connection with the project designated as the Resilience Assessment and Emergency Response.
2. Scope of Services. Consultant agrees to perform the services, identified on **Exhibit "A"** attached hereto, including the provision of all labor, materials, equipment, supplies and expenses.
3. Time for Performance. Consultant shall perform all services and provide all work product required pursuant to this agreement by no later than **June 30th, 2021 for the Assement and December 31st, 2021 for the Emergency Response**, unless an extension of such time is granted in writing by the City, or the Agreement is terminated by the City in accordance with Section 18 of this Agreement.
4. Payment. The Consultant shall be paid by the City for completed work and for services rendered under this agreement as follows:
 - a. Payment for the work provided by Consultant shall be made as provided on **Exhibit "B"** attached hereto, provided that the total amount of payment to Consultant shall not exceed the amounts for each task identified in **Exhibit "A"** (Scope of Services) inclusive of labor, materials, equipment supplies and expenses.
 - b. The consultant may submit vouchers to the City once per month during the progress of the work for payment for project completed to date. Vouchers submitted shall include the Project Number designated by the City and noted on this agreement. Such vouchers will be checked by the City, and upon approval thereof, payment will be made to the Consultant in the amount approved. Payment to the Consultant of partial estimates, final estimates, and retained percentages shall be subject to controlling laws.
 - c. Final payment of any balance due the Consultant of the total contract price earned will be made promptly upon its ascertainment and verification by the City after the completion of the work under this agreement and its acceptance by the City.
 - d. Payment as provided in this section shall be full compensation for work performed, services rendered and for all materials, supplies, equipment and incidentals necessary to complete the work.
 - e. The Consultant's records and accounts pertaining to this agreement are to be kept available for inspection by representatives of the City and of the State of Washington for

a period of three (3) years after final payment. Copies shall be made available upon request.

5. Ownership and Use of Documents. All documents, drawings, specifications, electronic copies and other materials produced by the Consultant in connection with the services rendered under this Agreement shall be the property of the City whether the project for which they are made is executed or not. The Consultant shall be permitted to retain copies, including reproducible copies, of drawings and specifications for information, reference and use in connection with Consultant's endeavors. Consultant shall not be held liable for reuse of documents or modifications thereof by the City or its representative for any purpose other than the original intent of this Agreement, without written authorization of Consultant.
6. Compliance with Laws. Consultant shall, in performing the services contemplated by this agreement, faithfully observe and comply with all federal state, and local laws, ordinances and regulations, applicable to the services to be rendered under this agreement. Compliance shall include, but not limited to, 8 CFR Part 274a – Control of Employment of Aliens, § 274a.2 Verification of identity and employment authorization.
7. Indemnification. Consultant shall indemnify and hold the City of Camas, its officers, officials, employees and volunteers harmless from any and all claims, injuries, damages, losses or suits including attorney fees, caused by the negligent acts, errors or omissions of the Consultant in performance of this Agreement, except for injuries and damages to the extent caused by the sole negligence of the City.

However, should a court of competent jurisdiction determine that this Agreement is subject to RCW 4.24.115, then, in the event of liability for damages arising out of bodily injury to persons or damages to property caused by or resulting from the concurrent negligence of the Consultant and the City, its officers, officials, employees, and volunteers, the Consultant's liability, including the duty and cost to defend, hereunder shall be only to the extent of the Consultant's negligence. It is further specifically and expressly understood that the indemnification provided herein constitutes the Consultant's waiver of immunity under Industrial Insurance, Title 51 RCW, solely for the purposes of this indemnification. This waiver has been mutually negotiated by the parties. The provisions of this section shall survive the expiration or termination of this Agreement.

8. Consultant's Liability Insurance.
 - a. Insurance Term. The Consultant shall procure and maintain for the duration of this Agreement, insurance against claims for injuries to persons or damage to property which may arise from or in connection with the performance of the work hereunder by the Consultant, its agents, representatives, or employees.
 - b.
 - c. Minimum Scope of Insurance. Consultant shall obtain insurance of types and coverage described below:
 1. Automobile Liability insurance with a minimum combined single limit for bodily injury and property damage of \$1,000,000.00 per accident. Automobile Liability insurance covering all owned, non-owned, hired and leased vehicles. Coverage shall be at least as broad as Insurance Services Office (ISO) form CA 00 01.
 2. Commercial General Liability insurance shall be written with limits no less than \$2,000,000.00 each occurrence, \$2,000,000.00 general aggregate. Commercial General Liability insurance shall be at least as broad as ISO occurrence form CG 00 01 and shall cover liability arising from premises, operations, stop-gap independent

contractors and personal injury and advertising injury. The Public Entity shall be named as an additional insured under the Consultant's Commercial General Liability insurance policy with respect to the work performed for the Public Entity using an additional insured endorsement at least as broad as ISO endorsement form CG 20 26.

3. Professional Liability insurance appropriate to the consultant's profession. Professional Liability insurance shall be written with limits no less than \$2,000,000.00 per claim and \$2,000,000.00 policy aggregate limit.
4. Workers' Compensation coverage as required by Industrial Insurance laws of the State of Washington.
5. Verification. Consultant shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, showing the City of Camas as a named additional insured, evidencing the Automobile Liability and Commercial General Liability of the Consultant before commencement of the work.
- d. Other Insurance Provision. The Consultant's Automobile Liability and Commercial General Liability insurance policies are to contain, or be endorsed to contain that they shall be primary insurance as respect to the City. Any Insurance, self-insurance, or self-insured pool coverage maintained by the City shall be excess of the Consultant's insurance and shall not contribute with it.
- e. Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best rating of not less than A: VII.
- f. Verification of Coverage. Consultant shall furnish the City with original certificates and a copy of the amendatory endorsements, including but not necessarily limited to the additional insured endorsement, evidencing the insurance requirements of the Agreement before commencement of the work.
- g. Notice of Cancellation. The Consultant shall provide the City with written notice of any policy cancellation within two business days of their receipt of such notice.
- h. Failure to Maintain Insurance. Failure on the part of the Consultant to maintain the insurance as required shall constitute a material breach of contract, upon which the City may, after giving five business days notice to the Consultant to correct the breach, immediately terminate the Agreement or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the City on demand, or at the sole discretion of the City, offset against funds due the Consultant from the City.
- i. City Full Availability of Consultant Limits. If the Consultant maintains higher insurance limits than the minimums shown above, the City shall be insured for the full available limits of Commercial General and Excess or Umbrella liability maintained by the Consultant, irrespective of whether such limits maintained by the Consultant are greater than those required by this Agreement or whether any certificate of insurance furnished to the City evidences limits of liability lower than those maintained by the Consultant.
9. Independent Consultant. The Consultant and the City agree that the Consultant is an independent Consultant with respect to the services provided pursuant to this agreement. Nothing in this Agreement shall be considered to create the relationship of employer and employee between the parties hereto.

Neither Consultant nor any employee of Consultant shall be entitled to any benefits accorded City employees by virtue of the services provided under this Agreement. The City shall not be

responsible for withholding or otherwise deducting federal income tax or social security or for contributing to the state industrial insurance program, otherwise assuming the duties of an employer with respect to Consultant, or any employee of Consultant.

10. Covenant Against Contingent Fees. The Consultant warrants that he/she has not employed or retained any company or person, other than a bonafide employee working solely for the Consultant, to solicit or secure this contract, and that he has not paid or agreed to pay any company or person, other than a bonafide employee working solely for the Consultant, any fee, commission, percentage, brokerage fee, gifts, or any other consideration contingent upon or resulting from the award or making of this contract. For breach or violation of this warranty, the City shall have the right to annul this contract without liability or, in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.
11. Discrimination Prohibited. During the performance of this Agreement, the Consultant, for itself, its assignees, and successors in interest agrees to comply with the following laws and regulations:
 - Title VI of the Civil Rights Act of 1964
(42 USC Chapter 21 Subchapter V Section 2000d through 2000d-4a)
 - Federal-aid Highway Act of 1973
(23 USC Chapter 3 Section 324)
 - Rehabilitation Act of 1973
(29 USC Chapter 16 Subchapter V Section 794)
 - Age Discrimination Act of 1975
(42 USC Chapter 76 Section 6101 et seq.)
 - Civil Rights Restoration Act of 1987
(Public Law 100-259)
 - Americans with Disabilities Act of 1990
(42 USC Chapter 126 Section 12101 et. seq.)
 - 49 CFR Part 21
 - 23 CFR Part 200
 - RCW 49.60.180

In relation to Title VI of the Civil Rights Act of 1964, the Consultant is bound by the provisions of **Exhibit "C"** attached hereto and by this reference made part of this Agreement, and shall include the attached **Exhibit "C"** in every sub-contract, including procurement of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto.

12. Confidentiality. The Contractor agrees that all materials containing confidential information received pursuant to this Agreement shall not be disclosed without the City's express written consent. Contractor agrees to provide the City with immediate written notification of any person seeking disclosure of any confidential information obtained for the City.
13. Work Product. All work product, including records, files, documents, plans, computer disks, magnetic media or material which may be produced or modified by the Contractor while performing the Services shall belong to the City. Upon written notice by the City during the Term of this Agreement or upon the termination or cancellation of this Agreement, the Contractor shall deliver all copies of any such work product remaining in the possession of the Contractor to the City. Consultant shall not be held liable for reuse of documents or modifications thereof by the City or its representatives for any purpose other than the original intent of this Agreement, without written authorization of Consultant.

14. Certification Regarding Debarment, Suspension, or Ineligibility and Voluntary Exclusion—Primary and Lower Tier Covered Transactions.

- a. The Contractor, defined as the primary participant and its principals, certifies by signing these General Terms and Conditions that to the best of its knowledge and belief that they:
 6. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal or State department or agency.
 7. Have not within a three-year period preceding this contract, been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public or private agreement or transaction, violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, receiving stolen property, making false claims, or obstruction of justice;
 8. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this section; and
 9. Have not within a three-year period preceding the signing of this contract had one or more public transactions (federal, state, or local) terminated for cause of default.
- b. Where the Contractor is unable to certify to any of the statements in this contract, the Contractor shall attach an explanation to this contract.
- c. The Contractor agrees by signing this contract that it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the BOARD.
- d. The Contractor further agrees by signing this contract that it will include the clause titled “Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transaction,” as follows, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions:

Lower Tier Covered Transactions

1. The lower tier contractor certifies, by signing this contract that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
2. Where the lower tier contractor is unable to certify to any of the statements in this contract, such contractor shall attach an explanation to this contract.
- e. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, person, primary covered transaction, principal, and voluntarily excluded, as used in this section, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the BOARD for assistance in obtaining a copy of these regulations.

15. Intellectual Property.

- a. Warranty of Non-infringement. Contractor represents and warrants that the Contractor is either the author of all deliverables to be provided under this Agreement or has obtained and

holds all rights necessary to carry out this Agreement. Contractor further represents and warrants that the Services to be provided under this Agreement do not and will not infringe any copyright, patent, trademark, trade secret or other intellectual property right of any third party.

- b. Rights in Data. Unless otherwise provided, data which originates from this Agreement shall be a "work for hire" as defined by the U.S. Copyright Act of 1976 and shall be owned by the City. Data shall include, but not be limited to reports, documents, pamphlets, advertisements, books, magazines, surveys, studies, films, tapes, and sound reproductions. Ownership includes the right to copyright, patent, register, and the ability to transfer these rights.
16. Assignment. The Consultant shall not sublet or assign any of the services covered by this agreement without the express written consent of the City.
17. Non-Waiver. Waiver by the City of any provision of this agreement or any time limitation provided for in this agreement shall not constitute a waiver of any other provision.
18. Conflict of Interest. It is recognized that Contractor may or will be performing professional services during the Term for other parties; however, such performance of other services shall not conflict with or interfere with Contractor's ability to perform the Services. Contractor agrees to resolve any such conflicts of interest in favor of the City. Contractor confirms that Contractor does not have a business interest or a close family relationship with any City officer or employee who was, is, or will be involved in the Contractor's selection, negotiation, drafting, signing, administration, or evaluating the Contractor's performance.
19. Right to Terminate Contract. The City shall have the right at its discretion and determination to terminate the contract following ten (10) calendar days written notice. The consultant shall be entitled to payment for work thus far performed and any associated expenses, but only after the city has received to its satisfaction the work completed in connection with the services to be rendered under this agreement. The Consultant may terminate services on the Project upon ten (10) written notice without cause or in the event of substantial failure by the City to fulfill its obligations of the terms hereunder. Consultant shall submit an invoice for services performed up to the effective date of termination and the City shall pay Consultant all outstanding invoices, together with all costs arising out of such termination, within fourteen (14) days. The City may withhold an amount for services that may be in dispute provided that the City furnishes a written notice of the basis for their dispute and that the amount withheld represents a reasonable value.
20. Notices. Notices to the City of Camas shall be sent to the following address:
Sam Adams, Utilities Manager
City of Camas
616 NE 4th Avenue
Camas, WA 98607
PH: 360-801-7003
EMAIL: sadams@cityofcamas.us

Notices to Consultant shall be sent to the following address:

Brian Murphy, Project Manager
Tetra Tech
15350 SW Sequoia Parkway, Suite 220
Portland, OR 97224
PH: 503-684-9097
FX: 503-598-0583

21. Integrated Agreement. This Agreement together with attachments or addenda, represents the entire and integrated agreement between the City and the Consultant and supersedes all prior negotiations, representations, or agreements written or oral. This agreement may be amended only by written instrument signed by both City and Consultant. Should any language in any Exhibits to this Agreement conflict with any language in this Agreement, the terms of this Agreement shall prevail. Any provision of this Agreement that is declared invalid, inoperative, null and void, or illegal shall in no way affect or invalidate any other provision herof and such other provisions shall remain in full force and effect.
22. The Client and Consultant agree that they shall diligently pursue resolution of all disagreements within 45 days of either party's written notice using a mutually acceptable form of mediated dispute resolution prior to exercising their rights under law. Consultant shall continue to perform services for the Project and the Client shall pay ofr such services during the dispute resolution process unless the Client issues a written notice to suspend work. Causes of action between the parties to this Agreement shall be deemed to have accrued and the applicable statutes of repose and/ or limitation shall commence not later than the date of substantial completion.
- Each party shall be responsible for its share of the arbitration fees in accordance with the applicable Rules of Arbitration. In the event a party fails to proceed with arbitration, unsuccessfully challenges the arbitrator's award, or fails to comply with the arbitrator's award, the other party is entitled to costs of suit, including reasonable attorney's fee for having to compel arbitration or defend or enforce award.
23. Governing Law. This Agreement shall be governed by and interpreted in accordance with the laws of the State of Washington.
24. Venue. The venue for any dispute related to this Agreement or for any action to enforce any term of this Agreement shall be Clark County, Washington.
25. Remedies Cumulative. Any remedies provided for under the terms of this Agreement are not intended to be exclusive, but shall be cumulative with all other remedies available to the City at law or in equity.
26. Counterparts. Each individual executing this Agreement on behalf of the City and Consultant represents and warrants that such individual is duly authorized to execute and deliver this Agreement. This Agreement may be executed in any number of counter-parts, which counterparts shall collectively constitute the entire Agreement.
27. Limitation of Liability. In recognition of the relative risks and benefits of the project to both the City and Consultant, the risks have been allocated such that the City agrees, to the fullest extent permitted by law, to limit the liability of Consultant and its subconsultants to the City and to all construction contractors and subcontractors on the project for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, so that the total aggregate liability of Consultant and its subconsultants to all those named shall not exceed \$50,000 or the amount of Consultant's total fee paid by the City for services under this Agreement, whichever is the greater. Such claims and causes include, but are not limited to negligence, professional errors or omissions, strict liability, breach of contract or warranty.

DATED this _____ day of _____, 2021.

CITY OF CAMAS:

CONSULTANT:

Authorized Representative

By _____

By _____

Print Name _____

Print Name _____

Title _____

Title _____

EXHIBIT “A” SCOPE OF SERVICES

Re: America’s Water Infrastructure Act Water System Risk and Resiliency Assessment and Emergency Response Plan Scope of Work

PROJECT UNDERSTANDING

The City of Camas is undertaking a water system risk and resilience assessment (RRA) and Emergency Response Plan Update (ERP) of its physical operational assets and cyber networks in compliance with the America’s Water Infrastructure Act (AWIA). The assessment is designed to determine the water system’s vulnerabilities to malevolent acts, natural hazard, and proximity and dependency risks.

The objective is the development of an RRA that meets all AWIA requirements and provides the City of Camas with the documentation to develop the required emergency response plan internally. Tetra Tech proposes to perform the RRA in conformance with the methodology presented in Risk Analysis and Management for Critical Asset Management Protection (RAMCAP); Standard for Risk and Resilience Management of Water and Wastewater Systems (ANSI/AWWA, 2010) as described in the AWWA J100 standard (Figure 1).

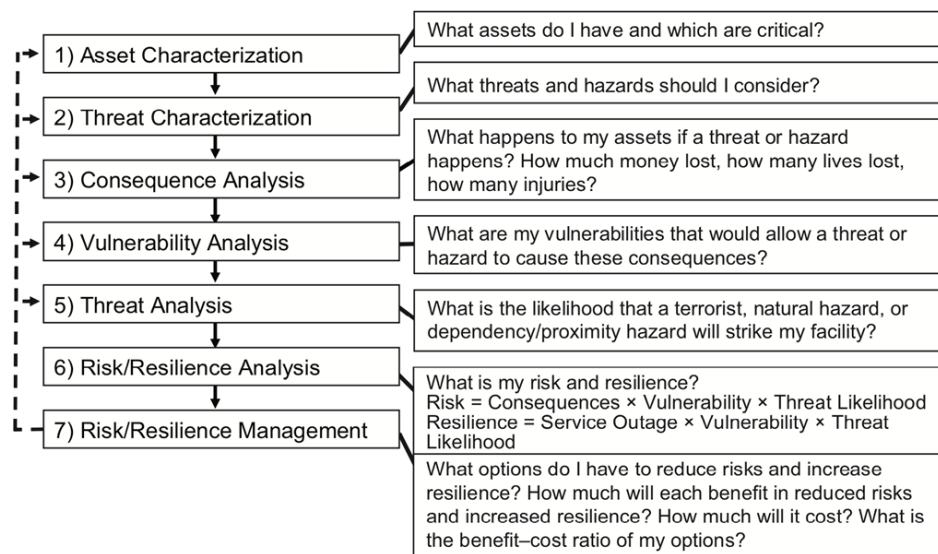


Figure 1.

J100 Standard for Risk and Resilience Management of Water and Wastewater Systems

AWWA

Tetra Tech will conduct the RRA for water system mission critical cyber and physical assets including its administrative and operations facilities. AWIA requirements emphasize cybersecurity threats in light of the increasing occurrences of system intrusions, data base hacks, and ransomware attacks. The RRA will consider the systems cyber assets – computers, networks, data and communications systems, and billing systems – critical to the safe production of drinking water and business operations. These consist of both information technology (IT) and operational technology (OT) systems, including:

- Industrial control systems (ICS)
- Supervisory control and data acquisition (SCADA) systems.
- Supporting network and computer infrastructure
- Business applications supporting utility operations

The cyber-asset assessment will closely mirror the physical RAMCAP assessment tasks but involve a different City of Camas team with knowledge of computerized systems from both IT and SCADA perspectives. This assessment will evaluate the risks to critical systems and the City of Camas's ability to quickly and effectively recover from disruptions of these systems.

SCOPE OF SERVICES

Task 1 Project Administration

Tetra Tech will provide a Project Administration Plan to direct, coordinate, and monitor the activities of the project with respect to budget, schedule, and contractual obligations.

Tetra Tech will be responsible for management of all Tetra Tech team activities, including any subconsultants. Tetra Tech will manage and coordinate all components of the Project and take a proactive role in keeping all tasks on schedule and budget and ensure timely completion of the Project.

Tetra Tech will provide full coordination with City of Camas staff and be responsive to any communications. Tetra Tech will be in contact with the City frequently enough to ensure a timely City review of deliverables. Tetra Tech will work with all stakeholders in a responsible manner and as directed by the City of Camas's Project Manager.

Tetra Tech will prepare all project-related agendas and meeting minutes. Agendas and the supporting information will be distributed via emails to the City of Camas's Project Manager at least one business day prior to any meetings, except draft reports, which shall be submitted at least three business days ahead of the meetings. Meeting minutes shall be distributed to all attendees and any other identified parties within five business days of the meeting date.

Tetra Tech will submit a summary report of work completed by sub-tasks with each invoice.

Tetra Tech will conduct internal quality assurance and quality control meetings and follow-up with technical experts as necessary throughout the course of the project. The duration of this project will not exceed December 31, 2021.

Task 2 Kickoff Meeting and Data Review

Tetra Tech will conduct a project planning meeting with the Project Manager from the City of Camas. The objectives of this meeting will be to confirm the project timeline, confirm agencies participating in the project, and coordinate compilation of the necessary documents to conduct the plan reviews. The critical path item in developing a plan of this nature is data collection. We will address this need immediately. Using the AWIA requirements as a minimum baseline, we will develop a data needs list, data needs submission log, and draft data collection plan. The data collection schedule will be finalized at the kickoff meeting.

During the meeting, Tetra Tech will confirm the overall project, scope, project plan, and schedule.

Assumptions: The kickoff meeting will be conducted by Microsoft Teams conference call.

Task 3 Data Collection and Review

Data gathering, through existing documentation and field assessment will address the following elements:

- Malevolent acts (physical and cyber intrusion by internal/external perpetrators) and natural hazards (for the City of Camas, it is assumed that the list of natural hazards can be limited to earthquakes, fires, floods and storm events)
- System resilience
- Monitoring practices
- Financial network infrastructure
- Operation and maintenance
- Network diagrams addressing schemes and system descriptions
- Drawings showing the relationship of each system to the treatment process (i.e., process flow diagrams, record drawings and O&M manuals).
- City of Camas records of previous malevolent acts, natural events, service outages due to utility or external factors

The focus of data collection will be identifying the status of existing systems and analyzing existing systems and deficits per the EPA guidelines and City of Camas's objectives.

Additional technical documentation that may be requested if available includes:

- Latest version of all security policies and procedures
- Any contract/asset access service agreements
- Security documentation such as post orders, recent calls for service, and security organization chart.
- Electronic engineering files of the administration and operations building utilities, communications and security systems
- Available O&M manuals
- Most recent emergency management plan

This assessment will include the following system elements:

<ul style="list-style-type: none">• Source of supply• Transmission pipelines• Pump stations• Storage reservoirs \• Critical PRVs	<ul style="list-style-type: none">• Security systems and practices• Operations center• Maintenance yard• IT and OT cyber networks
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Task 4 Asset and Threat Characterization and Consequence Analysis – Workshop #1

Asset-Threat Pair Determination

Tetra Tech will prepare for, and facilitate, Workshop #1 with the City of Camas to introduce the RAMCAP assessment approach and develop the physical and cyber asset characterization. The workshop will be attended by Tetra Tech's project manager, project engineer, cybersecurity specialist, and physical security specialist.

Tetra Tech will review the major cyber assets associated with each facility and their criticality to the City of Camas's mission. Tetra Tech will facilitate a discussion with City staff to define their mission, followed by a discussion of how each facility is critical to this mission.

A threat characterization will be conducted, to assess malevolent acts and natural hazards, including threats that can impact off-site assets controlled by others (e.g., utilities and chemical suppliers). The workshop will identify reasonable, worst-case threats using the RAMCAP table of potential hazards and threat scenarios. These are based on leading physical and cybersecurity guidance identified as AWIA consensus standards for water utilities, including the following:

- AWWA J100 Standard
- AWWA Cyber Security Guidance & Tool
- National Institute of Standards and Technology Cybersecurity Framework
- ISA/IEC-62443 (Formerly ISA-99) Industrial Automation and Control Systems Security
- National Institute of Standards and Technology SP800-82 Rev. 1 Guide to Industrial Control Systems Security

Tetra Tech will prepare for, and facilitate, the threat characterization process at the workshop. This part of the workshop will identify threats and narrow the focus of threats that represent real, physically possible threats to critical assets identified during the asset characterization.

Tetra Tech will prepare an Asset Classification and Threat Characterization Technical Memorandum summarizing the key assets and associated criticality identified during the workshops.

Field Investigations

Tetra Tech will conduct field-data collection regarding water assets identified as critical and conduct interviews with key staff.

In conjunction with fieldwork, Tetra Tech's cybersecurity lead, will spend time with the City of Camas's IT and SCADA staff reviewing the networks. Tetra Tech will request information from the City to identify the key

components of the network and cyber infrastructure. This will allow Tetra Tech to become familiar with the critical automated systems prior to the onset of project work.

Tetra Tech's field investigations will determine the ability of current protection systems to withstand each identified threat. Each site will be classified based on the criticality of its cyber assets as defined in the RAMCAP methodology. Tetra Tech will begin with threat analysis assumptions identified during the asset/threat characterization workshop to estimate the likelihood of a malevolent act or natural hazard based on relative alternative targets and historical records, respectively.

Consequence Analysis

Tetra Tech will reconvene with City of Camas staff to identify the types of consequences to be evaluated and quantify those consequences. This information will be used in the PARRE Software Tool to assign scores to calculate consequence of loss for each asset-threat pair. We will confirm or revise the consequence analysis to rank asset-threat pairs according to the magnitude of resulting consequences, using a consequence scale provided in the RAMCAP methodology. Consequences will be estimated, at a minimum, in terms of loss of life and serious injury; financial losses; duration and severity of service denial; and economic losses to the utility. This analysis will be used as the basis for the vulnerability and threat analysis workshop to follow.

Deliverable: Facilitated Workshop #1

Assumptions

- This assessment will be conducted in a manner and develop results to meet the needs of the AWIA RRA requirements.
- The RRA will fully evaluate a maximum of twenty (20) water system Asset-Threat pairs.
- The workshop and field analysis will be conducted by MS Teams video conference

Task 5 Vulnerability and Threat Analysis – Workshop #2

Based on the findings of Workshop #1, Tetra Tech will use the consequence analysis to identify a natural breakpoint in the quantification of consequence to identify approximately the top twenty critical assets in the water system. This approach, as recommended by the J100 guidance is simply to ascertain a manageable number of assets to be addressed.

With a focused list of assets Tetra Tech will prepare a vulnerability analysis to identify, within the security framework, the vulnerabilities to threats and/or hazards that could potentially occur.

Tetra Tech will then conduct a threat analysis using data from City records, law enforcement, and Emergency Planning and Community Right to Know Act (EPRCA Tier II) databases to identify the likelihood of that a natural hazard, dependency or proximity hazard or malevolent threat would take place at their facility.

Tetra Tech will facilitate Workshop #2 with City staff to review and revise the vulnerability and threat likelihood analysis.

Deliverables: Facilitated Workshop #2

Assumptions

- The workshop will be conducted by MS Teams video conference

Task 6 Risk and Resilience Analysis

Tetra Tech will assess the risk and resilience to the previously identified Asset-Threat pairs according to the malevolent acts and natural events (including earthquakes) as outlined by the AWWA J100 methodology. Tetra Tech will compile all information and scores gathered in the preceding tasks to calculate risk and resilience for each asset-threat pair. Risk is calculated as the product of the Consequence (expressed as a scored value), Vulnerability (expressed as a probability), and Threat Likelihood (expressed as a probability):

$$\text{RISK} = \text{Consequence} \times \text{Vulnerability} \times \text{Threat Likelihood}$$

Resilience will be calculated as the product of the Service Outage (expressed as a scored value in terms of duration and severity), Vulnerability, and Threat Likelihood.

$$\text{RESILIENCE} = \text{Duration} \times \text{Severity} \times \text{Vulnerability} \times \text{Threat Likelihood}$$

Tetra Tech will prepare a risk and resilience analysis technical memorandum compiling the results of the analysis. We will then facilitate a conference call to discuss the results to ensure that all City participants agree with the outcome and determine which risks warrant mitigation. The call will define what level of risk and resilience is acceptable. For asset-threat pairs with an unacceptable level of risk and resilience, the following process will be pursued:

- Define mitigation and resilience options as countermeasures to the threats.
- Estimate the capital and operating costs for each option.
- Identify options that apply to multiple asset-threat pairs.
- Calculate the net benefits and benefit-cost ratio to estimate total value and risk-reduction efficiency of each option.
- Determine the resources needed to operate the selected options.
- Identify mitigation options for the selected asset-threat pairs.

Task 7 Risk and Resilience Management - Workshop #3

Following the calculation of risk and resilience, Tetra Tech will facilitate Workshop #3. The Risk and Resilience Management workshop will evaluate and select what, if any, actions are needed to enhance all-hazards security or resilience are needed. If actions are needed then selecting the portfolio of actions to be taken including improving security, improving consequence mitigation, developing redundancy, entering into mutual aid agreements, developing emergency response plans, reducing or eliminating dependency/proximity threats, etc.

These decisions will be subjective and dependent upon City staff participants. Therefore, the recording or the reasoning process and justification for each decision will be important for future groups when the RRA is updated.

Tetra Tech will prepare recommended risk and resilience management options for the City of Camas's consideration and submit the recommendations one week in advance of the workshop. Tetra Tech will develop the necessary spreadsheets and analytical tools for evaluating and selecting the recommendations.

Deliverable: Facilitated Workshop #3

Assumptions

- The workshop and field analysis will be conducted by MS Teams video conference

Task 8 Draft Final and Final RRA

Following completion of the workshops, Tetra Tech will prepare a Draft Final RRA compiling and summarizing the process, results, recommendations, decisions, and action items that will provide the City with Risk and Resilience

Action Plan for review. Following review, Tetra Tech will conduct a meeting with the City project manager to review comments and revisions. Tetra Tech will prepare a Final RRA Action Plan for the City of Camas's records. Tetra Tech will also prepare the required RRA document and post it to the project secure Sharepoint site for downloading. Tetra Tech will provide the link to the online certification letter for the City's completion and submission.

Deliverables:

- Draft Final RRA
- Final RRA

Assumptions:

- The City of Camas will provide a single set of reviewed and resolved comments on the Draft Final RRA.
- Following project completion all project files will be deleted from Tetra Tech servers and the Sharepoint site deleted for security purposes.

Task 9 Emergency Response Plan (ERP) Initiation

Concurrent with the submission of the final RRA, Tetra Tech will initiate the process of developing the ERP. Tetra Tech will conduct a 2-hour on-site ERP project kickoff meeting with the City's project manager and key personnel. The Tetra Tech project manager will facilitate the meeting. Tetra Tech will provide printed meeting materials for up to 10 participants.

Tetra Tech will conduct the on-site ERP kickoff meeting with key stakeholders pre-selected and notified by the City, who will serve as members of a Working Group. The objectives of this meeting will be to initiate their involvement in the ERP development, finalize the project timeline, and discuss the communication plan. Meeting objectives will also include obtaining commitment and buy-in to the planning process, as well as setting expectations and confirming responsibilities of the Working Group members. In addition, Tetra Tech will identify and discuss the planning requirements for this project and review applicable local, state, and federal guidelines.

Deliverable: Facilitated ERP kick-off.

Task 10 Plan Review, Gap Analysis, and ERP Outline

Tetra Tech will conduct a comprehensive review of the existing emergency response documentation and guidance and determine their suitability for meeting requirements for AWIA compliance. A gap analysis will assist Tetra Tech in guiding a discussion with the City regarding the update's overall vision and end state.

After discussing the gap analysis and reviewing revisions needed to meet the AWIA compliance, Tetra Tech will develop an ERP outline that is consistent with both the City's vision and AWIA requirements.

Tetra Tech will submit a data request for ERP documents to the City's project manager and assess those provided. Tetra Tech will then develop a gap analysis summary that highlights current capabilities and areas for further development.

Task 11 Stakeholder Workshop

A collaborative plan revision process that combines iterative draft plan development with Working Group participation is the key to building ownership in the plan. Through a series of targeted interviews and meetings, Tetra Tech will gather the data needed to begin the planning process. Tetra Tech will facilitate the stakeholder engagement process and provide advice and guidance based on best practices, as appropriate.

During this task, Tetra Tech will conduct an on-site planning meeting and up to four stakeholder interviews with departments that have critical ERP responsibilities. The meeting and interviews are designed to gather the necessary information to revise the plan as well as discuss key planning assumptions and the outline and format of the updated ERP. Tetra Tech will provide printed meeting materials for each interview.

After the stakeholder outreach, Tetra Tech will develop recommendations detailing the findings and proposed comprehensive plan outline and scope of content. The recommendations will be used as a tool to guide updates for the ERP as required by AWIA.

Deliverable: Facilitated ERP workshop

Task 12 Preliminary, Draft Final, and Final ERP Development and Review

Tetra Tech will develop a preliminary draft ERP and submit it to the City one week prior to a document-review workshop with the City's ERP Working Group. The workshop objective is for stakeholders to provide review, input, and direction and for the Tetra Tech team to gather feedback and guidance on missing information. Tetra Tech will provide printed meeting materials for up to 10 participants. The workshop will be scheduled for two hours. Following the workshop, Tetra Tech will prepare a draft final ERP for City review. The City will provide a final review of the ERP. Tetra Tech will conduct a conference call with the City project manager to review comments and revisions. Following the conference, call Tetra Tech will prepare a final ERP for the City's records. Tetra Tech will also prepare the required ERP compliance letter for the City's submission to the EPA.

Deliverables:

- Preliminary draft ERP via Sharepoint site
- Final ERP via Sharepoint site

Assumptions:

The City will provide a single set of reviewed and resolved comments.

EXHIBIT “B”
COSTS FOR SCOPE OF SERVICES

Price Proposal detailing Project Phases, Tasks, and Schedule is attached.

EXHIBIT “C”

TITLE VI ASSURANCES

During the performance of this AGREEMENT, the CONSULTANT, for itself, its assignees, and successors in interest agree as follows:

1. **Compliance with Regulations:** The CONSULTANT shall comply with the Regulations relative to non-discrimination in federally assisted programs of the AGENCY, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the “REGULATIONS”), which are herein incorporated by reference and made a part of this AGREEMENT.
2. **Equal Opportunity Employer:** The CONSULTANT, In all services, programs, activities, hiring, and employment made possible by or resulting from this Agreement or any subcontract, there shall be no discrimination by Consultant or its selection and retention of sub-consultants, including procurement of materials and leases of equipment, of any level, or any of those entities employees, agents, sub-consultants, or representatives against any person because of sex, age (except minimum age and retirement provisions), race, color, religion, creed, national origin, marital status, or the presence of any disability, including sensory, mental or physical handicaps, unless based upon a bona fide occupational qualification in relationship to hiring and employment. This requirement shall apply, but not be limited to the following: employment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. Consultant shall comply with and shall not violate any of the terms of Chapter 49.60 RCW, Title VI of the Civil Rights Act of 1964, the Americans With Disabilities Act, Section 504 of the Rehabilitation Act of 1973, 49 CFR Part 21, 21.5 and 26, or any other applicable federal, state, or local law or regulation regarding non-discrimination.
3. **Solicitations for Sub-consultants, Including Procurement of Materials and Equipment:** In all solicitations either by competitive bidding or negotiations made by the CONSULTANT for work to be performed under a sub-contract, including procurement of materials or leases of equipment, each potential sub-consultant or supplier shall be notified by the CONSULTANT of the CONSULTANT’s obligations under this AGREEMENT and the REGULATIONS relative to non-discrimination of the grounds of race, color, sex, or national origin.
4. **Information and Report:** The CONSULTANT shall provide all information and reports required by the REGULATIONS or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by AGENCY, STATE or the Federal Highway Administration (FHWA) to be pertinent to ascertain compliance with such REGULATIONS, orders and instructions. Where any information required of a CONSULTANT is in the exclusive possession of another who fails or refuses to furnish this information, the CONSULTANT shall so certify to the AGENCY, STATE or FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.
5. **Sanctions for Non-compliance:** In the event of the CONSULTANT’s non-compliance with the non-discrimination provisions of this AGREEMENT, the AGENCY shall impose such AGREEMENT sanctions as it, the STATE or the FHWA may determine to be appropriate, including, but not limited to:
 - Withholding of payments to the CONSULTANT under the AGREEMENT until the CONSULTANT complies, and/or;
 - Cancellation, termination, or suspension of the AGREEMENT, in whole or in part.

6. Incorporation of Provisions: The CONSULTANT shall include the provisions of paragraphs (1) through (5) in every sub-contract, including procurement of materials and leases of equipment, unless exempt by the REGULATIONS, or directives issued pursuant thereto. The CONSULTANT shall take such action with respect to any sub-consultant or procurement as the AGENCY, STATE, or FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance.

Provided, however that in the event a CONSULTANT becomes involved in, or is threatened with, litigation with a sub-consultant or supplier as a result of such direction, the CONSULTANT may request the AGENCY and the STATE enter into such litigation to protect the interests of the AGENCY and the STATE and, in addition, the CONSULTANT may request the United States enter into such litigation to protect the interests of the United States.