



West Palm Beach, FL

# **Professional Services for Monitoring of Debris Removal and Related Services**

RFP# - 09-015

Proposal | Electronic | September 2015





City Clerk
City of Key West, Florida
City Hall
3126 Flagler Ave.
Key West, Florida 33040

Subject: Professional Services for Monitoring of Debris Removal and Related Services

Dear Members of the Evaluation Committee.

Tetra Tech, Inc.¹ (Tetra Tech) is pleased to submit the enclosed proposal to provide disaster debris monitoring services to the City of Key West (City). Tetra Tech is a leading provider of consulting, engineering, and technical services worldwide and supports government and commercial clients by providing innovative solutions to complex problems focused on water, environment, energy, infrastructure, and natural resources. Our team of disaster recovery experts offers a unique integration of mitigation, emergency preparedness and planning, and disaster response and recovery management services, providing end-to-end solutions for the City. Our team is a recognized leader in disaster response and recovery and is well suited to assist the City for the following reasons:

- Nationally Recognized Leader in Disaster Debris Monitoring with Unmatched Florida Disaster Response and Recovery Efforts. Since 2004, our team has assisted more local governments with debris monitoring efforts following debris-generating disasters than any other firm in the nation. Collectively, our team has overseen and managed the recovery of over 69 million cubic yards of debris on behalf of over 300 public sector clients, resulting in excess of \$3.5 billion in reimbursable costs to our clients from the Federal Emergency Management Agency (FEMA), state regulatory agencies, the Federal Highway Administration, and the Natural Resources Conservation Service. Our team has assisted numerous communities in Florida with response and recovery efforts following Hurricanes Charley, Frances, Jeanne, Ivan, Dennis, Katrina, and Wilma and Tropical Storms Fay and Debbie. Our team has been called upon by Clay, Collier, Escambia, Lake, Miami-Dade, Monroe, Pasco, Polk, Santa Rosa, and Sarasota Counties as well as the Cities of Boca Raton, Fort Lauderdale, Marathon, Naples, Orlando, and Pensacola to provide debris monitoring services and grant application, administration, and management. Since 2004, our team has monitored the collection and removal of almost 30 million cubic yards of debris in Florida.
- Strong Florida Presence. With our disaster recovery team based in Maitland, Florida, and recovery experts located throughout the state, our team can respond to the City of Key West within hours of activation. We maintain an inventory of the equipment and resources required to support timely mobilization. Tetra Tech maintains a warehouse located in Orlando with over 120 fully stocked bays of debris monitoring supplies capable of supporting over 50 simultaneous recovery operations for over 90 days. Our team has consistently deployed large-scale mobilizations of hundreds of staff and thousands of dollars' worth of equipment to multiple clients in a matter of days and on very short notice.
- Strong Beach, Marine, and Vessel Qualifications and Experience. Tetra Tech has led many of the largest beach and marine debris removal programs in United States history. Our experience includes the removal of hundreds of vessels from the environmentally sensitive Florida Keys following the 2004–2005 hurricane

Tetra Tech, Inc.

<sup>&</sup>lt;sup>1</sup> The BDR Division is now Tetra Tech, Inc.

season, debris mapping utilizing our proprietary side scan sonar in Lake Borgne following Hurricane Katrina, and marine and vessel debris removal on behalf of the New Jersey Department of Environmental Protection following Hurricane Sandy. We have also led marine debris removal programs for Escambia County, FL; City of Galveston, TX; and Collier County, FL.

- History of Supporting Clients Through All Phases of the Disaster Recovery Life Cycle. Our team has successfully assisted over 300 local and state government clients across the nation with planning for and recovering from natural and human-caused disasters and has extensive experience successfully managing multiple disaster response and recovery operations across the United States simultaneously. Our firm will mobilize an immediate and effective response team to restore the City's normal operations as quickly as possible. Our staff of industry experts will apply the necessary project controls to efficiently document and complete fieldwork and provide follow-up support, including appeal development and closeout audit support months—and in some cases, years—after the completion of field work.
- RecoveryTrac™ Automated Debris Management System (ADMS) Technology. RecoveryTrac™ allows our staff to monitor and manage a recovery effort electronically, increasing productivity while decreasing fraud, human error, and cost to the City. RecoveryTrac™ will give the City real-time debris collection tracking that provides accurate and timely reporting to City stakeholders. RecoveryTrac™ was designed to provide real-time data on missed pickups, damage caused by debris haulers, waypoints for every pile of debris picked up, and street-level pass maps, which will meet the unique data needs of Key West. Within the past three years, our team has successfully implemented the use of RecoveryTrac™ on all of our 23 projects completed in this time frame.
- FEMA Reimbursement Experts. Our team has recovered millions of dollars of eligible FEMA Public Assistance (PA) reimbursement costs incurred by our clients. As former regional administrator of FEMA Region VII, Mr. Dick Hainje led Region VII through 60 presidential disaster declarations in Kansas, Iowa, Nebraska, and Missouri and assisted Region IV with the 2004 Florida hurricane FEMA response. Mr. Donald Kunish, formerly the deputy bureau chief for the Florida Division of Emergency Management, has provided programmatic and application support for the FEMA PA, Individual Assistance, Hazard Mitigation Grant Program, and the Community Development Block Grant programs for a variety of disasters. Ms. Kalindi Fitch has extensive understanding of the grant administration process, eligibility requirements, regulations, and policies across many federal programs.

Tetra Tech is fully prepared to serve as Key West's disaster debris monitoring services provider and provide the high quality service the City expects. For questions regarding this response, please contact the representatives listed below.

Technical representative:

Ms. Anne Cabrera

2301 Lucien Way, Suite 120, Maitland, FL 32751 (954) 559-4951 | anne.cabrera@tetratech.com

Sincerely,

Tetra Tech, Inc.

**Contractual representative:** 

Ms. Betty Kamara

2301 Lucien Way, Suite 120, Maitland, FL 32751 (407) 803-2551 | betty.kamara@tetratech.com

Jonathan Burgiel Vice President

# TABLE OF CONTENTS

#### **Letter of Transmittal**

Attachment A – Unit Price Proposal Form	Tab A
<ul><li>Additional Positions</li><li>Corporate Resolution</li></ul>	
Attachment B – Proposer's Technical Approach	Tab B
Attachment C – Proposer's Qualifications Statement Form	Tab C
<ul><li>Qualifications Statement Supplement</li><li>Letters of Reference</li><li>Resumes</li></ul>	
Attachment D – Proposer's Most Current Financial Statement	Tab D
<ul><li>Tetra Tech Form 10-K</li></ul>	
Attachment E – Equipment	Tab E
<ul><li>Equipment and Supplies</li></ul>	
Attachment F – TDMS Site Statement	Tab F
<ul> <li>TDMS Site Understanding</li> </ul>	
Attachment G – Description and Sample of Tickets and Forms	Tab G
<ul><li>Sample Tickets</li></ul>	
Attachment H – Public Entity Crimes Certification	Tab H
Attachment I – Anti-Kickback Affidavit	Tab I
Attachment J - Conflict of Interest Statement	Tab J
Attachment K – Local Vendor Certification	Tab K
Attachment L – Acknowledgement of Conformance with O.S.H.A Standards	Tab L
Attachment M – Copy of State of Florida Corporate Filings	Tab M
<ul> <li>Florida Certificate of Good Standing</li> </ul>	
Attachment N – Minimum Requirements for Evidence of Insurance	Tab N
<ul><li>Evidence of Insurance</li></ul>	
Attachment O – Draft Contract Documents	Tab O
<ul> <li>Tetra Tech Professional Services Agreement</li> </ul>	
Attachment P – Domestic Partner Benefits	Tab P
<ul> <li>Corporate EEO Statement</li> </ul>	
Attachment Q - Cone of Silence	Tab Q

A copy of Tetra Tech's internal training manual is included separately with our submittal.

#### ATTACHMENT A

#### PROFESSIONAL SERVICES REQUEST FOR PROPOSAL FOR MONITORING OF DEBRIS REMOVAL AND RELATED SERVICES UNIT PRICE PROPOSAL FORM

Proposal costs are inclusive of all related expenses including, but not limited to, contract administration, technical assistance to the CITY, personnel training and certification, TDMS management, services for security, safety, and associated actions necessary for implementation of debris management monitoring operations by the Proposer as defined in the Contract.

PROPOS/	AL FROM:		
Company	Tetra Tech, Inc.	<del></del>	
Address:_	2301 Lucien Way, Suite 120		
	Maitland, FL 32751		
Phone/Fa	ax: 321-441-8518 / 321-441-8501		

To furnish all materials, equipment and labor and to perform all work in accordance with the Contract Documents for construction of: **Professional Services for Monitoring of Debris Removal and Related Services**, located at various locations within CITY OF KEY WEST, Florida.

To: CITY OF KEY WEST ATTN: CITY CLERK 3126 Flagler Ave. Key West, FL 33040

- 1.0 The undersigned Proposer proposes and agrees, if this Proposal is accepted, to enter into a Contract with CITY in substantially the form as the Contract included in the Proposal Documents to perform all Work and any Additional Services as specified or indicated in the Proposal Documents at the unit prices and within the times indicated in this Proposal and in accordance with the other terms and conditions of the Proposal Documents.
- 2.0 Proposer accepts all of the terms and conditions of the Invitation to Proposal and Instructions to Proposers, including without limitation those dealing with the disposition of Proposal security. The Proposal will remain subject to acceptance for 90 days after the Proposal opening, or for such longer period of time that Proposer may agree to in writing upon request of CITY.
- 3.0 In submitting this Proposal, Proposer represents, as set forth in the Contract, that:
  - A. Proposer has examined and carefully studied the Proposal Documents, the other related data identified in the Proposal Documents, and the following Addenda, receipt of all, which is hereby acknowledged;

Addendum No.	Addendum Date
1	Date not listed
2	Date not listed
3	Date not listed

- Proposer has visited the Site and become familiar with and is satisfied as to the general, local and Site conditions that may affect cost, progress, and performance of the Work;
- C. Proposer is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress and performance of the Work;
- D. Proposer has correlated the information known to Proposer, including location of the CITY in relation to any proposed final disposal sites, information and observations for CITY's Debris Separation/Reduction and Temporary Debris Management Sites obtained from visits to the Site, any reports and drawings identified in the Proposal Documents, and all additional examinations, investigations, and data provided with the Proposal Documents;
- E. Proposer has given the CITY written notice of all conflicts, errors, ambiguities, or discrepancies that Proposer has discovered in the Proposal Documents, and the written resolution thereof by the CITY is acceptable to Proposer;
- F. The Proposal Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Proposal is submitted.
- 4.0 Proposer further represents that this Proposal is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Proposer has not directly or indirectly induced or solicited any other Proposer to submit a false Proposal; Proposer has not solicited or induced any individual or entity to refrain from Proposal; and Proposer has not sought by collusion to obtain for itself any advantage over any other Proposer or over CITY.
- 5.0 Proposer acknowledges that there are no quantities guaranteed, and Unit Cost information is solely for the purpose of comparison of Proposals, and final payment for all Unit Price Proposal items will be based on actual services provided, determined as provided in the Contract Documents.
- 6.0 Proposer acknowledges that all unit costs include any necessary insurance and bonds.

#### Table A-Unit Price

Hours below are based on 30-day time period for 1 team, 7 days a week and 10 hours a day.

Positions	Staffing Ratio	Hourly Rate	Estimated Hours	Extended Cost
Principal In Charge	1	\$80.00	280	\$22,400.00
Project Manager	1	\$72.00	280	\$20,160.00
Deputy / Operations Manager	1	\$65.00	280	\$18,200.00
IT Specialist	1	\$45.00	280	\$12,600.00
Project Coordinator	1	\$32.00	280	\$ 8,960.00
Data Manager	1	\$55.00	280	\$15,400.00
GIS Analyst	1	\$45.00	280	\$12,600.00
Field Supervisor	1	\$48.00	280	\$13,440.00
Debris Site / Tower Monitors	3	\$33.50	840	\$28,140.00
Collection Monitor	7	\$33.50	1960	\$65,660.00
Citizen Drop Off Site Monitor	3	\$28.00	840	\$23.520.00
Data Entry Clerk/ Clerical	4	\$ 0.00	1120	\$ 0.00
Billing / Invoice Analysts	2	\$45.00	560	\$25,200.00
Billing / Invoice Manager	1	\$ 0.00	280	\$ 0.00
FEMA Coordinator / Specialist	1	\$89.00	280	\$24,920.00
Public Information Support Manager	1	\$35.00	280	\$ 9,800.00
Call Center Staff	3	\$28.00	840	\$23,520.00
Total Estimated Cost				\$324,520.00

Confirmation of Signature of Unit Price Proposal Information

Tetra	Tech, Inc. Sonathan all
Name	of Proposer Signature of Proposer
Vice	President/Operations Manager
Title	
7.0	Proposer's Information:
	The PROPOSER states that they are an experienced CONTRACTOR, providing Debris Monitoring Services and has completed similar Work within the last five years. This information has been provided on Contractor's Qualifications Statement Attachment D.
0.8	Proposer accepts the provisions of the Contract. If the Proposer takes exception to any of the provisions in the Contract, the Proposer will provide a list of the exceptions under a separate Tab.
9.0	The Proposer is familiar with the terms used in this Proposal and the meanings indicated.
	PROPOSAL SUBMITTED on Sept. 29, 2015.
State 0	Contractor License No. P19034 (Document Number) . (If applicable)
Licens	e Type: State of Florida Certificate of Status

If Proposer is: An Individual	
Name (typed or printed): —————	
Ву:	(SEAL)
(Individual's signature	)
Doing business as: — — — — — — —	
Business address :	Phone No:
	FAX No.:
If Proposeris: A Partnership	
· ·	(SEAL)
D	
By:(Signature of general partners	er attach evidence of authority to sign)
(α.g του <b>g</b> ου στου μετέντου	······································
Name (typed or printed): —————	Business
address :	
aduress	
PhoneNo:	FAXNo:
f Proposer is: A Corporation	
	address State of
ncorporation: Delaware	
ype (General Business, Professional, Serv	ice Limited Liability): Professional
V (,)	,
Sy: Suathan Sul	vidence of authority to sign)
Jame (typed or printed): Jonathan Burgiel	

Title: Vice President/Operations Manage	ET RA	TEC RPOR FEB
(CORPORATE SEAL)	PEZAV	988 NAR
Attest:Please see attached corp	orate resolution	
(Signature of Corporate	Secretary)	
Business address: 2301 Lucien Way, Suite	120, <u>Maitland, FL 32751</u>	
Phone No: 321-441-8518		ıf
Qualification to do business is April 28, 1988 (S	State of Florida Certificate of Status)	

# Attachment A: Additional Positions



# **ADDITIONAL POSITIONS**

# **OTHER REQUIRED POSITIONS**

In accordance with the City's Request for Proposals, Tetra Tech would like to add the following positions to the Cost Proposal:

Position	Hourly Rate
Administrative 327	\$32.00
Health & Safety Manager	\$55.00
Senior Planner	\$49.00
Planner	\$59.00
Planning Aide	\$49.00

# Attachment A: Corporate Resolution



#### **CERTIFICATE**

#### TETRA TECH, INC.

I hereby certify to you that I am the duly elected and qualified Senior Vice President, General Counsel and Secretary of Tetra Tech, Inc., a Delaware corporation (the "Company"), and that, as such, I am authorized to execute this Certificate on behalf of the Company. I further certify to you on behalf of the Company that:

Jonathan Burgiel, EMI Division Operations Manager, within the Company's Water, Environment and Infrastructure business group, was authorized and empowered, in the name of the Company, in accordance with the Company's Signature Approval Authority Matrix, as approved by the Company's Board of Directors, for and on behalf of the Company, to sign proposals and bind the Company in contractual commitments.

IN WITNESS WHEREOF, I have hereunto set my hand as of this 14th day of April, 2015.

Janis B. Salin Senior Vice President, General Counsel and Secretary

1988

(Seal)

# ATTACHMENT B PROPOSER'S TECHNICAL APPROACH / GENERAL OPERATIONS PLAN

A detailed description of how the Proposer would respond to a Hurricane or other event. In the Plan, assume that A Category 2 Hurricane has made landfall on the City of Key West generating the amount of debris described below.

Vegetative Debris	146,000	Cubic Yards
Construction and Demolition Debris	48,000	Cubic Yards
Mixed Debris	6,000	Cubic Yards
White Goods	1,000	Units
House Hold Hazardous Waste	1 000	Pounds
Total Yards	200,000	

Proposer's Operations Plan should be very detailed describing:

- Meetings,
- Timeline.
- · Equipment to be mobilized,
- · Manpower needed,
- · Monitoring of collections,
- TMDS operations,
- · Demobilization,
- · Monitoring site remediation if needed,
- Close out.

Proposer shall include a detailed Safety Plan. Documentation of training for each crewmember must be submitted with the Proposal and updated annually.

A detailed description of Tetra Tech's technical approach/general operations plan in response to a hurricane or other event is provided on the subsequent pages.

# **Attachment B: Technical Approach Supplement**



### TECHNICAL APPROACH/ DEBRIS MONITOR MANAGEMENT PLAN

#### **Personnel Resources of Tetra Tech**

At Tetra Tech, our ability to serve our clients begins and ends with our seasoned disaster recovery professionals. Our team consists of experienced emergency managers, disaster preparedness specialists, engineers, surveyors, and hazardous waste technicians who possess hands-on experience in recent disasters and emergencies as well as prevention, mitigation, preparedness, response, and recovery programs. Tetra Tech's disaster recovery professionals have managed projects in response to hurricanes, floods, tornadoes, fires, ice storms, and straight-line wind events in 20 states with simultaneous activations in nine states. This has included large-scale debris monitoring involving a minimum of 1 million cubic yards (CY) of debris for 13 government entities.

Due to prior Florida Keys experience, Tetra Tech understands the unique challenges with deploying resources to Key West following a disaster. Tetra Tech is committed to coordinating with the City prior to an event to ensure rapid response times and capability to mobilize resources to the impacted area.

Based on the City of Key West's scenario in Attachment B, a category 2 hurricane impacting the City will generate approximately 200,000 CY of disaster debris. We anticipate that the average collection operations may require 30 debris contractor trucks and approximately 17 monitors. Because monitor staffing is dependent on contractor resources that need to be monitored, we must first find the number of contractor trucks needed to respond to the scenario in order to define our staff. Table B-1 estimates how many trucks are needed to respond to the scenario for a 30-day project. The period of performance for this scenario is based on an operation that takes full advantage of the Federal Emergency Management Agency (FEMA) Public Assistance (PA) Alternative Procedures Program's increased reimbursement cost share.

Exhibit B-1: Estimated Debris Contractor Truck Requirement

Average truck loads per day	6
Average truck debris load	35 CYs
Total CY	200,000
Estimated CY per day	6300
Average active daily trucks	30

Exhibit B-2: Estimated Staffing Requirements for Hurricane Scenarios

Resource	Total Number of Personnel Available	Peak*	Daily Average
Management Team			
Project Principals	9	1	.25
Project Managers	38	1	1
Operations Managers	42	1 (dependent on the number of staging locations)	1 (dependent on the number of staging locations)
Field Staff			•

Collection Monitors	1500	40	17***
Disposal Monitors	120	8 (dependent on number of debris management sites and truck volume)	3
Field Supervisors (7:1 Monitor-to-Field Supervisor Ratio)	55	6	2
Project Coordinators (50:1 Monitor-to-Project Coordinator Ratio)	35	1	1
Data Entry	150	0**	0**

<sup>\*</sup>Peak typically occurs two to three weeks into the project.

### **Equipment and Supplies**

Tetra Tech understands the critical nature of asset management and logistics following a disaster. To support timely mobilization, we maintain an inventory of the equipment and resources required following a disaster event. The inventory is checked and tested annually to verify readiness. *Tetra Tech maintains a warehouse located in Orlando, Florida, with over 120 fully stocked bays of debris monitoring supplies capable of supporting over 50 simultaneous recovery operations for over 90 days.* Many of the critical resource items we use during a recovery effort are housed at this location, which will allow Tetra Tech to begin deploying resources 24 hours prior to landfall within a 100-mile perimeter of expected impact to safely stage equipment and personnel away from the direct path of the storm.

In addition to our warehouse, Tetra Tech owns a fleet of project-ready supply and satellite trailers that can be mobilized at a moment's notice. Our team has consistently deployed large-scale mobilizations of hundreds of staff and thousands of dollars' worth of equipment to multiple clients in a matter of days and on very short notice.

*In compliance with Attachment E of the City's Request for Proposals,* Exhibit B-3 lists available equipment and facilities readily available upon activation.

**Exhibit B-3: Resource List** 

Field Documents* Currently in our warehouse		Needed to respond to this scenario
ADMS Handheld Units	825	50
Time and Materials Forms	9,446	150
Truck Certification Forms (printer rolls)	1,000	100
ADMS Ticket Stubs	530,000	6000
Haul Out Ticket Stubs	50,000	2000
Placards	4,500	125
Kits		
Project Manager Kits (1 per 100 monitors)	40	1

<sup>\*\*</sup> Because of the use of RecoveryTrac™ automated debris management System (ADMS), we will not need data entry personnel to enter paper tickets

<sup>\*\*\*</sup>Typical ration of trucks to loading devices is 1.5-2.

Project Coordinator Kits (1 per 100 monitors)	20	1
Human Resources Kits (1 per 100 monitors)	40	1
Collection Monitor Kits (1 per 25 monitors)	90	2
Disposal Monitor Kits (1 kit per disposal site)	40	3+
Leaner/Hanger/Stump Kits (1 per 50 monitors)	40	1
Equipment**		
Laptops	250	5
Air Cards	250	5
Scanners	35	5
Printers	45	5
Mobile Command Office	3	1
Gas Trucks	To be obtained from pre-contracted vendor	
Modular Work Locations	To be obtained from pre-contracted vendor	
Generators	To be obtained from pre-contracted vendor	
Portable Facilities	To be obtained from pre-contracted vendor	

<sup>\*</sup>All field documents are replenished as they are needed. Tetra Tech has several emergency vendors with the ability to fulfill supply needs in 24 hours or less.

BASED ON A REVIEW OF THE POTENTIAL STAFFING NEEDS FOR THE CITY FOLLOWING A CATEGORY 2
HURRICANE, TETRA TECH HAS THE IN-HOUSE RESOURCES AVAILABLE TO SUPPORT THE CITY IN THE EVENT OF
A MAJOR DEBRIS-GENERATING EVENT. ADDITIONALLY, TETRA TECH HAS THE EXPERIENCED STAFF AND
LOGISTICS PROCESSES IN PLACE TO QUICKLY MOBILIZE AND SUPPORT ELECTRONIC MONITORING OF DEBRIS
REMOVAL OPERATIONS IN THE CITY.

<sup>\*\*</sup> ADMS units are readily available and can be ordered as needed on a 24-hour turnaround.

### **SCOPE OF WORK**

Our approach to debris monitoring has been tested on over 300 clients in 20 states over the last 12 years. From our project management plan to data reporting, reconciliation, and final closeout, our staff is trained and ready to implement this proven approach with or without warning. This approach will ensure the City's compliance with Federal Highway Administration Emergency Relief (FHWA-ER) Manual, Natural Resources Conserviation Service (NRCS), FEMA 327, FEMA 325, FEMA 329, and FEMA 322 guidelines, optimazing maximum reimbursement.

#### PROJECT MANAGEMENT PLAN

ONE OF THE INITIAL TASKS PERFORMED BY THE TETRA TECH TEAM AFTER ACTIVATION WILL BE TO UPDATE A PROJECT MANAGEMENT PLAN (PMP), WHICH WILL BE A PRE-EXISTING DRAFT DOCUMENT FOR A POST-EVENT CONTRACT. AT A MINIMUM, THE PMP WILL INCLUDE THE FOLLOWING ESSENTIAL DOCUMENTS LISTED BELOW.

**Organizational Chart:** The organizational chart will depict the operational and reporting relationships between project constituents, including the City, Tetra Tech, the debris removal contractor(s), and regulatory agencies.

**Contact List:** After establishing the project reporting structure through the development of the organizational chart, Tetra Tech will identify and document a primary and secondary point of reference and a means of contact for each area of functional responsibility.

**Daily Meetings:** The Tetra Tech project manager or deputy project manager will facilitate daily meetings between the City of Key West, end users, and the debris removal contractor project management staff to discuss daily reports, problems that require resolution, coordination challenges, safety issues, potential operational improvements, etc. Daily meetings are essential for the first few weeks of a debris removal operation, after which frequency is typically reduced as appropriate.

Contract Review: The contract between the City and Tetra Tech outlines and defines the roles and responsibilities of each party, and the contract between the end user and Tetra Tech will be clearly defined prior to commencing work. During the course of the project initiation meeting, Tetra Tech and the City will conduct a thorough review of debris contracts and clarify any misunderstandings with respect to scope, terms, and conditions. In addition, Tetra Tech will provide consultation to the City with respect to any potential funding issues that may result from the contracts due to recent changes in federal policy or guidance, mitigating potential issues that maximize reimbursement at final closeout.

**Geographic Information Systems (GIS) Data:** Tetra Tech's information technology and data management infrastructure is equipped to provide GIS reporting and progress posting to mapping software. In order to accomplish this, Tetra Tech will work with the City's GIS department to gather the necessary layer data required to build and populate GIS reporting tools should GIS services be requested.

Cost Control Protocols: Given Tetra Tech's experience in the debris monitoring business and our understanding of the FEMA PA Program and the Federal Highway Administration (FHWA) Emergency Relief (ER) Program, we understand the scrutiny that government agencies receive on debris removal efforts. Therefore, Tetra Tech will implement cost control protocols to ensure that reasonable cost requirements established by funding agencies are met. Examples of procedures used by Tetra Tech to control project costs include the following:

 Communicating with the client on a daily basis relative to their expectations for staff resources and level of service

- Monitoring the ratio of monitors to supervisors on a daily basis
- Attempting to utilize as many local personnel as possible in order to avoid travel and per diem expenses
- Close daily coordination with debris haulers on crew resources in order to match monitor needs with available crews (and avoid unnecessary staff from showing up for work with no crews)
- Using Tetra Tech's national contracts for rental cars, cell phones, etc. that provide lower rates than individual plans

#### **DAMAGE ASSESSMENT**

AS AN INTERNATIONAL CONSULTING FIRM, TETRA TECH POSSESSES UNIQUE SKILLS AND RESOURCES TO ASSIST WITH A DAMAGE ASSESSMENT INVENTORY. AT THE REQUEST OF THE CITY, TETRA TECH CAN DEPLOY THE PROJECT MANAGER TO THE EMERGENCY OPERATIONS CENTER (EOC) BEFORE IMPACT TO HELP THE CITY PREPARE FOR THE ASSESSMENTS THAT ARE TO FOLLOW.

Following a disaster, the City will need to evaluate citywide damages and identify priorities. Preliminary damage assessments are a critical component to the City receiving a disaster declaration following a major debrisgenerating event. If tasked, Tetra Tech is prepared to supplement City staff and assist in conducting electronic damage assessments. Tetra Tech's ADMS technology, RecoveryTrac<sup>TM</sup>, would be used to conduct damage assessments and collect supporting data including photo documentation of damages. The collected information would be reported real-time through web-based maps that depict damage assessment progress. Tetra Tech has recently supported damage assessment efforts for local governments following the earthquake in Napa Valley, California, and the severe storms and flooding in Boulder, Colorado. See Exhibit B-4 for a sample image of Tetra Tech's web-based damage assessment report.

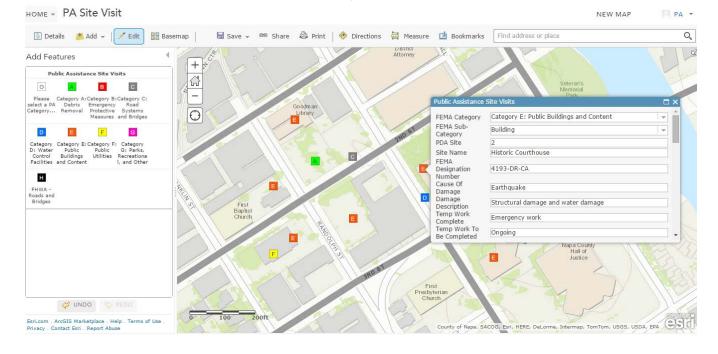


Exhibit B-4: Damage Assessment Report

#### **OPERATIONAL SCHEDULE**

Based on Tetra Tech's understanding of the City and their needs, we have developed a draft mobilization schedule with key project management tasks in chronological order. The timeline is based on a typical activation; however, Tetra Tech is prepared to work with the City to adjust the timing of the specific elements below to meet the City's needs.

Prior to an event with warning (such as a hurricane), our team will begin monitoring the landfall of any tropical system at H-96 and will coordinate via conference call with the City. Following an event without warning (such as tornadoes or flooding), Tetra Tech will begin response at H-0.

Exhibit B-5: Disaster Debris-Generating Event Operational Plan

Time	Task	Deliverables/Milestones		
Preparednes	Preparedness			
Pre-event (normal conditions)	Meet with the City to review plans and documents	<ul> <li>Conduct annual pre-event meeting with the City and debris contractor</li> <li>Review the City's disaster recovery contracts for FEMA compliance</li> <li>Update critical documents and files, including any GIS files</li> </ul>		
H-96	Review capabilities and resources	<ul> <li>Contact the City and initiate daily conference call</li> <li>Determine resource requirements from debris model</li> <li>Review the City's emergency policies and contracts</li> <li>Establish contact with the City's debris hauler</li> </ul>		
H-72	Execute responsibilities and activate contracts	<ul> <li>Review possible critical areas of concern, hospitals, major transit systems, historic districts, environmental issues, and critical infrastructure</li> <li>Review protocols for private property, gated communities, and public drop-off sites</li> <li>Review temporary debris management site (TDMS) locations and follow up with the Florida Department of Environmental Protection (FDEP) on permitting procedures</li> <li>Estimate equipment requirements and DMS capacity to haul and stage debris</li> <li>Prepare ADMS technology for mobilization</li> </ul>		
H-48	Monitor storm track and continue preparations	<ul> <li>Conduct regular meetings with City staff as requested</li> <li>Confirm staging location and begin mobilization of resources</li> <li>Mobilize project assets and begin base camp coordination and logistics (food, water, housing, etc.) with the City and Tetra Tech headquarters (if necessary)</li> <li>Review list of priority roads and the operational plan</li> <li>Obtain GIS files for municipalities that the City will assist with debris removal</li> <li>Continue to update and gather updates from the City's debris hauler</li> </ul>		
H-24	Prepare final reports	<ul> <li>Save all critical documents and files to the network drive, USB drive, and laptop hard drive</li> <li>Certify emergency road clearance equipment (in coordination with the City's debris hauler)</li> <li>Determine emergency road clearance priorities</li> </ul>		
H-0	ARRIVAL OF NOTICE EVENT/INITIATE RESPONSE TO NO-NOTICE EVENT			
Response				
H +24	Emergency push	<ul> <li>Receive notice to proceed with cost cap</li> <li>Begin 70-hour emergency push</li> <li>Maintain time and materials (T&amp;M) logs for push equipment</li> </ul>		

Time	Task	Deliverables/Milestones	
		<ul> <li>Coordinate with the City/County to conduct preliminary damage assessments (if requested)</li> <li>Supervisors report to pre-designated locations and prep staff on project</li> <li>Begin establishing ADMS infrastructure</li> <li>Begin recruiting and training monitors, project coordinators, and data staff</li> <li>Initiate opening of DMS locations</li> <li>Follow up with FDEP on debris permits (if required)</li> <li>Work with the City to establish public information protocols to respond to concerns and comments</li> </ul>	
H +48	Emergency push/damage assessment	<ul> <li>Continue emergency push</li> <li>Continue preliminary damage assessment</li> <li>Develop debris cost estimate required for presidential disaster declaration</li> <li>Develop operational plan for disaster-specific issues</li> <li>Refine health and safety plan for disaster-specific issues</li> </ul>	
H +72	Disaster debris vehicle certification/ site preparation	<ul> <li>Begin hauling truck certification</li> <li>Install ADMS tower monitor infrastructure</li> <li>Train monitors on policies, ADMS, and safety</li> <li>Open public drop-off sites as requested</li> </ul>	
H +96	Begin debris collection monitoring	<ul> <li>Assign monitors to trucks</li> <li>Assign supervisors to monitors</li> <li>Hold morning and afternoon meeting with City staff and debris hauler</li> <li>Implement quality assurance (QA)/quality control (QC) procedures</li> </ul>	
Recovery			
Week 1+	Right-of-Way (ROW) debris collection monitoring	<ul> <li>Continue ROW collection</li> <li>Address household hazardous waste (HHW) issues (if critical)</li> <li>Issue daily reports/GIS maps</li> <li>Hold daily meetings with the City, hauler, and/or State/FEMA as required</li> <li>Staff citizens debris management hotline (if requested)</li> <li>Define supplemental programs required (private roads, HHW) and prepare eligibility request</li> </ul>	
Week 1+	Data management and invoice reconciliation	<ul> <li>Provide ADMS reports and real-time monitoring access</li> <li>Establish client GeoPortal to provide insight into project progress</li> <li>Review truck metrics provided by RecoveryTrac<sup>TM</sup></li> <li>Initiate weekly reconciliation</li> <li>Initial payment recommendations with retainage</li> </ul>	
Week 1+	Reimbursement support/grant administration (FEMA, NRCS)	<ul> <li>Prepare damage/cost estimates</li> <li>Compile supporting documentation (debris permits, debris contracts, etc.)</li> <li>Liaise with FEMA Region 4, Florida Division of Emergency Management (FDEM), U.S. Army Corps of Engineers (USACE), etc.</li> </ul>	
Week 2+	Special projects (if required)	<ul> <li>Waterway debris removal</li> <li>Private property debris removal (PPDR)</li> <li>Public drop-off sites</li> <li>HHW</li> <li>Mud/silt/sand removal (from storm drains, ditches, etc.)</li> </ul>	

Time	Task	Deliverables/Milestones
		<ul> <li>Identify areas of operational concern and make disaster-specific recommendations to FEMA to improve efficiency</li> </ul>
Week 3+	Financial Recovery Assistance Staff Engaged (if requested)	<ul> <li>Facilitate kickoff meetings with primary stakeholders</li> <li>Draft a PA work plan</li> <li>Conclude/review preliminary damage assessments</li> <li>Gather documentation for project worksheet (PW) development</li> <li>Identify opportunities for mitigation</li> <li>Conduct site visits</li> </ul>
Project completion	Document turnover/closeout	<ul> <li>Final reconciliation</li> <li>Retainage release</li> <li>Release hard copy files</li> <li>Provide electronic database</li> <li>Assist with PW development</li> <li>Assist the City with long-term reimbursement</li> <li>Audit assistance</li> <li>Appeal support if necessary</li> </ul>

Activities described in Tetra Tech's pre-landfall mobilization strategies are conducted independently of a Notice to Proceed by the City. We understand that many times the path of tropical systems shift greatly within 24-48 hours of landfall and therefore the costs associated with our mobilization are internal to Tetra Tech only.

#### **EMPLOYEE TRAINING AND OPERATIONS**

#### **Monitor Requirements**

To qualify to work as a loading site monitor, all individuals must meet the following requirements:

- Valid driver's license
- No felony convictions within the last seven years
- Reliable personal transportation with proof of current vehicle insurance
- Properly functioning cell phone (with plan sufficient to allow communication at no additional cost to employee; cost of cell phone not reimbursed)
- Must have a minimum of high school diploma or GED
- Excellent listening, verbal and written communication skills
- Legible handwriting
- Organized with a high-level of attention to detail
- The ability to work 12- 14 hours per day, 7 days per week and at times in inclement weather
- Ability to establish and maintain professional image and working relationships with contractors and fellow employees while not allowing those relationships to alter work performance or impair judgment and objectivity

Maintaining compliance with the Robert T. Stafford Act and FEMA regulations, Tetra Tech gives first priority to using resources located within the disaster area, including but not limited to procuring supplies and equipment, awarding subcontracts, and employing workers. Welcoming the boost that local hires have on the economy, Tetra Tech will hire local residents (when available) to help monitor the debris removal process. These newly hired employees are responsible for the proper documentation of eligible disaster-related debris. The proper documentation of this debris is a crucial step in mitigating issues with federal reimbursement. To properly instruct newly hired employees, Tetra Tech has developed a training program that includes training modules and

experienced trainers to teach them. These modules are complete with the information required to facilitate accurate field monitoring. Included in the training modules are qualifying tools to ensure the retention of the material. This will help Tetra Tech select and promote the most qualified personnel for the monitoring task.

Training modules include the following:

- Truck Certification
- Collection Monitor
- Disposal Monitor
- Leaner/Hanger Monitor
- Stump Monitor
- Backfill Monitor
- Project Coordinator
- Field Supervisor

Upon completion, a newly hired Tetra Tech monitor is fully educated on his or her monitoring position. Training includes FEMA 327 and 325 guidance, complete documentation for the task, health and safety guidance, *and fraud prevention information.* 

A copy of Tetra Tech's training manual can been provided upon request by the City, as it is considered proprietary and confidential.

#### SAFETY PROGRAM

Hazards exist in every workplace in many forms. It is imperative that supervisors evaluate safety concerns and develop and train employees with the proper guidelines to assure a safe working environment. Tetra Tech is committed to workplace safety. As such, all Tetra Tech project managers have completed the Occupational Safety and Health Administration (OSHA) Disaster Site Worker course and have their 10-hour Construction Safety Certification to ensure safe and effective operations.

During a debris recovery operation, Tetra Tech project managers and supervisors routinely examine the safety of collection and disposal operations with the authority to shut down unsafe operations. All disposal monitors are equipped with the appropriate personal protective equipment, which may include hard hats, appropriate footwear, reflective vests, hearing protection, and eye protection to ensure a safe work environment. Tetra Tech project managers conduct regular tailgate safety sessions with their field employees to alert them of potential work hazards and review safe work practices. This includes the review of a safety guidelines handout and checklist, which Tetra Tech has developed to aide monitors in becoming more aware of potentially hazardous conditions and the necessary equipment for hazard reduction. In addition to OSHA trained project management, Tetra Tech has OSHA certified trainers on staff. These trainers are mobilized to oversee safety/hazard communication and train field supervisors and employees. Tetra Tech also has the ability to evaluate DMS operations to ensure they meet OSHA standards, such as grinding equipment set back a pre-determined minimum distance from residential structures.

## RecoveryTrac™ Automated Debris Management System

With a focus on the ability to <u>accurately</u> collect field information when the typical infrastructure is not available, Tetra Tech developed the mobile collection tool. We made this tool simple to use, reliable, and most importantly, able to collect and store information and photos offline until they can be uploaded. The "disconnected" capability provides the ability to operate anytime, anywhere with a minimal infrastructure support footprint. The end result is accurate, real-time debris removal *information made available minutes after completion instead of the next day as with paper-based systems.* 

#### **Electronic System - Key Benefits**

- Real-time situation awareness of field resources and efficient direction to support district priorities
- Easily integrated with other systems
- Real-time GIS web services for EOC information and visualization systems
- Disconnected field mobile based GIS integrated data collection
- Wide area, rapid deployment in less than 24 hours with pre-trained technical staff
- Over 800 mobile units on-hand and ready for County-wide multi-district mobilizations

# Real-Time Information and Visualization Increases Efficiency

Over the last several years, the cellular industry has invested heavily in the hardening of infrastructure in areas most susceptible to environmental disasters. We have taken advantage of these improvements by partnering with the Tier 1 providers to get the information from the field as quickly as possible, ideally in real-time. Field devices are constantly looking for connectivity to immediately upload collected information. Once the field data is uploaded, RecoveryTrac<sup>TM</sup> geospatial services provide rich information and visualization of the field data. Using the EOC operation board concept, users can visualize everything from damage concentrations to field debris equipment locations and more. The end result is better information, resulting in better decisions and less waste.

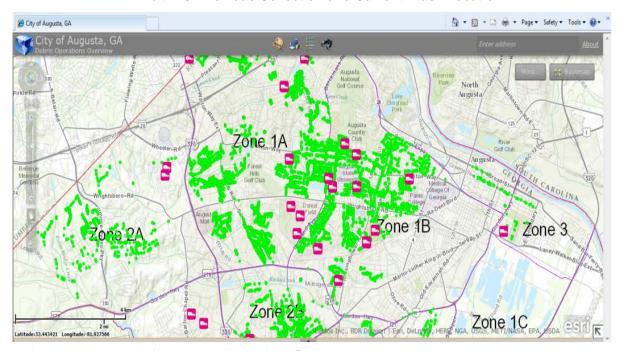


Exhibit B-6: Previous Collection and Current Truck Location

# **Coordinated Reporting and Quality Control**

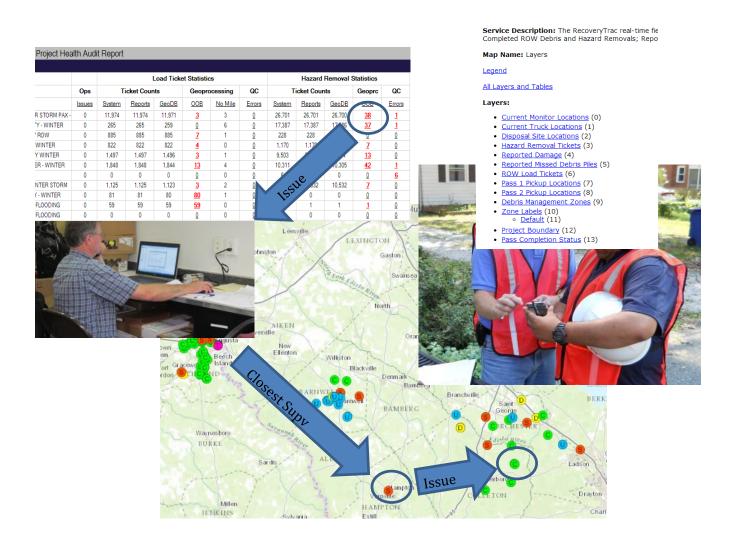
RecoveryTrac<sup>™</sup> ADMS can provide the one-stop information in a consistent, easily consumed format that can provide a multi-precinct/countywide operations status picture. These data feeds are in real-time; there is no

spreadsheet to import and no conversion—just a single GIS web data service to pull required information. Some examples of data included:

- Road Clearance Status (Pass Map)
- Hazard Removal Locations
- Debris Pickup Locations
- Truck and Monitor Locations
- Reported Damage Locations
- Debris Removed

Data managers assigned to continuously monitor the information flowing into the system check for potential problems and dispatch supervisors to respond to the problem. The system monitoring panel shows real-time statistics and potential problems for operations based on exhaustive in-process quality checks that occur continually. The exhibit below details how we use RecoveryTrac<sup>™</sup> ADMS to meet our quality standards using the direct monitoring and immediate feedback technique.

Exhibit B-7: Monitoring Panel and ERSI GIS Web Service Map Layers



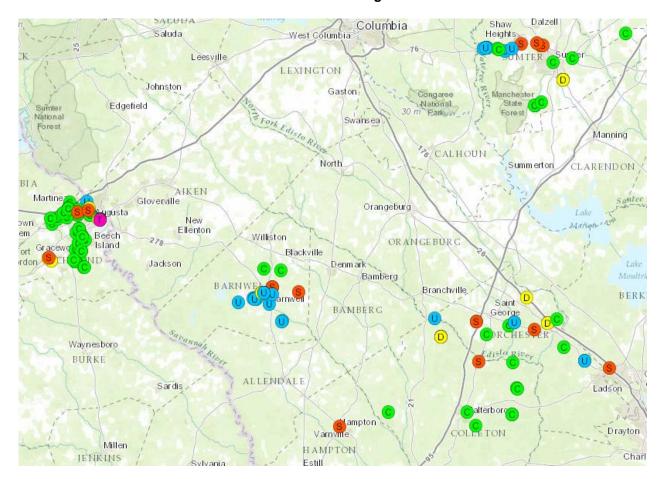
# **Debris Tracking**

RecoveryTrac<sup>™</sup> allows real-time access and visibility into field operations. At each debris collection point, the roadway monitor marks the waypoint or location of the debris pile to collect GPS coordinates. The map below displays the waypoints associated with each collection ticket issued in the field. The waypoint collection report is updated in real-time and can be filtered by date.

**Load Ticket - Waypoints First Pass Waypoints** RecoveryTrac 4085311 **Second Pass Waypoints** First and Second Pass Waypoints

Exhibit B-8: Pickup Location with Real-Time Reporting Maps

An additional feature of our ADMS technology is that each handheld device reports back the location of the device regularly. By leveraging this location information, Tetra Tech can view monitor locations and truck locations in real-time, as demonstrated in Exhibits B-9 and B-10.



**Exhibit B-9: Monitoring Locations** 

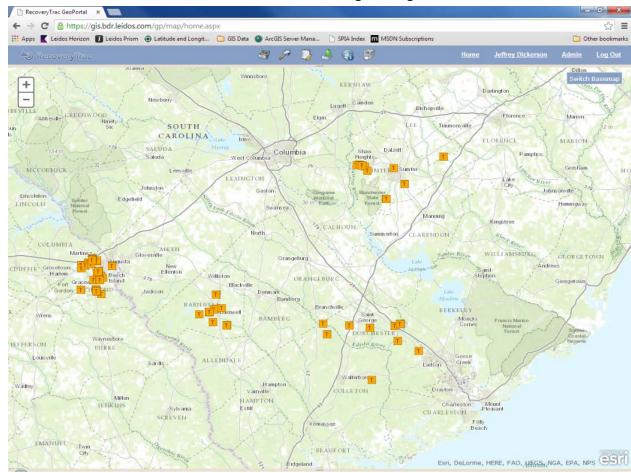


Exhibit B-10: Truck Locations through a Larger Activation

# **Completion Tracking by Linear Road Segment**

As debris and hazards are removed by contractors, inspectors use mobile technology to verify and mark the road segments complete. Missed debris and hazards are marked, and target work reports are generated to assist in dispatching hot-spot crews to finish the remaining work. The progress is shown on geospatial maps that are updated in real-time using the data collected by the mobile data collection tools. An example is shown below in Exhibits B-11 and B-12. Completed roads are shown in green, and in-progress roads are shown in red.

ADMS technology will assist Tetra Tech in complying with the County's requirement to certify that the debris hauler has completed collection of eligible debris within specified geographical areas. To meet this requirement, Tetra Tech will work with the County to develop completion dates to be communicated to residents to set their debris out for collection. Tetra Tech will then monitor and document collection from identified areas for final collection and mark the road segments as complete upon collection of debris.

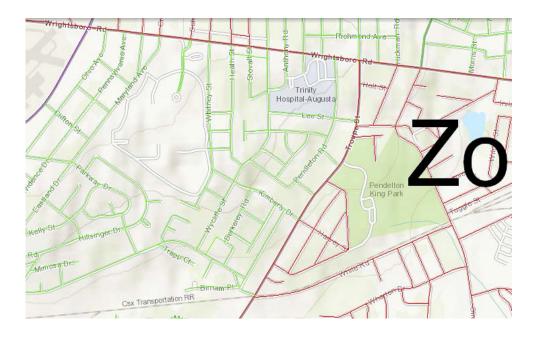
City of Augusta, GA
Debris Operations Overview

RecoveryTrac 4084266
Load Ticket

Index Date 03/27/2014 1:26 PM O
City Augusta
Contractor AUGUSTA
Contractor ACHERIT
Sub Contractor FORC
Sub Contractor
FORC
Capacity 18 00
Contractor
C

**Exhibit B-11: Collection Point Data** 

**Exhibit B-12: Completion Map** 



#### TIME AND MATERIALS

DURING THIS PHASE OF DEBRIS OPERATIONS, TETRA TECH IS PREPARED TO SUPPORT THE CITY BY MONITORING DEBRIS CONTRACTOR CREWS IF THE CITY SUPPLEMENTS THEIR STAFFING TO HELP SUPPORT EMERGENCY RELIEF EFFORTS. WE CAN ALSO OFFER THE CITY ASSISTANCE IN DOCUMENTATION OF CITY CREWS DURING THIS TIME PERIOD.

The 70-hour push period begins immediately following an event. Debris removal contractors coordinate with City crews to clear blocked roadways for emergency vehicle passage. Tetra Tech is prepared to assist during the push period by providing the following services:

- Documenting blocked roads that require immediate clearance
- Administering the sign-in and sign-out of labor and equipment to track T&M charges
- Helping staff maintain maps or databases to track road clearance progress and other essential tasks, as requested
- Maintaining documentation for reimbursement of 70-hour push work

#### **VEHICLE CERTIFICATION**

Tetra Tech has a proven vehicle certification procedure that complies with FEMA 325 and 327 guidelines and results in maximum reimbursement for our clients. Tetra Tech's ADMS technology, RecoveryTrac<sup>™</sup>, will be used to electronically certify all trucks used in an activation. Benefits of using the mobile truck certification application include *electronic volume calculations*, instantaneous upload to the RecoveryTrac<sup>™</sup> database to allow immediate QA/QC checks to verify the truck certification calculations, and automated photo-matching of truck and driver photographs to the truck. The truck certification application allows us to complete truck certifications in *30% less time than with a paper-based system*.



**Exhibit B-13: Truck Audit Report** 

Our disaster debris vehicle certification procedure includes the following:

- Generation of unique truck numbers for contractor crews and equipment
- Automated truck certification form, which includes the latest FEMA guidelines on truck certification documentation and volume calculations, and a bar code for automated ticket scanning

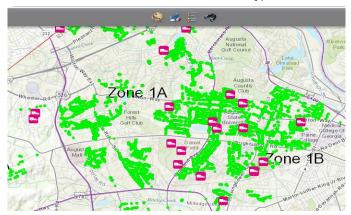
- Special vehicle notations on the truck certification form and vehicle placard, which inform tower monitors of sideboards, tailgates, or other modifications, thus discouraging debris removal contractors from fraudulently altering vehicles after certification
- Photographs of vehicles, vehicle cavities, and drivers
- Periodic spot checks and recertification of trucks to identify trucks altered after initial certification

#### RIGHT-OF-WAY COLLECTION REPORTING

Our ADMS technology in debris monitoring allows the City to view debris collection points, truck locations, monitor locations, damage, incidents, and daily metrics at any given time. The additional geospatial reporting capabilities are made possible through the Tetra Tech approach to field monitoring.

At each debris collection point, the field collection monitor marks the "waypoint" or location of the debris pile to collect GPS coordinates. The map below displays the waypoints associated with each collection ticket issued in the field. The waypoint collection report is updated in real-time and can be filtered by date.

Exhibit B-14: Waypoint Collection/Hazardous Tree Maps



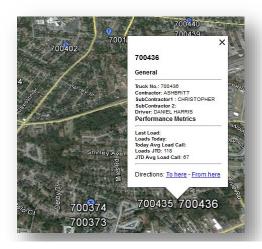


An additional feature of our ADMS technology is that each handheld device reports back the location of the device regularly. By leveraging this location information, Tetra Tech can view monitor locations and truck locations in real-time, as demonstrated in Exhibits B-15 and B-16.

Exhibit B-15: Monitoring Locations



Exhibit B-16: Truck Locations



## **First Pass Completion Reporting**

Tetra Tech uses GIS software integrated with RecoveryTrac<sup>™</sup> in conjunction with field controls, to report, track, and display debris removal progress on a daily basis. Several processes are conducted to efficiently achieve this objective beginning with the identification of debris removal zones. The entire disaster-affected area is divided into smaller working zones in order to efficiently conduct debris removal operations.

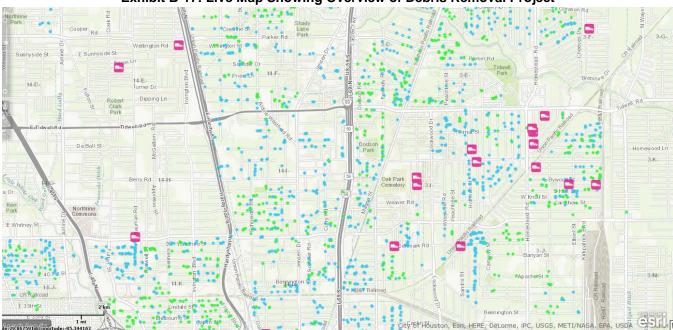


Exhibit B-17: Live Map Showing Overview of Debris Removal Project

The debris removal zones are assigned daily to both the debris contractor and collection monitor. Collection monitors will verify that debris contractors are collecting debris in their assigned areas via debris removal zone maps. A load ticket is completed for each truck load of debris that is removed and transported to a disposal site. Each load ticket contains the weigh point data that displays the location for each pile of debris collected. This is automatically uploaded into RecoveryTrac™ database with our ADMS system. As removal operations move forward, live updates in our geoportal show progress throughout the affected area including collection locations and live truck locations.

Tetra Tech collection monitors are also responsible for documenting any debris piles that a debris contractor skips no matter the size. "Cherry picking" is term used when a debris hauler moves down a street and only removes piles of debris that are large enough to significantly fill their truck and skips over the smaller piles. If a collection monitor feels there is justifiable need to stop operations due to this practice, the monitor is instructed to refrain from issuing a ticket until both the debris hauler supervisor and a supervisor notified to determine appropriate action.

The debris removal process is broken down into phases that are known as passes. The first pass is the initial removal of debris on individual roads or within a zone and is usually within the first three or four weeks following commencement of debris removal operations. Second pass is when debris haulers go back through on the same individual roads or zones and remove additional debris piles that were placed on the ROW after the first pass. Subsequent passes work the same way. When first pass is reported complete, the operations manager will task the field supervisor assigned to that area to visually inspect and verify that the zone is complete. Road segments are completed as they are completed and change in the geoportal from red to green. Once all subzones are

complete, the zone is considered complete for first pass. This process will replicate itself for additional passes if necessary. This process is tracked by road segment in real-time also available on our geoportal for viewing



Exhibit B-18: Live Pass Map Showing Green Road Segments as Complete

## **Field Operations**

The Tetra Tech debris monitoring program includes the following:

- Operations. Field collection monitors report to a staging location prior to the commencement of daily
  operations for a briefing to be given by the project manager or field supervisors and the distribution of safety
  gear (for example, caution lights or safety vests), map books, and ADMS handheld units/debris tickets.
- **Deployment.** A field monitor is assigned to one loading unit or to a leaner and hanger removal crew. In instances where leaner and hanger crews have multiple saw operators, the cut crew can request the addition of a monitor (this typically happens when a cut crew can complete over 60 hazard removals per day).
- Field Supervision. Responsibilities of the field supervisor monitor include training, QA/QC of work being
  performed, verifying load ticket accuracy, and responding to field monitor and debris contractor issues in the
  field.
- Responsibilities. Field monitors will verify the proper loading of debris into the debris removal contractor's certified loading container. Monitors will document that contractors and their subcontractors adhere to local, state, and federal regulations and that they are working safely and efficiently. Field monitors often notice inconsistencies with debris removal procedures and submit them to their supervisors. If a field monitor feels there is justifiable need to stop operations, the monitor is instructed to refrain from issuing a ticket until the debris hauler supervisor and a Tetra Tech supervisor can be called in to determine the appropriate action.
- Work Scheduling. Tetra Tech will coordinate with the debris removal contractor's project manager to estimate the number of field monitors that will be required for the following day. To be responsive and mitigate overstaffing, Tetra Tech requests that the debris hauler release the next day's schedule by 5 p.m. This will verify the appropriate number of field monitors is dispatched.

- Daily Closeout. At the close of operations each day, all collection and disposal monitors will report to the staging area to clock out and turn in their ADMS handheld units.
- Contractor Completion. Tetra Tech will assist the City in completing the project efficiently and within the timelines set forth in the Request for Proposals (RFP). There are many aspects of debris removal that are outside of the monitoring firm's control but will still need to be managed. Tetra Tech will assist the City with managing these goals, including the following:
  - The ability of a debris contractor to respond with sufficient equipment will affect the proposed schedule. Tetra Tech will provide burn rate analysis to verify the proper equipment is being provided. This will be adjusted as more accurate debris estimates are available.
  - Leapfrogging by the contractor (cherry picking work being performed) is detrimental to the efficiency of operations and will be reported.
  - Invoices by the contractor need to be produced in a timely manner so that Tetra Tech can reconcile in a timely manner. Tetra Tech will work to make the contractors aware of an appropriate time frame for invoicing and will communicate with the City if deadlines are not being met.
  - Deadlines for collecting debris are set to correspond with the work schedule that is based on
    estimated work to be completed. As damage estimates become more accurate (as is typical
    throughout the process), Tetra Tech will work with City officials to adjust the timeline to appropriately
    reflect the changing estimates.

In addition, there are events out of the control of all parties that could negatively impact a debris removal operation (for example, inclement weather). In the event any of these circumstances occur, Tetra Tech will work closely with the City to refine timelines and support an expeditious recovery for the City.

#### INLAND WATERWAYS/SEAWEED REMOVAL

The Tetra Tech team is the industry's leader in inland waterways monitoring. Our team monitored debris collection and sediment removal of over 2/3 of the state of New Jersey coastline after Hurricane Sandy. Inland waterway debris removal is important for the City recovery efforts because it reduces flooding risks by restoring proper watershed. Key elements of an inland waterway debris removal effort include the following:

- Identification of the appropriate funding source (that is, FEMA or NRCS) and documentation of legal authority to fund debris removal operations
- Review of maintenance records
- Development of a scope of work and site-specific operations plan
- Documentation of the scope of work to substantiate FEMA or NRCS funding

If necessary, staff will secure the necessary boat(s) meeting the state's minimum requirements, including all U.S. Coast Guard (USCG) safety equipment. Staff will also utilize GPS to enhance navigational accuracy for documentation purposes.

Tetra Tech also supported seaweed/grass removal during recent storms in Monroe County and New Orleans Parish. Because these beaches have high visibility for long stretches, monitors are able to view multiple loading devices and distribute load tickets to multiple trucks. This decreases the ratio of monitors to loading equipment considerably.

#### PRIVATE PROPERTY DEBRIS REMOVAL

FEMA and the Office of Emergency Management (OEM) have authorized conditional PPDR programs in previous events. The Tetra Tech team has administered several PPDR programs in recent history, including programs for New Orleans, LA; Terrebonne Parish LA; Escambia County, FL; Galveston, TX; and Pensacola, FL. With

experience managing several of the largest PPDR efforts in the United States, the Tetra Tech team understands the tremendous amount of public information outreach necessary to make a PPDR program successful. Tetra Tech also understands the historical considerations that must be made when coordinating PPDR and demolitions. Following Hurricane Katrina, we worked closely with the conservation community in New Orleans, including the Historic District Landmark Commission and the Neighborhood Conservation District Commission to salvage items of historical significance from over 400 homes that were destroyed. Although a future PPDR programs may not be approved by FEMA and OEM or authorized by the end user, deliverables would include the following:

- Obtaining PPDR approval from FEMA and OEM
- Organizing a public information campaign to determine public interest and obtain support from the public
- Coordinating the salvage of historically significant items with the Key West Art and Historical Society (KWAHS)
- Confirming the ordinance governing authority to enter private property and execute the right-of-entry (ROE) agreement with the property owner
- Developing a site-specific operations and hazard analysis plan
- Documenting the scope of work and property closeout

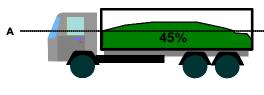
#### DEBRIS MANAGEMENT SITE MONITORING

Response to debris-generating events requires locating DMS, emergency permitting of DMS (including debris burning and State regulatory permits), baseline soil testing before the DMS are opened and as part of remediation process, and recycling and diversion initiatives once the reduced vegetative debris is collected and processed. Tetra Tech has had significant experience assisting local governments in Florida with pre-permitting DMS before a disaster event as well as post-disaster permitting.

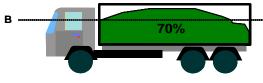
As DMS are activated, Tetra Tech will provide a minimum of two disposal monitors per site. Staffing numbers may also increase or decrease, depending on site layout. Tetra Tech verifies hauler passes through the DMS and documentation remains accurate and complete with several daily audits by project operations managers and supervisors to verify load call accuracy and consistency. Specific documentation kept by Tetra Tech DMS disposal monitors includes the following:

- Load Ticket. The load ticket is used to document debris removal complying with all requirements of FEMA 327 and 325.
- Disposal Monitor Log. The disposal monitor log is used as backup documentation and requirements of FEMA 327 and 325.
- Scale Manifest Tickets. If the debris-hauling contract is weight-based, tickets generated by the existing scales at the City's DMS will be digitized and cataloged by Tetra Tech.
- Incident Report. Documenting property damage, arguments, unsafe practices, and personal injury.
- Photographic Documentation. Tetra Tech disposal supervisors will photograph a DMS frequently to create a visual timeline of the site.
- QA/QC of Field Tickets. Disposal monitors review and verify collection monitors' work in the field.

Exhibit B-19: Load Call Estimate Examples



**Example A** – The mounded portion of the load offsets the areas where the load drops below the fill line. Because the load includes light and medium debris, the load percentage estimate is 45 percent.

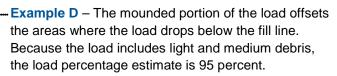


**Example B** – The mounded portion of the load offsets the areas where the load drops below the fill line. Because the load includes light and medium debris, the load percentage estimate is 70 percent.



95%

**Example C** – The mounded portion at the front of the load offsets the area in the back where the load drops below the fill line. Because the load includes light and medium debris, the load percentage estimate is 85 percent.



# KEY WEST TEMPORARY DEBRIS MANAGEMENT SITE UNDERSTANDING

In compliance with *Attachment F of the City's RFP*, we can confirm that the temporary debris management site (TDMS) sites listed therein <u>are adequate</u> for the purposes of debris storage, given the City's proposed scenario if a foot stack height of 15 feet is obtained.

For a scenario that consists of 146,000 CY of vegetative debris (consistent with Attachment B) with the understanding that the primary sites are listed below

DMS	Approximate Acres	Estimated Cy Hauled To Each Site	Estimated Storage Requirements (Acres)	Minimum "Foot Stack Height" <sup>1</sup>	Conclusion
Truman Waterfront Property	5	61,320	4.21	15 Ft	Adequate
5701 College Road	4	48,180	3.30	15ft	Adequate
Wickers Football Field	3	36,500	2.50	15ft	Adequate



-

<sup>&</sup>lt;sup>1</sup> Using USACE Debris Storage Site Requirement Calculator

## QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

Implementing comprehensive QA/QC protocols and technologies is critical to a debris monitoring effort. Proper

QA/QC protocols reduce the amount of work associated with backend data management, reduce invoice reconciliation timeframes, prevent fraud, and establish a sound dataset for future audits. Throughout years of experience assisting local governments with recovering from disasters and the subsequent audits, Tetra Tech has developed industry-leading QA/QC standards and protocols. The use of our ADMS technology expedites the QA/QC process

The use of our ADMS technology expedites the QA/QC process and virtually eliminates ticket errors that can result from traditional manual (paper and pen) debris monitoring operations.

and virtually eliminates ticket errors that can result from traditional manual (paper and pen) debris monitoring operations. For example, monitors no longer have to carry a GPS device and manually write in GPS coordinates; this is automatically logged. Due to the real-time information collected by our ADMS technology, Tetra Tech can establish a virtual command center to audit project information during the collection process and correct issues as they appear.

For example, our ADMS technology provides reporting and tracking on any missed debris piles. This allows Tetra Tech to improve our responsiveness to resident complaints and provide real-time tracking tools to manage removal of these missed piles to the City.

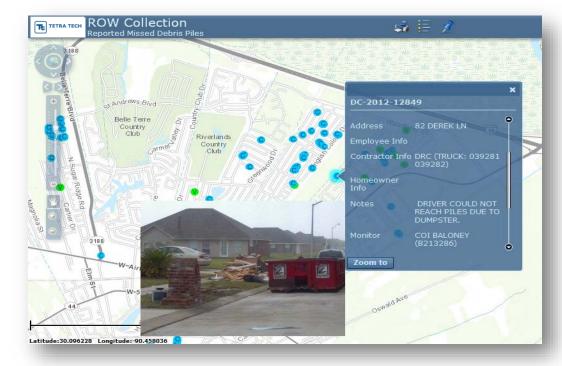


Exhibit B-20: Missed Piles Tracking

# FRAUD PREVENTION

Several Tetra Tech practices are used to prevent debris haulers from committing fraud both in the field and remotely by real-time data monitoring. At DMS locations, Tetra Tech disposal monitors or supervisors will randomly recertify a previously certified truck. Recalculating the truck hauling capacity helps verify that the original work was accurate and that nothing has been altered since certification. Additionally, ADMS technology displays a

photo of the truck as a ticket is scanned by the disposal monitor. This makes it nearly impossible for a debris hauler to switch truck certifications between trucks or alter their truck configuration (i.e., remove sideboards).

Fraud Prevention Reports are also run on a daily basis to look for any data anomalies that may be a result of fraud. The Load Call report shows all load calls for a given day/monitor to assure no trucks are receiving extraordinarily high load calls. The Load Ticket and Unit Rate Daily ticket reports are ran to determine if monitors are issuing an excessive amount of tickets in relation to the average number of tickets per day. The RecoveryTrac<sup>TM</sup> system also has project controls built in which alert the data manager to anomalies that may be indicative of fraud. For example, the following data features are flagged:

- Truck Turn-Around-Time. The time between last pickup location and arrival of a truck at the DMS is tracked. A time that is too short may be indicating the debris hauling truck not filling the vehicle to capacity.
- Out-of-Bounds. The municipality boundaries are programmed geospatially to assure debris pickup remains within the eligible bounds of the City.
- Debris Type. Any ticket in which the debris type collected differs between what the collection monitor and disposal report the load as is flagged for review.

## HAZARDOUS TREE REMOVAL

Guidance established in FEMA 325 and 327 requires supporting photo documentation for each ticket issued for hazardous tree or hanger removal services. The previous standard for monitoring firms was to take supporting photographs with a digital camera and manually associate the photos to each tree ticket. Tetra Tech can utilize ADMS technology to automatically associate photographs for all hazardous tree and hanger removal operations, which eliminates the potentially extensive labor associated with this task. Additionally, our ADMS technology and software is designed to manage photo documentation by compressing and securely storing photos for field validations and audits in real-time. The ability to associate photo documentation to unit rate tickets is critical for FEMA reimbursement, QA/QC, and fraud deterrence.

As work in the field is completed, the information and supporting photos are uploaded directly to our database for QA/QC checks. A QA/QC manager verifies that the photographs comply with FEMA regulations and that all measurements meet the City's contractual agreement with the contractor.

RecoveryTrac Unit Rate AuditReport (Crew: 700430) Date: 03/11/2014 Client: AUGUSTA ect AUGUSTA - WINTER STORM PAX - ROW COLLECTION Total Ticket Count: 12 Ticket No. GPS-Lat 120590044 DAWN WALKER (B214108) 03/11/2014 8:17 AM 33 434518 -82 023773 2405 ACAPIII CO DP 1.00 2.50 2d(GIS: 2D) Crew Photo Pre-Work Photo Measurement Photo Post-Work Photo 120590045 DAWN WALKER (B214108) 03/11/2014 8:27 AM -82.023628 2405 ACAPULCO DR 33.434532 1.00 3.38 2d(GIS: 2D) Crew Photo Pre-Work Photo Post-Work Photo Measurement Photo

Exhibit B-21: Real-Time Ticket Report

# **UNIT RATE TICKET GEOPORTAL REPORT**

As monitors complete unit rate tickets for hazardous trees or hangers, their locations are logged and collected. The map below displays locations where hazardous tree or hanger removals were documented in the field. Clicking on the marker allows the user to review the data and photos collected by the field monitor (see example below). The unit rate ticket report is updated in real-time.

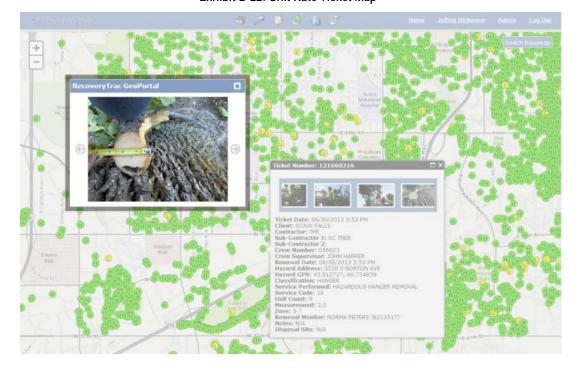


Exhibit B-22: Unit Rate Ticket Map

## **INCIDENT REPORTING**

Another key feature of our ADMS technology is that it allows field monitors to report incidents and provide supporting photographs in real-time to the City, Tetra Tech, and the debris contractor. Examples of incidents include reporting pre-existing damage, damage caused by the contractor, debris piles skipped by the contractor, safety hazards, and other incidents critical to a debris removal program. As monitors complete incident reports in the field, the information and supporting photographs are uploaded to the Tetra Tech reporting server. Depending on the type of incident, priority e-mails may be sent out by the reporting server to City representatives, Tetra Tech's project team, and debris contractor representatives. Our firsthand experience assisting local governments with recovering from disasters has shown that accurately capturing and photographing pre-existing damage can alleviate residential damage claims that may be submitted to the City. Additionally, the incident map developed from the collection information is essential to quickly identifying unresolved contractor damages before the completion of the program.

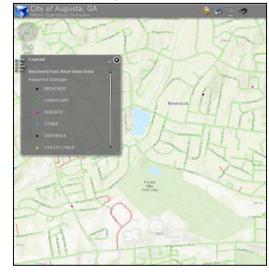
Exhibit B-23: Incident Report

# 

Incident Database



# Incident Map



# **Daily Reporting Metrics**

Tetra Tech has a suite of reports that are automated from RecoveryTrac<sup>™</sup> and available in real-time via PC, tablet, or smart phone. Although the reports are available at any time to the City, Tetra Tech will submit a daily status report that includes daily CYs/tons collected by material and program, cumulative cubic yard/tons collected, number of debris monitors in the field, cumulative CYs/tons hauled to final disposal, and daily/cumulative hazard removals. Below are samples of these reports created for recent projects. Additionally, Tetra Tech takes pride in the customization of reports to meet our client's specific needs and provides tailored reports to any metrics not captured in the generic reports.



Exhibit B-24: Sample Custom Reports Developed

#### CONTRACTOR RECONCILIATION

To expedite contractor invoice reconciliation efforts, Tetra Tech requires copies of all primary debris hauler contracts with the City. After reviewing the contracts, Tetra Tech will set up the RecoveryTrac<sup>™</sup> database to generate transactions applicable to contract terms for tickets issued to each debris contractor. Tetra Tech will then meet with each primary debris contractor to review the debris contractor project reports that will be generated automatically through RecoveryTrac<sup>™</sup>. The debris contractor reports will provide each contractor with sufficient data to reconcile with their subcontractors as well as generate invoices for payment by the City. The debris hauler representative in charge of invoice reconciliation is then given a report login, which enables them to access the data remotely. They may run the report on for a specific date or range of dates. Several QA and QC checks are throughout the day with a final scrub occurring at day's end to ensure clean data. Finally, an additional QA/QC check is performed when the contractor's invoice data is sent to Tetra Tech during our invoice reconciliation process. Incongruences in the hauler's dataset are flagged for review and must be resolved prior to the issuance of a final invoice. The application of RecoveryTrac<sup>™</sup> significantly reduces the amount of time needed for a contractor to generate an invoice and for the subsequent invoice reconciliation with Tetra Tech. The process for contractor invoice reconciliation in a RecoveryTrac<sup>™</sup> project is as follows:

- Debris contractor manually enters ticket detail into a contractor database or imports ticket data based on Tetra Tech's debris contractor reports.
- Debris contractor generates an invoice for a specified period and submits the invoice and electronic backup to Tetra Tech for review.
- Tetra Tech reviews the contractor data against RecoveryTrac<sup>™</sup> database records.
  - If <u>no</u> discrepancies are identified, Tetra Tech notifies the contractor that there are no discrepancies in the dataset.
  - If discrepancies are identified, Tetra Tech generates a discrepancy report noting the ticket numbers and differences between the two data sets.
- Tetra Tech submits the discrepancy report for the contractor's review. The contractor revises their invoice based on the discrepancies and resubmits to Tetra Tech for review.
- Once a debris contractor's invoice has been reconciled, Tetra Tech generates a payment recommendation and transmittal letter for each invoice and submits the invoice package for the City's review.

#### FEMA PA CONSULTING SERVICES

Of particular relevance is our understanding of FEMA, FHWA, and other reimbursement agencies' requirements for eligibility, documentation, and reimbursement. Over the past 20 years, our grant management experts have assisted clients with applying for and retaining grant funds, even after closeout and audit processes. Our team has extensive experience assisting local and state governments with managing and documenting projects that are eligible for federal funding through the FEMA PA Program, including multiple, large PA programs for the States of Vermont, South Dakota, and Connecticut. Our team also has significant experience with FHWA-ER federal reimbursement, having assisted over 60 clients with FHWA application, project management, and reimbursement. Our team's record of success spans over 300 state and local government clients in response to over 40 declared presidential disasters, representing the recovery of more than \$3.5 billion in disaster grant funds. These activations have yielded grant program management engagements resulting in clients not only garnering grant funds but in retaining 99.8 percent of the funds received. Tetra Tech has extensive direct experience with the following grant programs:

- FEMA PA Program
- FEMA Hazard Mitigation Grant Program
- FEMA Flood Mitigation Assistance Program<sup>2</sup>
- FHWA-ER Program
- FHWA Transportation Investment Generating Economic Recovery Grant
- NRCS Emergency Watershed Protection
- U.S. Department of Housing and Urban Development Community Development Block Grant

<sup>&</sup>lt;sup>2</sup>Formerly three separate grant programs: FEMA Severe Repetitive Loss Program, FEMA Repetitive Flood Claims Program, and the FEMA Pre-Disaster Mitigation Program.

# ATTACHMENT C

# PROPOSER'S QUALIFICATIONS STATEMENT FORM

The undersigned guarantees the truth and accuracy of all statements and the answers contained herein.

1. Please describe your company in detail.  Tetra Tech, Inc., (Tetra Tech) is a leading provider of specialized management consulting and technical
engineering services. Clients include a diverse base of public and private-sector organizations located throughout the United States and internationally. The company was founded in 1966 and became a publicly
traded company (NASDAQ-TTEK) in 1991. Tetra Tech, Inc. is incorporated in the State of Delaware and its
Federal Employer Identification Number (FEIN) is 95-4148514. Tetra Tech is a family of more than 45
comparies working in areas including resource management and infrastructure development. See subsequence
companies working in areas including resource management and infrastructure development. See subsequence pages for addition information.  2. The address of the principal place of business is:
Corporate Office: 3475 East Foothill Boulevard, Pasadena, CA 91107
Main Office: 2301 Lucien Way, Suite 120, Maitland, FL 32751
3. Company telephone number, fax number and e-mail addresses:  Main Office Phone/Fax Number: (321) 441.8518 / (321) 441.8501
Technical Representative Name/E-mail: Anne Cabrera, anne.cabrera@tetratech.com
Contractual Representative Name/Email: Betty Kamara, betty.kamara@tetratech.com
Signatory/Authorized Negotiator: Jonathan Burgiel, jonathan.burgiel@tetratech.com
4. Number of employees: Approximately 13,000
<ol> <li>Number of employees or subcontractors to be assigned to this project (per event) and what is capacity?</li> <li>Approximately 17; see staffing ratio in Attachment A for a breakdown per position.</li> </ol>
6. Company Identification numbers for the Internal Revenue Service: Federal Tax ID Number: 95-4148514
7. Provide Occupational License Number (and County), if applicable, and expiration date:  Not Applicable

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12.	List the following information concerning all contracts in progress as of the date of
	submission of this bid. (In event of co-venture, list the information for all co-ventures.)

Name of Project	Owner	Value	Contracted Completion	%of Completion to
			Date	Date

The list of current activated projects is provided at the end of this section.

(Continue list on insert sheet, if necessary)

13.	Has the Proposer or Representative inspected the proposed project site and does
	the Bidder have a complete plan for performance of disaster response services?
3.7	

Yes

14. Provide list of subcontractor(s), the work to be performed and also a list of major materials suppliers for this Project?

Sub-Contractor Name	Address	Work to be Performed
N/A		
		restall.

(Continue list on insert sheet, 1f necessary)

The foregoing list of subcontractor(s) may not be amended after award of the contract without the prior written approval of the City Manager.

15. What equipment do you own that is available for the work?

PROVIDE LIST IN ATTACHMENT The list of equipment and supplies is provided at the end of this section.

16. What equipment will you purchase for the proposed work? (Continue list on insert sheet, if necessary)

To be determined

18. What equipment will you rent for the proposed work?

(Continue list on insert sheet, if necessary)

Temporary office space, generator, portable facilities

19. State the names of the proposed project team and include resumes, and give details of his or her qualifications and experience in managing similar work.

An organizational chart with the complete list of key personnel as well as resumes for the proposed project team is provided at the end of this section.
20. State the true, exact, correct and complete name of the partnership, corporation or trade name under which you do business and the address of the place of business. (If a corporation, state the name of the president and secretary. If a partnership, state the names of all partners. If a trade name, state the names of the individuals who do business under the trade name.)
Tetra Tech, Inc.  2301 Lucien Way, Suite 120, Maitland, FL 32751
Corporate President/Secretary: Dan Batrack / Janis B. Salin
20.1 The correct name of the Proposer is:  Tetra Tech. Inc.
20.2 Insurance
20.2. The business is a (Sole Proprietorship) (Partnership) (Corporation).
Corporation
The names of the corporate officers, or partners, or individuals doing business under a trade name, are as follows:  None
SUBMITTED BY: Tetra Sech. Inc.  Vice President/Operations Manager  PRINT NAME/ TITLE  STATE OF FLORIDA)  SS.  COUNTY OF Orange
The foregoing instrument was acknowledged before me this 25th day of September
2015, by Jonathan Burgiel who is personally known to me or who has
produced ——————— as identification and who did/did not take an Oath.
WITNESS my hand and official seal, this 25th day of September , 2015.  (NOTARY SEAL)
Signature of person taking acknowledgment  Notary Public State of Florida Sandra M Fajardo My Commission FF 098767 Expires 03/09/2018

# Attachment C: Qualifications Statement Supplement



# 1. Please describe your company in detail.

## DESCRIPTION AND HISTORY OF THE FIM

Business Address (Main Office): 2301 Lucien Way, Suite 120, Maitland, FL 32751

Phone Number: (321) 441-8518

Year Established: 1966
Business Type: Corporation
Number of Employees: 13,000

Locations: Over 300 offices worldwide, including 24 offices in the State of Florida

Tetra Tech, Inc.¹ (Tetra Tech) is a leading provider of consulting, engineering, and technical services worldwide. Founded in 1966, Tetra Tech is one of the leading firms in the nation in the field of disaster management and homeland security, with millions of dollars in revenue coming from contracts in such diverse areas as infrastructure hardening and protection; disaster recovery; emergency management, planning, and preparedness; community resilience; disaster recovery, and grant management. Tetra Tech supports government and commercial clients by providing innovative solutions to complex problems focused on water, environment, energy, infrastructure, and natural resources. With 13,000 employees worldwide, Tetra Tech's capabilities span the entire project life cycle.

Dedicated to helping state and local governments plan for and recover from natural and human-caused disasters, our staff members offer a field-tested and proven methodology for emergency readiness, continuity planning, and disaster recovery. Our team is recognized for its ability to quickly respond to a broad range of emergencies, allowing our clients to return to the business of running their day-to-day operations.

Likewise, our team's understanding of the Federal Emergency Management Agency (FEMA), the Federal Highway Administration (FHWA) (including recent changes), and other reimbursement agencies' requirements for



eligibility, documentation, and reimbursement helps clients receive the maximum reimbursement allowed. *Our team has obtained over \$3.5 billion in reimbursement funds for our clients* from federal agencies such as FEMA, FHWA, and the Natural Resources Conservation Service (NRCS). In total, our team has successfully managed the removal of and reimbursement for over *69 million cubic yards (CYs) of debris* as well as the *demolition of over 5,000 uninhabitable residential and commercial structures*.

Within our proposal, we demonstrate that our team:

- Is duly qualified to perform the scope of work outlined in the City of Key West's request for proposal, as evidenced by our staff's extensive qualifications for many of the nation's most catastrophic disasters and our team's previous experience with disaster recovery in Florida over the past 10 years
- Is committed to providing the City with skilled resources within the time frames specified by the City, as evidenced by the depth of experience of our senior management team and project management team, their historical performance across Florida and within Key West, and our commitment to the City to perform in a timely manner

<sup>&</sup>lt;sup>1</sup> The BDR Division is now Tetra Tech, Inc.



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- Offers a proven and successful technical and management approach that has been refined in disaster
  activations across the United States, including 13 projects with over 1 million CYs of debris, as evidenced by
  our team's detailed scope of work and significant work history in the disaster response marketplace and within
  the Florida
- Offers detailed reporting, real-time debris collection tracking, and mapping capabilities that are driven by our RecoveryTrac<sup>™</sup> automated debris management system (ADMS) technology, which allows our staff to monitor and manage a recovery effort electronically in addition to increasing productivity while decreasing fraud, human error, and cost to the City
- Has the financial resources and cash flow for a large and long-term recovery effort

# **Large-Scale Debris Monitoring Experience**

Our team understands the significant resource commitment and effort necessary to manage and monitor largescale debris removal operations for local governments. We have monitored and obtained FEMA, FHWA, and NRCS reimbursement on 13 debris removal projects in excess of 1 million CYs of debris.

Tetra Tech takes great pride in the reliability of our service. Clients count on us to respond in their time of need, and we deliver. Our team has never failed to respond to our clients' deployment and mobilization needs, regardless of location or type of disaster. *Exhibit C-1 summarizes our team's experience serving as the prime contractor on large-scale debris monitoring projects for over 500,000 CYs of debris in the past 10 years.* Our services under these engagements included environmental permitting, debris management sites (DMS) monitoring, contractor invoice reconciliation, and federal grant reimbursement support.

Exhibit C-1: Summary of Our Large-Scale Debris Monitoring Activations

Client	Disaster	Year	Cubic Yards Monitored
Escambia County, Florida	Hurricane Ivan	2004	5,385,084
City of Pensacola, Florida	Hurricane Ivan	2005	1,381,670
Santa Rosa County, Florida	Hurricane Dennis	2005	1,708,085
Escambia County, Florida	Hurricane Dennis	2005	1,589,182
Jefferson County, Texas	Hurricane Rita	2005	1,448,027
City of Gulfport, Mississippi	Hurricane Katrina	2005	2,891,220
Harrison County, Mississippi	Hurricane Katrina	2005	2,494,971
City of Waveland, Mississippi	Hurricane Katrina	2005	512,820
Miami-Dade County, Florida	Hurricane Wilma	2005	2,571,871
City of Pembroke Pines, Florida	Hurricane Wilma	2005	919,200
City of Plantation, Florida	Hurricane Wilma	2005	796,369
City of Fort Lauderdale, Florida	Hurricane Wilma	2005	614,711
City of Boca Raton, Florida	Hurricane Wilma	2005	585,351
City of Hollywood, Florida	Hurricane Wilma	2005	585,331
City of Miramar, Florida	Hurricane Wilma	2005	513,127
Town of Amherst, New York	Buffalo Snow Storm	2006	778,421
City of Springfield, Missouri	Midwest Snowstorms	2007	1,442,727
Greene County, Missouri	Midwest Snowstorms	2007	572,319
City of Norman, Oklahoma	Midwest Ice Storm	2007	536,581
Hidalgo County, Texas	Hurricane Dolly	2008	628,307
City of Houston, Texas	Hurricane Ike	2008	5,469,167
Harris County, Texas	Hurricane Ike	2008	2,395,475

Client	Disaster	Year	Cubic Yards Monitored
City of Bolivar, Texas	Hurricane Ike	2008	2,699,683
City of Galveston, Texas	Hurricane Ike	2008	1,810,857
Galveston County, Texas	Hurricane Ike	2008	859,496
City of Baytown, Texas	Hurricane Ike	2008	817,603
City of Beaumont, Texas	Hurricane Ike	2008	747,901
Montgomery County, Texas	Hurricane Ike	2008	697,441
Chambers County, Texas	Hurricane Ike	2008	630,234
Orange County, Texas	Hurricane Ike	2008	616,527
Bastrop County, Texas	Texas Drought and Wildfires	2011	773,068
Augusta-Richmond County, Georgia	Winter Storm Pax	2014	645,970

# **Experience Coordinating with Federal, State, and Local Funding Sources and Reimbursement Processes**

Throughout the course of the hundreds of debris management and grant management projects that our staff has administered for state and local governments across the United States, our team has developed a unique understanding of the FEMA organization and other regulatory agencies' policies and procedures. Our team maintains strong relationships with many of the lead federal coordinating officers, debris specialists, Public Assistance (PA) coordinators and officers, and other staff. Our team also understands the duties and responsibilities of emergency management personnel at the state and local level, which helps us build strong relationships. Our team has worked with hundreds of local government emergency management agencies and dozens of state emergency management organizations following disaster debris-generating events.

Our team has worked closely with FEMA and FHWA staff in the determination of debris eligibility, data requirements, project worksheet/detailed damage inspection report development, auditing of documentation, and reimbursement requirements. This includes providing step-by-step assistance to clients throughout the FEMA reimbursement process.

To maximize PA funding for our clients, our staff members maintain a working relationship with FEMA at the headquarters, regional, and local levels. Constant communication and regular interface with FEMA allows our team to obtain quick responses on disaster-specific guidance and issues.

Moreover, Tetra Tech maintains a full-time staff to assist our clients in obtaining reimbursement. **Mr. Dick Hainje**, former regional administrator of FEMA Region VII, has been

#### WHAT DO OUR CLIENTS SAY?

"Your team assisted us with FEMA PA Grant Program application and administration, FHWA ER technical assistance, FEMA HMGP grant application, and HUD CDBG-DR project identification, technical assistance, and application development representing a combined estimated \$280 million in federal grants—the largest grant application in Boulder County's history.

Boulder County has been very pleased by the work of your team and would absolutely recommend them to any other state or local government agency in the aftermath of a disaster."

Michelle Krezek, Commissioners' Deputy Boulder County, Colorado

responsible for deploying and managing over 2,000 emergency management employees following disasters and created a long-term community recovery process for FEMA Region VII. Mr. Hainje has assisted our clients with navigating the reimbursement process and obtaining clarification on FEMA policies. Mr. Hainje also led the response, recovery, and mitigation for the historic 2008 Midwest flooding event, where he was the regional administrator in charge of over 1,000 FEMA employees deployed to this event.

Additionally, our data management and document storage procedures are tailored to facilitate FEMA review of the generation of project worksheet versions throughout the project. *Our FEMA appeals and funding specialists have worked with FEMA closeout officers to obtain millions of previously deobligated dollars for communities.* 

In the field, our operations managers and field supervisors fully understand FEMA rules and regulations for hand-loaded vehicles; stump, limb, and tree removal at unit rates; volumetric load calls at temporary disposal site locations; and right-of-way (ROW) debris removal eligibility. This allows us to monitor contracts to the smallest detail while concurrently managing and documenting the operation using proven methodologies that maximize FEMA reimbursement. *Our understanding of reimbursement agencies' requirements for eligibility, documentation, and reimbursement has helped our clients obtain over \$3.5 billion in reimbursement funds from federal agencies such as FEMA, FHWA, and the NRCS.* 

## Private Property/Right-of-Way Debris Removal

Our team has administered many of the largest PPDR programs in U.S. history, including projects for New Orleans, Louisiana; Gulfport, Mississippi; Bastrop, Texas; and Escambia County, Florida. Tetra Tech assists communities with ensuring they have the legal authority via local and state ordinances to enter onto private property. Our team also assists with preparing submittal packages for FEMA to approve the program, promoting the ROE program with residents, and ensuring the program is properly documented. Exhibit C-2 is a representative list of our experience in assisting clients with PPDR activities and demolition program management.

Exhibit C-2: PPDR and Demolition Program Management												
Client	Disaster/Year	Public Advertisement	Application Administration	Historical/Environmental Review	Property Survey	Scheduling	Individual Property Debris Tracking	Demolition Program Management	Debris Removal Monitoring	Reduction/Disposal Monitoring	Property Close Out	Data Management
Boulder County, CO	Flooding (2013)	•	•	•	•	•			•	•	•	•
Middletown, Township of, NJ	Hurricane Sandy (2012)					•	•	•	•	•		•
St. John the Baptist Parish, LA	Hurricane Isaac (2012)	•			•	•			•	•		•
Bastrop County, TX	Wildfires (2011)	•	•	•	•	•			•	•	•	
Comanche Nation, OK	Ice Storm (2009)					•	•		•	•		
Cedar Rapids, City of, IA	Flooding (2008)			•		•		•	•	•	•	
University of Iowa	Flooding (2008)			•		•		•	•		•	
Galveston, City of, TX	Hurricane Ike (2008)	•	•	•	•	•	•		•	•	•	
Terrebonne Parish, LA	Hurricanes Ike (2008)	•	•	•	•	•	•	•	•	•	•	•
Iberville Parish, LA	Hurricane Gustav (2008)	•	•		•	•			•	•	•	•
New Orleans, City of, LA	Hurricane Katrina (2005)	•	•	•	•	•	•	•	•	•	•	•
Waveland, City of, MS	Hurricane Katrina (2005)	•	•		•	•			•	•	•	•
Naples, City of, FL	Hurricane Wilma (2005)					•			•	•	•	

## **Waterways Debris Removal**

Our team has worked extensively with local, state, and federal agencies, including the United States Army Corps of Engineers (USACE) and the National Oceanic and Atmospheric Administration, to determine legal responsibility and to evaluate and implement marine debris removal programs. Our team has performed multiple projects for Monroe County, Florida (the Florida Keys), to remove derelict vessels and traps from waterways following Hurricanes Katrina, Gustav, Ike, and Wilma. Following Hurricane Ike, our team assisted Galveston City Municipal Utility District #12, Jefferson County Drainage District #7, the Trinity Bay Conservation District, and the Harris County Flood Control District with inland waterway debris removal assignments. We will help the City legal staff rapidly determine legal responsibility for waterway debris removal, verify scope eligibility, and document the work in a fashion deemed appropriate by reimbursement agencies. *Most recently, our team members monitored marine and vessel debris removal efforts following Hurricane Sandy on behalf of the New Jersey Department of Environmental Protection (NJDEP)*.

# Leaning Trees, Hanging Limbs, and Stump Removal

Leaning trees, hanging limbs, and stumps pose significant threats to public health and safety. Guidance on reimbursement for the removal of these vegetative threats is disaster-specific. Tetra Tech has the experience and expertise to help communities avoid the de-obligation of funds or non-reimbursement for these activities due to ineligible work. Our team has assisted numerous clients in surveying, documenting, and monitoring the removal of leaning trees, hanging limbs, and stumps. *Our team members most recently monitored the removal and disposal of 26,800 hazardous trees and hangers for the City of Augusta following 2014 Winter Storm Pax.* Exhibit C-3 featured clients for whom our team has monitored the collection and removal of leaning trees, hanging limbs, and stumps following a disaster debris-generating event.

Exhibit C-3: Previous Leaner/Hanger/Stump Removal Programs

Client	Event	Total Leaners/Hangers/ Stumps Removed
City of Augusta, Georgia	2014 Winter Storm Pax	26,800
City of Rapid City, South Dakota	2013 Ice Storm	8,000
City of Sioux Falls, South Dakota	2013 Ice Storm	26,700
State of Connecticut	2011 Winter Storm Alfred	57,200
Henrico County, Virginia	2011 Hurricane Irene	15,500
Texas Department of Transportation	2011 Texas Drought and Wildfires	5,800
City of Raleigh, North Carolina	2011 Tornado	7,500
Arkansas Game and Fish Commission	2009 Ice Storm	48,900
City of Houston, Texas	2008 Hurricane Ike	212,500
Terrebonne Parish, Louisiana	2008 Hurricane Gustav	14,500
City of Norman, Oklahoma	2007 Midwest Ice Storm	26,800
Greene County, Missouri	2007 Midwest Snow Storm	53,900
Genesee County, New York	2006 Ice Storm	9,100
Town of Amherst, New York	2006 Ice Storm	32,700
City of Fort Lauderdale, Florida	2005 Hurricane Wilma	20,400
Santa Rosa County, Florida	2005 Hurricane Dennis	13,700
Escambia County, Florida	2004 Hurricane Ivan	15,100

#### **Hazardous Material Removal**

Major disasters (particularly those that involve significant flooding) will result in the need to address hazardous materials. Typically, the U.S. Environmental Protection Agency (EPA) is responsible for identifying and removing large quantities of household hazardous waste (HHW) (containers over 5 gallons such as large commercial/industrial storage tanks, propane tanks, 55-gallon drums, etc.). Local governments are charged with implementing collection programs for HHW, including containers with paints, pesticides, household cleaners, oils/solvents, fuels, etc. Our team has significant experience helping local governments plan, procure, implement, and track disaster-related HHW collection programs at curbside or drop-off locations. Following Hurricane Ike, which resulted in a storm surge that covered almost all of Galveston Island, our team helped the City of Galveston implement one of the largest post-disaster HHW programs in U.S. history, in addition to working cooperatively with the EPA on large quantity HHW recovery.

## **Vessel and Vehicle Recovery**

Tetra Tech is able to assist the City in documenting the locations and quantities of vessel and vehicle debris in the City and presenting a case to FEMA to approve and fund the program. The City must first show that they have a legal responsibility to remove the debris and that the debris is not the responsibility of another state or federal agency such as the Florida Department of Environmental Protection, USACE, or the NRCS. Vessel and vehicle debris on private land may present unique ingress/egress challenges and require ROE agreements for access. *Our team recently monitored vessel debris removal efforts following Hurricane Sandy on behalf of the NJDEP and provided similar services to Escambia County, FL and Monroe County, FL (Florida Keys) following the 2004 and 2005 hurricane season.* 

## **Asbestos Containing Material Management**

Through our team's years of demolition experience, including our previous engagements in Iowa following the 2008 flood, our team of experts has developed best management practices for documenting and monitoring work related to Asbestos Containing Material (ACM). Tetra Tech's best management practices for ACM collection, remediation, and disposal meet state and local regulatory agency requirements. Tetra Tech will collect and catalog all pertinent information related to the ACM content, or lack thereof, for a property. Once the remediation contractor has removed and wrapped the ACM, Tetra Tech will document the transfer of custody through final disposition. As part of the ACM documentation process, Tetra Tech will also collect and pair all waste shipment records to the respective load tickets. Additionally, if Tetra Tech notices any lack of due diligence or potential for environmental violations during the course of the project, our management staff will notify City officials immediately and assist in creating a mitigation strategy. In the instance of non-ACM debris removal, Tetra Tech will collect and digitally link all DMS or landfill manifest with the corresponding load ticket.

#### **Data Management**

Our team has spent years researching and developing an effort to streamline the debris collection documentation process with a focus on minimizing the cost to our clients and improving the visibility of debris project operations. Our ADMS, RecoveryTrac<sup>TM</sup>, is the result of these efforts. RecoveryTrac<sup>TM</sup> is a scalable and fully featured disaster management application designed specifically to address the operational challenges faced during a disaster recovery project. Managing the enormous volume of documentation generated during a debris monitoring operation was paramount to the design of our ADMS. *This state-of-the-art technology has already shown to increase the efficiency and improve the management of debris removal efforts for multiple clients*. For more information on our data management, please see please see Section 5: Technical Approach.

### **Hauler Invoice Reconciliation and Contracting**

To expedite contractor invoice reconciliation efforts, Tetra Tech requires copies of all primary debris hauler contracts with the City. After reviewing the contracts, Tetra Tech will set up our ADMS, RecoveryTrac™ database



to generate transactions for tickets issued to each debris contractor. Tetra Tech will then meet with each primary debris contractor to review the debris contractor reports that will be generated automatically through RecoveryTrac™. The debris contractor reports will provide each contractor with sufficient data to reconcile with their subcontractors as well as generate invoices for payment by the City. Several quality assurance (QA) and quality control (QC) checks will be conducted on data before it is provided to the contractor. RecoveryTrac™ significantly reduces the amount of time needed for a contractor to generate an invoice and for the subsequent invoice reconciliation with Tetra Tech. For more information on our hauler invoice reconciliation and contracting, please see Section B: Technical Approach.

## **FEMA Appeal Assistance and Support**

Our staff has an outstanding track record of getting our clients reimbursed, with more than 200 major disaster recovery mobilizations over the past 10 years. Given the nature and scrutiny of FEMA reimbursement, it is not unusual for a local government to have one or more project worksheets questioned by FEMA/Office of Inspector General (OIG) during the audit process. We routinely work with our clients in these matters—oftentimes for years following an event—to support and defend their reimbursement.

Furthermore, due to our staff's in-depth knowledge of FEMA reimbursement policies, we are often hired by applicants to assist them during FEMA/OIG audits and support them during FEMA appeals even when we have had no involvement with the applicant during the recovery period. Our team of recovery experts is currently working with the Port of Galveston, Texas, to close out Hurricane Ike-related projects. To date, we have been able to identify and capture over \$80 million in previously unidentified or deobligated funding. The following are a few examples of areas in which our staff has successfully supported the appeals effort of our clients with FEMA:

- South Broward Drainage District. Following Hurricane Wilma, our team prepared an appeal in support of \$4
  million in reimbursement associated with lake erosion repairs made by the South Broward Drainage District.
  With our team's support, the South Broward Drainage District was fully reimbursed.
- Lake County, Florida. Our team supported the successful appeal of over \$400,000 of previously deobligated
  funds in response to the 2004 Hurricanes Charley, Frances, and Jeanne. These funds were associated with
  debris collected on private roads and gated communities. Our team did a comprehensive geographic
  information system (GIS) analysis of all of the debris collected on the roads in question and was able to appeal
  the decision and obtain reimbursement from FEMA for these county-incurred costs.
- Port of Galveston, Texas. The Port of Galveston experienced extensive damage due to storm-induced erosion caused by Hurricane Ike surge that reached heights upward of 20 feet. The pier was not designed to withstand the water weight and rapid draw down of the water. As a result, the concrete sheet pile was damaged and caused the fill underneath the warehouse slab to wash out, thus compromising the support of the warehouse floor. The floor collapsed near the most significant voids underneath the base. FEMA deemed the damage ineligible due to subtle erosion that happened over time. The Port of Galveston, with the assistance of our team of experts, submitted an appeal for eligibility and won the appeal resulting in an approval of a \$1.5 million for Pier 15. More importantly, the appeal approval has established precedence for the Port of Galveston's remaining Ike-damaged piers, enabling the Port of Galveston to apply for an additional \$80 million of funding due to damage caused by Hurricane Ike previously deemed ineligible.

# 8. How many years has your organization been in business? Does your organization have a specialty?

Tetra Tech was founded in 1966. Our experience in disaster field monitoring and management services dates back to 1989, when we helped clients recover from Hurricane Hugo. In the 21 years since, we have helped over 300 clients recover from the damaging effects of hurricanes, tropical storms, tornadoes, floods, and ice storms across the country.

Examples of special programs Tetra Tech has managed and administered in the past include the following:

## **Disaster Recovery Program Management Services**

- Emergency road clearance
- Curbside debris collection
- Operation of citizen drop-off sites
- Demolition of uninhabitable structures
- Data management and invoice reconciliation
- Execution of private property debris removal (PPDR) programs
- Oversight of DMS
- Final debris disposal at a landfill or other end use
- Conflict and damage resolution
- Truck certification
- Right-of-entry (ROE) administration

# **Special Programs Management**

- Animal carcass removal and disposal
- Asbestos abatement
- Beach remediation/restoration
- Construction and demolition debris
- Creosote piling
- Disposal site management
- Drainage and canal debris removal
- E-wastes
- Food waste removal
- Hazardous waste debris removal

- Leaner, hanger, and stump removal
- Marine/waterway debris removal
- Private property demolition/debris removal
- Nuisance abatement ordinance administration
- Saltwater killed tree removal
- Subsurface storm drain debris removal
- Vessel and vehicle recovery
- Wetland and parkland debris
- White goods debris removal
- Woodchips/ashes

11. Give names, addresses and telephone numbers of three individuals, corporations, agencies, or institutions for which you have previously performed work. List of all disaster response contracts performed in the last 5 years, including customer name, total contract amount and yards removed.

### References

Similar to the services being requested by the City of Key West, our team has successfully assisted over 300 clients with recovering from the damaging effects of hurricanes, tropical storms, tornadoes, floods, and ice storms across the country. Our efforts have allowed our clients to maintain their focus on continuing daily operations while relying on us to oversee the management of debris removal operations and federal reimbursement in compliance with Federal Emergency Management Agency (FEMA) and Federal Highway Administration (FHWA) guidelines and reimbursement procedures.

The following projects are a representative sample of our experience and accomplishments in performing services that are similar in scope, complexity, and magnitude to the City within the past seven years. When contacting these references, please recall that all of these projects were performed under the BDR Division, which is now Tetra Tech, Inc.

# Disaster Debris Monitoring Services-Hurricane Ike Bolivar Peninsula, Texas



The Bolivar Peninsula (Peninsula) is a 22.5 miles stretch of coastline in unincorporated Galveston County, Texas, that was decimated by high winds and storm surge resulting from Hurricane Ike. Immediately following landfall, our team worked closely with County staff within the Code Enforcement Division, Office of Emergency Management, and Commissioner's Court to assist in the preparation of the debris and sand recovery effort along the Peninsula. The Peninsula is composed of over 5,000 structures that were nearly all destroyed by this event (including approximately 3,000 structures that were completely destroyed or needed

demolition). The County estimated that there was approximately 1.5 million cubic yards of debris and sand that was removed during the operations, which lasted nearly four months. Limited access to the Peninsula combined with a complex debris stream made this assignment quite challenging.

Our team assisted with a multitude of procurement, operational, administrative, legal, and financial decisions and challenges facing the County to mitigate the risk of non-reimbursement by FEMA under the Public Assistance program. The programs that the our team was involved in over the course of several months included right-of-way debris removal, forensic debris removal, private property debris removal program including demolition of structures, open field/marsh debris field removal, public information campaign/town-hall meetings, debris call center, sand recovery and screening, beach screening, and shallow water debris removal. Additionally, our team established a call center with both English and Spanish speaking functionality in order to respond to all questions concerning demolition and debris removal on the Peninsula.

#### Reference:

**Connie Nicholson, Director of Community Services** 

722 Moody Street, 5th Floor Galveston, TX 77550

409-770-5543 | connie.nicholson@co.galveston.tx.us

Period of Performance: September 2008-October 2009

# Disaster Debris Program Management-Hurricane Ike City of Galveston, Texas



The City of Galveston is a barrier island in Southeast Texas. High winds and waters and a massive storm surge caused by Hurricane Ike resulted in catastrophic damage to the City of Galveston. Following the storm's passing, our team was activated under a pre-positioned contract to assist the City of Galveston with disaster program management and debris monitoring efforts. Our team initiated operations in the City of Galveston by overseeing emergency roadway clearance activities. Next, our team assisted the City of Galveston and their contract debris haulers—DRC Emergency Services and Ashbritt—in identifying and permitting debris

management sites. Further, our team worked with City of Galveston staff to design a program to collect the massive quantities of debris that resulted.

Our team oversaw the removal and collection of 1.1 million cubic yards of mixed debris, 150,000 cubic yards of debris-laden beach sand in the public right-of-way following the storm, nearly 1 million pounds of household hazardous waste, 2,900 dangerous trees or limbs, 45,000 appliances, 6,000 electronic waste items, 3,000 pounds of animal carcasses, and nearly 500 flooded and abandoned vehicles. Our team also assisted the City of Galveston in implementing its private property debris removal program.

The project manager was on-site within one hour of notification from the City of Galveston following search and rescue operations. Our team was on the island within four hours of notice to proceed and began recovery operations that included hiring roughly 170 staff.

#### Reference:

Mr. Charlie Kelly, Emergency Management Coordinator

City of Galveston 601 54th Street Galveston, TX 77551

409-763-3710 | kellycha@cityofgalveston.org

Period of Performance: September 2008-September 2010

# Disaster Debris Program Management-Hurricane Irene Henrico County, Virginia



Henrico County retained our team to assist with right-of-way collection and the removal of hazardous leaners and hangers following Hurricane Irene. With 200 staff members, our team was able to successfully remove 5,390 tons of debris within Henrico County. Our firm also successfully removed 14,779 hazardous hangers and 242 leaners.

Our team worked closely with Henrico County officials and their contracted debris removal hauler to facilitate the rapid cleanup of Henrico County roads. Our monitors were responsible for ensuring that only eligible debris was cleared and all

activities were documented according to FEMA guidelines. Our team also provided management and compliance monitoring at temporary debris storage and reduction sites (TDSRS) sites set up to manage disaster debris and documented the final disposal of debris.

Our comprehensive database system was used to manage all documentation in order to be able to quickly reconcile with the County's contracted haulers as well as be able to provide data exports to FEMA to expedite the reimbursement process.

#### Reference:

Mr. Steven Yob, P.E. Director of Public Works

Henrico County P.O. Box 90775 Henrico, VA 23273

804-501-4393 | Yob@co.henrico.va.us

Period of Performance: August-December 2011

# Comprehensive Disaster Program Management and Debris Management-Hurricane Ike City of Friendswood, Texas



On September 13, 2008, the suburban City of Friendswood was struck by Hurricane Ike, causing widespread damage, power outages, and flooding. Our team, in close coordination with the Office of Emergency Management staff, immediately sprang into action mobilizing a project management team to begin monitoring the City's debris hauler, Crowder-Gulf. Over the next four months, our firm worked diligently to document and monitor debris related costs for FEMA and FHWA-ER reimbursement.

Our team remained in close coordination with Friendswood Office of Emergency Management staff as they completed their FEMA and Texas Division of Emergency Management (TDEM) audits. Our team provided Friendswood and the auditors with additional information from our key project management team to ensure that any questions were quickly addressed and aided in Friendswood's successful audit process.

#### Reference:

Mr. Terry Byrd, Emergency Management Coordinator

City of Friendswood

910 South Friendswood Drive Friendswood, TX 77546

713-826-3492 | tbyrd@ci.friendswood.tx.us

Period of Performance: September 2008-January 2009

# Disaster Debris Program Management-Hurricane Isaac

#### St. John the Baptist Parish, Louisiana



On August 28, 2012, the 7-year anniversary of Hurricane Katrina making landfall in Louisiana, St. John the Baptist Parish was more adversely affected by the prolonged wind and rain that accompanied Hurricane Isaac than any other parish in Louisiana.

As a result of the slow-moving category 1 storm, 59,000 homes were damaged statewide with some of the most severe damage in St. John the Baptist Parish (Parish). Floodwaters from Lake Pontchartrain surged underneath Interstate-10 and flooded the Parish's north and east sides, causing widespread road closures,

which greatly limited access to the Parish. Nearly 95 percent of the Parish's power was lost and 7,000 damaged homes were left completely under water.

In the days prior to landfall, our team's senior management team began mobilizing to the area and was in coordination with the Parish to establish an immediate response plan, identify reporting needs, and establish TDSRS. Within two hours of a notice to proceed, our team had established office space within the Parish and begun recruiting, hiring, and training qualified monitors. Our firm proudly kept our promise to the Parish administration and council members to only hire Parish residents during our activation. Within days, our team hired and trained 103 previously unemployed, qualified residents to monitor debris removal activities.

Operationally, our firm worked with Parish officials and the Parish's debris hauler to establish protocols for right-of-way (ROW) and hazardous waste debris removal; identify, permit, and open TDSRS; schedule daily debris removal; and provide accurate daily reports. In addition, our team worked closely with representatives from FEMA to develop a disaster-specific strategy to collect the overwhelming amounts of construction and demolition from private property that was a result of the storm. Finally, our firm's successful use of our proprietary automated debris monitoring system (ADMS) allowed us to document the debris removal as accurately and cost effectively as possible.

#### Reference:

#### Ms. Natalie Robottom, Parish President

1801 W. Airline Hwy. LaPlace, LA 70068

985-652-9569 | robottom@sjbparish.com

Period of Performance: August 2012-September 2013

# Disaster Debris Program Management-Hurricane Irene Onslow County, North Carolina



After Hurricane Irene, Tetra Tech was immediately engaged in Onslow County, which is situated on the southeastern coast of North Carolina. The County's thick pine and hardwood tree canopy was severely impacted by Hurricane Irene's high winds. Tetra Tech worked in coordination with the Cities of Jacksonville, Richlands, and Swansboro as well as the North Carolina Department of Transportation to develop a county-wide debris removal schedule and reporting mechanisms. In addition to monitoring debris collection county-wide, our team assisted Onslow County in managing the single debris management site (DMS) that had been

activated for air-curtain incineration. Along with the DMS operation, Tetra Tech managed the 10 citizen collection centers that residents used to self-haul vegetative and C&D debris.

#### Reference:

Mr. Norman Bryson, Emergency Services Director

1180 Commons Drive North Jacksonville, NC 28546

910-347-4270 | Norman\_bryson@onslowcountync.gov Period of Performance: August 2011–December 2011

# Disaster Debris Program Management and Grant Management–2013 Flooding Boulder County, Colorado



Our team is currently assisting Boulder County, Colorado, following the devastating floods that occurred in September 2013 causing extensive damage throughout Boulder County and surrounding communities. Our team is managing the private property debris removal and public ROW debris removal monitoring programs. Our team is also assisting the County with the identification of eligible debris for reimbursement and administrating the program management for the County's demolition project.

Additionally, our team is assisting Boulder County in strategically managing the County's claims development and administration under the FEMA's Public Assistance Program, the FHWA reimbursement requirements, and the FEMA Hazard Mitigation Grant Program and assisting with Community Development Block Grant-Disaster Recovery application support. Our team has also been tasked with providing grant accounting/administration support as needed to strengthen the efficacy of Boulder County agencies to be able to manage these grants long after our departure.

#### Reference:

Mr. Brian Graham, AICP, Flood Recovery Coordinator

2525 13th St., Suite 203 Boulder, CO 80304

720-564-2667 | bgraham@bouldercounty.org

Period of Performance: October 2013-December 2014

# Disaster Debris Monitoring and Recovery Services—Tropical Storm Debby Pasco and Clay County, Florida



As the fourth named storm of the 2012 Atlantic hurricane season, Tropical Storm Debby caused extensive flooding in North Florida and the Florida Panhandle. In Pasco County, the Anclote River and Pithlachascotee River overflowed, flooding communities with "head deep" water. In Clay County, homes were inundated with floodwaters after the Black Creek overflowed. Both Clay County and Pasco County turned to our firm to provide disaster debris monitoring services in the wake of the disaster. Immediately upon a notice to proceed, our offices had deployed a full support team to assist with staging operations, project staffing, and scheduling.

Specific tasks of the project team included certifying the debris hauler trucks, providing load ticket data entry and contractor invoice reconciliation and approval. Because of the nature of the event, multiple different debris streams were generated on public and private property. Our team worked with officials from both counties to ensure that debris was taken to an appropriately permitted reduction site and that private property debris issues were addressed. In total, our team assisted Clay County with the monitoring of 3,777 cubic yards of debris and Pasco County with the monitoring of 2,583 cubic yards of debris.

Our team also assisted Clay County with immediate damage assessments and subsequent FEMA project worksheet preparation for Categories A&B as well as C-G.

#### Reference:

#### Mr. John Power, Solid Waste Director

Pasco County Solid Waste 14230 Hays Road Spring Hill FL 34610 727-856-0119 | jpower@pascocountyfl.net

#### Disaster Debris Program Management-Hurricane Sandy

#### Borough of Sayreville, New Jersey



The Borough of Sayreville, New Jersey suffered the effects of both winds and flooding associated with Hurricane Sandy. Dozens of homes were destroyed due to river flooding, along with downed trees and limbs throughout the Borough. The Borough turned to our team to provide disaster recovery guidance, debris monitoring, public communications, and reimbursement management in the wake of the disaster.

Immediately upon a notice to proceed, our team of program managers began hiring and training local staff, certifying trucks, and ensuring that State of New Jersey

regulations were followed and permits were in place. Our team deployed its RecoveryTrac<sup>™</sup> ADMS to document ROW debris removal. Thirty handheld units along with three DMS kits were mobilized and deployed within 24 hours of notice to proceed.

Several ADMS value-added features were leveraged to provide custom reporting information to satisfy reporting needs and enhance the capabilities of real-time information sharing.

- Real-time asset location provided a critical command and control tool to deploy resources effectively.
- Damage, safety, and injury reports were made available real-time on web based area maps.
- Documentation of the location of each individual debris pile picked up was provided to show damage concentration.

Our management team also coordinated the temporary storage and reduction of debris as well as subsequent final disposal with the Borough and privately owned facilities, ensuring the most cost effective recovery effort possible.

#### Reference:

#### Mr. Dan Frankel, Business Administrator

Borough of Sayreville 167 Main Street Sayreville, NJ 08872

732-390-7071 | dfrankel@sayreville.com

Period of Performance: November 2012–January 2013

# **Disaster Debris Program Management–2015 Flooding**

#### Blanco, Hays, & Caldwell Counties, Texas



In May 2015, Texas experienced one of the most severe weather events in Texas history, culminated by a record-breaking flood outbreak on Memorial Day weekend. An estimated 35 trillion gallons of rain fell during that time—enough to cover the entire state with 8" of water. Tetra Tech, recognizing the devastating impacts that the weather events would have on local governments, mobilized senior staff within hours of the first available damage reports. As floodwaters began receding, our staff began field operations throughout the state, including eight projects in Central

Texas that included Hays, Blanco, and Caldwell Counties, which were the most heavily impacted areas in the state.

Within 48 hours of a notice-to-proceed, Tetra Tech had fully staffed all eight projects with trained monitors, assisted in the opening of three Central Texas disposal locations, mobilized nearly 200 ADMS, and began assisting our clients with FEMA Public Assistance Coordination and Debris Hauler Procurement. Our familiarity with our Texas clients coupled with our responsiveness allowed affected communities to maximize reimbursement while minimizing operational and project initiation delays that are typical of an unprepared firm.

#### Reference:

Mr. James Sultemeier, Precinct 2 Commissioner, Blanco County

P.O. Box 471

Johnson City, Texas 78636

830-868-4471 | <u>blcomm2@co.blanco.tx.us</u>

Period of Performance: May 2015-Present

Letters of reference are enclosed at the end of this section.

# **Recent Debris Monitoring Experience**

Our team has vast experience providing disaster management, recovery, and consulting services to state and local government agencies. Our approach includes partnering with our clients to establish and test the necessary plans and procedures before a disaster strikes and assisting with disaster response and recovery operations as well as post-disaster grant management. One of the keys to maintaining readiness in the field of disaster response and recovery is remaining active year-round. Our team has responded to 10 major disaster declarations since 2011, totaling over 75 clients throughout the country. Exhibit C-4 provides an abbreviated experience matrix for projects conducted since 2011. *Profiles and references from specific projects are featured later in this section.* Tetra Tech can provide additional projects and information upon request.

	Ex	khibit C-4: Exp	perien	ice Ma	atrix (	(2011-	-2015	)							
Event/Client	Contract Amount	Cubic Yardage	Comprehensive Contract Management	Collection Monitoring	Disposal Monitoring	Hazardous Waste Collection Monitoring	Leaner/Hanger/Stump Removal	DMS Environmental Support	Beach Remediation/Restoration	Right-of-Entry Administration	Marine/Waterway Debris Removal I	Data Collection/ Management/ Billing/ Invoicing	FEMA Compliance Monitoring & Audit Oversight	FEMA Reimbursement	Automated Debris Management System
FLOODING – 2015 <sup>2</sup>															
Total Cubic Yards of Debris	– 293,750   Tota	l Clients – 1	0												
City of Houston, TX	\$2,000,000	240,725												•	
Hays County, TX	\$535,137	10,900		•	•		•	•						•	
Town of Wimberley, TX	\$129,198	18,922		•	•		•	•						•	
Caldwell County, TX	\$158,569	1,320													

<sup>&</sup>lt;sup>2</sup> On-going debris collection operations



FEMA Reimbursement	Automated Debris Management System
	-
•	
	•
	•

Event/Client	Contract Amount	Cubic Yardage	Comprehensive Contract Management	Collection Monitoring	Disposal Monitoring	Hazardous Waste Collection Monitoring	Leaner/Hanger/Stump Removal	DMS Environmental Support	Beach Remediation/Restoration	Right-of-Entry Administration	Marine/Waterway Debris Removal I	Data Collection/ Management/ Billing/ Invoicing	FEMA Compliance Monitoring & Audit Oversight	FEMA Reimbursement	Automated Debris Management System
Town of Fairfield, CT HURRICANE ISAAC – 2012	2012	13,300													
Total Cubic Yards of Debris – 721,672   Total Clients – 5   Representative Projects:															
Jefferson Parish, LA	\$1,356,500	270,136	I TOP			0110	•						•		
St. John the Baptist Parish,	\$6,984,665	225,000			_							_	_	•	
City of New Orleans, LA	\$8,075,037	177,443										•	•		
TROPICAL STORM DEBBY – 2012															
Total Cubic Yards of Debris -		lients – 3   R	epres	senta	tive F	roje	cts:								
Clay County, FL	\$47,500	3,777		•									•		
Pasco County, FL	\$250,000	2,583		•								•	•		
HURRICANE IRENE – 2011															
Total Cubic Yards of Debris -	573,200   Tota	l Clients – 22	!   Rej	prese	ntati	ve Pr	ojec	ts:							
Dare County, NC	\$633,070	145,700											•		
VA Dept. of Transportation	\$3,638,424	132,600											•		
Lenoir County, NC	\$525,000	127,000											•		
City of Virginia Beach, VA	\$1,077,996	55,600											•		
Henrico County, VA	\$1,112,591	26,950												•	
TEXAS DROUGHT & WILDFIR	RES – 2011														
Total Cubic Yards of Debris -	990,868   Tota	l Clients – 2													
Bastrop County, TX	\$4,005,068	773,068											•		
City of Houston, TX	\$512,938	271,800													•
NOR'EASTER (WINTER STOR	RMS) – 2011														
Total Cubic Yards of Debris -		tal Clients – '	19   R	epre	senta	tive	Proje	cts:							
CT Dept. of Transportation	\$3,856,533	436,410		•									•	•	
Town of West Hartford, CT	\$1,112,176	321,682											•		
Town of South Windsor, CT	\$610,158	234,764		•			•						•	•	
Town of Enfield, CT	\$298,309	189,090											•	-	
Town of Manchester, CT	\$568,533	153,575													
TORNADOES – 2011															
Total Cubic Yards of Debris -	61,458   Total	Clients – 4   I	Repre	esent	ative	Proj	ects:								

Event/Client	Contract Amount	Cubic Yardage	Comprehensive Contract Management	Collection Monitoring	Disposal Monitoring	Hazardous Waste Collection Monitoring	Leaner/Hanger/Stump Removal	DMS Environmental Support	Beach Remediation/Restoration	Right-of-Entry Administration	Marine/Waterway Debris Removal I	Data Collection/ Management/ Billing/ Invoicing	FEMA Compliance Monitoring & Audit Oversight	FEMA Reimbursement	Automated Debris Management System
<b>USACE/Elmore County, AL</b>		33,220		•	•										
USACE/Tuscaloosa County,		18,878		•	•										

<sup>\*</sup> Cubic yardage volume converted from tons using FEMA conversion ratio

# Florida Debris Monitoring Experience

In addition to the projects listed above, our team has assisted numerous communities in Florida with response and recovery efforts following Hurricanes Charley, Frances, Jeanne, Ivan, Dennis, Katrina, and Wilma. Our team has been called upon by Collier, Lake, Miami-Dade, Monroe, Pasco, Polk, Santa Rosa, Sarasota, and Volusia Counties as well as the Cities of Boca Raton, Daytona Beach, Fort Lauderdale, Marathon, Naples, Pembroke Pines, Pensacola, Plantation, and Sarasota to provide debris monitoring services and grant application, administration, and management. Since 2004, our team has monitored the collection and removal of almost 30 million CYs of debris in Florida. Tetra Tech is proud of our experience in Florida and is committed to successfully managing all phases of debris monitoring for our clients following a debris-generating event.

Exhibit C-5 provides an abbreviated list of projects completed in Florida that are similar in scope and complexity to the service required by the City, including volume of debris collected and the monitoring services rendered. *Tetra Tech can provide additional information upon request.* 

Exhibit C-5: Previous Experience in Florida

		EXHIBIT G-3.11	CVICA	LAPO	1101100		iiuu	I						
Event/Client	Year	Cubic Yardage	Comprehensive Contract Management	Collection Monitoring	Disposal Monitoring	Hazardous Waste Collection Monitoring	Leaner/Hanger/Stump Removal	DMS Environmental Support	Beach Remediation/Restoration	ROE Administration	Marine/Waterway Debris Removal I	Data Collection/ Management/ Billing/ Invoicing	FEMA Compliance Monitoring & Audit Oversight	FEMA Reimbursement
		90	Ö	S				Δ	В	œ	≥	ᅀᅩ	μО	LL.
TROPICAL STORM DEBBY – 2012  Total Cubic Yards of Debris – 7,253   Total Clients – 3														
Clay County, FL	2012	3,777												
Pasco County, FL	2012	2,583		_									_	
New Port Richey, City of, FL	2012	893		_								_	_	
TROPICAL STORM FAY – 2008														
Total Cubic Yards of Debris – 50,000   Total Clients – 3   Representative Florida Projects:														
St. Johns County, FL	2008	30,000		•								•		
Leon County, FL	2008	20,000		•										
GROUNDHOG DAY TORNADO	OES - 2007													
Total Cubic Yards of Debris -	· 281,000   To	otal Clients – :	2											
Lake County, FL	2007	144,000	•				•				•			
Volusia County, FL	2007	137,000	•				•							•
HURRICANE WILMA – 2005														
Total Cubic Yards of Debris -	8,914,000	Total Clients	- 17	Repre	senta	tive F	lorida	Proje	ects:					
Miami-Dade County, FL	2005	3,000,000					•							•
Pembroke Pines, City of, FL	2005	930,000		•			•							•
Fort Lauderdale, City of, FL	2005	901,000					•		•					•
Plantation, City of, FL	2005	811,000		•	•		•	•						•
Boca Raton, City of, FL	2005	646,000	•	•										•
Hollywood, City of, FL	2005	600,000		•			•					•	•	•
Naples, City of, FL	2005	400,000					•							•
HURRICANE RITA – 2005														
Total Cubic Yards of Debris -			- 3   R	epres	entati	ive Flo	orida I	Proje	cts:					
Monroe County, FL	2005	200,000	•									•	•	
HURRICANE KATRINA – 2005														
Total Cubic Yards of Debris -			- 11	Repre	senta	tive F	lorida	Proje	ects:					
Miami-Dade County, FL	2005	2,500,000	•	-										
Plantation, City of, FL	2005	450,000												

Event/Client	Year	Cubic Yardage	Comprehensive Contract Management	Collection Monitoring	Disposal Monitoring	Hazardous Waste Collection Monitoring	Leaner/Hanger/Stump Removal	DMS Environmental Support	Beach Remediation/Restoration	ROE Administration	Marine/Waterway Debris Removal I	Data Collection/ Management/ Billing/ Invoicing	FEMA Compliance Monitoring & Audit Oversight	FEMA Reimbursement
Fort Lauderdale, City of, FL	2005	400,000	•								•			
Hollywood, City of, FL	2005	360,000												
Monroe County, FL	2005	200,000												
HURRICANE DENNIS – 2005														
Total Cubic Yards of Debris – 3,917,267   Total Clients – 5   Representative Florida Projects:														
Santa Rosa County, FL	2005	1,708,085	•											
Escambia County, FL	2005	1,589,182	•					•			•			
Pensacola, City of, FL	2005	400,000	•					•			•			
Monroe County, FL	2005	200,000	•											•
<b>HURRICANE JEANNE – 2004</b>														
Total Cubic Yards of Debris -	350,000   To	otal Clients –2	2											
Orlando, City of, FL	2004	250,000	•					•						
Lake County, FL	2004	100,000	•											•
HURRICANE IVAN- 2004														
Total Cubic Yards of Debris -	7,475,554	Total Clients	- 3											
Escambia County, FL	2004	5,385,084	•								•			
Pensacola, City of, FL	2004	1,381,670	•				-				•			
FL Dept. of Transportation	2004	708,800												
<b>HURRICANE FRANCES – 200</b>	4													
Total Cubic Yards of Debris -	500,000   To	otal Clients -	2											
Orlando, City of, FL	2004	300,000	•					•						
Boca Raton, City of, FL	2004	200,000	•											•
HURRICANE CHARLEY – 200	4													
Total Cubic Yards of Debris -	1,652,200	Total Clients	<b>- 2</b>											
Orlando, City of, FL	2004	1,035,500	•					•				•		
Lake County, FL	2004	616,700	•									•		
TROPICAL STORM GABRIEL	LE – 2001													
Total Cubic Yards of Debris -	150,000   To	otal Clients -	1											
Sarasota County, FL	2001	150,000	•											

# 12. List the following information concerning all contracts in progress as of the date of submission of this bid. (in event of co-venture, list the information for all co-ventures.)

Exhibit C-6 below provides a list of current active projects.

Exhibit C-6: List of Active Projects

Name of Project	Owner	Value	Contracted Completion Date	% of Completion to Date
Disaster Debris Monitoring Services resulting from the May 2015 Severe Storm and Flooding	City of Houston, TX	\$2,000,000	December 31, 2015	90%
Disaster Debris Monitoring Services resulting from the May 2015 Severe Storm and Flooding	Hays County, TX	\$535,137	October 31, 2015	95%
Private Property Debris Removal Project Implementation Assistance resulting from the May 2015 Severe Storm and Flooding	Hays County, TX	\$303,970	December 31, 2015	1%
Disaster Debris Monitoring Services resulting from the May 2015 Severe Storm and Flooding	Caldwell County, TX	\$158,569	September 30, 2015	99%
Disaster Debris Consulting and Program Management and Debris Removal Monitoring Services resulting from the May 2015 Severe Storm and Flooding	Texas State University, TX	\$164,376	November 30, 2015	25%

# 15. What equipment do you own that is available for the work?

# **Equipment and Supplies**

Tetra Tech understands the critical nature of asset management and logistics following a disaster. To support timely mobilization, we maintain an inventory of the equipment and resources required following a disaster event. The inventory is checked and tested annually to verify readiness. *Tetra Tech maintains a warehouse located in Orlando, Florida, with over 120 fully stocked bays of debris monitoring supplies capable of supporting over 50 simultaneous recovery operations for over 90 days.* Many of the critical resource items we use during a recovery effort are housed at this location, which will allow Tetra Tech to begin deploying resources 24 hours prior to landfall within a 100-mile perimeter of expected impact to safely stage equipment and personnel away from the direct path of the storm.

In addition to our warehouse, Tetra Tech owns a fleet of project-ready supply and satellite trailers that can be mobilized at a moment's notice. Our team has consistently deployed large-scale mobilizations of hundreds of staff and thousands of dollars' worth of equipment to multiple clients in a matter of days and on very short notice.

Exhibit C-7 lists available equipment and facilities readily available upon activation.

**Exhibit C-7: Resource List** 

Field Documents* Currently in our warehouse	
ADMS Handheld Units	825
Time and Materials Forms	9,446
Truck Certification Forms (printer rolls)	1,000
ADMS Ticket Stubs	530,000
Haul Out Ticket Stubs	50,000
Placards	4,500
Kits	
Project Manager Kits (1 per 100 monitors)	40
Project Coordinator Kits (1 per 100 monitors)	20
Human Resources Kits (1 per 100 monitors)	40
Collection Monitor Kits (1 per 25 monitors)	90
Disposal Monitor Kits (1 kit per disposal site)	40
Leaner/Hanger/Stump Kits (1 per 50 monitors)	40
Equipment**	
Laptops	250
Air Cards	250
Scanners	35
Printers	45
Mobile Command Office	3
Gas Trucks	To be obtained from pre-contracted vendor
Modular Work Locations	To be obtained from pre-contracted vendor
Generators	To be obtained from pre-contracted vendor
Portable Facilities	To be obtained from pre-contracted vendor

<sup>\*</sup>All field documents are replenished as they are needed. Tetra Tech has several emergency vendors with the ability to fulfill supply needs in 24 hours or less.

# 19. State the names of the proposed project team and include resumes, and give details of his or her qualifications and experience in managing similar work.

Tetra Tech has assembled a team of experienced emergency management, infrastructure, and grant management specialists with hands-on experience in recent disasters and emergencies as well as prevention, mitigation, preparedness, response, and recovery programs. Our disaster recovery professionals are uniquely familiar with the policies, procedures, and requirements associated with providing disaster recovery services subject to Federal Emergency Management Agency (FEMA), Federal Highway Administration (FHWA), U.S. Department of Housing

<sup>\*\*</sup> ADMS units are readily available and can be ordered as needed on a 24-hour turnaround.

and Urban Development (HUD), Natural Resources Conservation Service (NRCS), and other federal agency reimbursement programs.

Our staff members have successfully managed the removal of and reimbursement for over 69 million cubic yards (CYs) of debris as well as the demolition of over 5,000 uninhabitable residential and commercial structures. Our team has monitored and obtained FEMA, FHWA, and NRCS reimbursement on 13 debris removal projects in excess of 1 million CYs of debris and understands the significant resource commitment and effort that is necessary to manage and monitor large-scale debris removal operations for local governments.

Tetra Tech is committed to providing the City with a dedicated and consistent project management team that will expedite recovery efforts in the City by establishing a coordinated and organized approach to debris removal. Our dedicated team is available to the City 365 days per year.

The established working relationship shared by the City and Tetra Tech provides our team with an in-depth understanding of the services the City will require following a disaster event. **Based on this understanding, Tetra Tech has assembled a project team with the qualifications and expertise necessary to support the City following a disaster.** 

# PROFESSIONAL CERTIFICATIONS, TRAINING, AND LICENSING

Tetra Tech is committed to providing our customers with quality technical products and services while meeting the highest level of ethical and regulatory standards and performance in our jobs. In addition, our environmental health and safety program helps our business operate in a manner that protects the health and safety of our employees, customers, business partners, community neighbors, and the environment.

Tetra Tech remains abreast of the latest guidance, issues being debated, and current best practices through participation in expert groups, attendance in training and conference sessions, and working with national experts in disaster recovery operations, emergency management, national security, information technology, public health, transportation, and critical infrastructure protection.

Our proposed team possesses many of the key certifications necessary to provide quality technical services and has completed numerous training courses related to debris operations and emergency management. Some of these include but are not limited to:

- Occupational Safety and Health Administration (OSHA) Disaster Site Worker Course
- OSHA 10-Hour Construction Safety Certification
- OSHA 40-Hour HAZWOPER Certification
- G-202 Debris Management
- Homeland Security Exercise and Evaluation Program (HSEEP) Certified
- IS 100: Introduction to Incident Command System
- IS-120: Introduction to Exercises
- IS-200: Basic Incident Command
- IS-547: Introduction to Continuity of Operations (COOP)
- IS-631: Public Assistance Operations I
- IS-632: Introduction to Debris Operations
- IS-634: Introduction to FEMA's Public Assistance Program
- IS-700: National Incident Management System
- IS-800: National Response Program
- Intermediate Workzone Traffic Control (FDOT)
- Mass Casualty Incident Manager Certification



Additionally, all collection and disposal managers and field supervisors must attend a debris monitoring training session prior to working. These training sessions are delivered by experienced trainers and provide the information required to facilitate accurate field monitoring. Tetra Tech also conducts daily "tailgate" safety sessions with field employees to alert them of potential work hazards and review safe work practices.

## PROPOSED STAFF

# **Senior Management Team**

Our senior management team will provide expert oversight and assistance at critical junctures and is prepared to assist the project management team for the duration of any disaster recovery operation. These individuals bring decades of disaster debris monitoring and reimbursement expertise.

- Mr. Jonathan Burgiel has 30 years of experience in solid waste and disaster recovery. His disaster-related work has included serving as principal in charge of over 30 projects, helping clients throughout the country prepare for, respond to, and recover from natural and human-caused disasters. Mr. Burgiel has provided senior management leadership to the New Jersey Department of Environmental Protection (NJDEP) (Hurricane Sandy); State of Connecticut (Hurricane Sandy); State of Louisiana (Hurricane Isaac); City of New Orleans, LA (Hurricane Katrina Residential Demolition Program); Harris County, TX (Hurricane Ike); and Miami-Dade County (Hurricanes Katrina and Wilma), to name a few.
- Mr. Ralph Natale has overseen response to some of the country's largest debris-generating disasters. He has served as principal in charge for more than 55 projects, managing the removal of over 15 million CYs of debris and over 500,000 hazardous trees. His experience dates back to 2005 following Hurricane Wilma, where he assisted the City of Naples and Collier County with disaster recovery operations when Hurricane Wilma struck his Naples home. He has served as a debris specialist and grant consultant for state and local governments during his nine-year career in the disaster debris industry, including for the State of Connecticut Emergency Operations Debris Task Force following Hurricane Irene and Winter Storm Alfred and the City of New Orleans, Louisiana, following Hurricane Isaac.
- Mr. Oliver Yao has eight years of disaster recovery experience and has supported response efforts to some of the largest disasters to affect the United States, including Hurricanes Katrina, Ike, and Sandy. Mr. Yao is currently responsible for the operational oversight of field projects, which includes automated debris management system (ADMS) implementation, logistics management, safety protocols, and senior management of data and reimbursement support. Mr. Yao has developed a team of seasoned data managers trained on the standard operating procedures he has developed to support project closeout and audit. Mr. Yao is a leading subject matter expert in reimbursement documentation and closeout audit support. In addition, Mr. Yao has assisted numerous local governments in Florida with FEMA appeals following Hurricanes Charley, Frances, Jeanne, and Wilma.
- Mr. Jeff Dickerson has more than 20 years of experience in program management and information technology and is the principal system architect of our ADMS, RecoveryTrac<sup>™</sup>. Mr. Dickerson has managed numerous large disaster response operations with over 1,000 field monitors, coordinated the operation of 24-hour data processing centers (some with nearly 100 personnel), and provided technical support for a debris management database to track over 1,000 trucks and the documentation for over 5 million CYs of debris brought to clients' debris management sites. Mr. Dickerson has led deployment and logistics efforts for some of the firm's largest debris monitoring efforts. Mr. Dickerson will also serve as IT Specialist.
- Mr. John Buri is a versatile emergency management, disaster mitigation, response and recovery, and grant management professional with 12 years of experience. Mr. Buri has provided senior management oversight on 16 major disasters declarations for over 100 clients since 2007, representing over \$1 billion in disaster-related grants. He has responded to numerous large-scale activations and engages with FEMA and state regulatory

- agencies and debris contractors in addition to providing FEMA Public Assistance (PA) consulting for all tasks and activities associated with each disaster recovery operation.
- Mr. Dick Hainje serves as a senior advisor and the former administrator of FEMA Region VII, where he led the region through 60 presidentially declared disasters. Mr. Hainje was the director of operations for Hurricane Charley and was responsible for the entire Florida operations division, which at the time was the largest deployment in FEMA's history. His extensive experience working with senior first responders as well as local, state, and federal elected officials during times of crisis has included providing full briefings to the president of the United States five times at the scene of major disaster operations. He was responsible for creating a long-term community recovery process for FEMA Region VII, which provides heavily impacted communities the opportunity to go through a FEMA-sponsored planning process after a catastrophic incident. Following Hurricane Katrina in 2005, Mr. Hainje was asked by Secretary Chertoff to serve as the deputy Principal Federal Official for the Mid-Atlantic States, where he was involved with every aspect of preparation for all of the states from Georgia to Delaware, including leading major hurricane preparation exercises in FEMA Region IV and FEMA Region III. Mr. Hainje will also serve as FEMA Coordinator/Specialist.

# **Project Management Team**

In addition to our senior management team, our dedicated project management team consists of disaster recovery professionals who are uniquely familiar with the policies, procedures, and requirements associated with providing disaster recovery services. Tetra Tech's staff members constitute an integrated team with unparalleled skills and experience that is uniquely qualified to manage the debris monitoring operations.

- Anne Cabrera will serve as principal in charge for the City. She will be responsible for managing the interactions with the City during times of normalcy, including any pre-season meetings and trainings. Ms. Cabrera will also serve as a consistent point of contact for the City's debris managers and will provide a bridge between any preparedness and post-disaster response activities. Ms. Cabrera has worked on almost every major post-disaster activation since Hurricane Wilma in 2005, where she has served in a variety of roles focusing on reimbursement for more than \$2 billion from the FEMA. In addition to her work with post-disaster recovery operations, Ms. Cabrera has worked with a number of clients on their longer-term financial recovery, including serving as a technical resource to clients during implementation of the FEMA PA program and other federal grant programs and assisting in the preparation, development, and review of FEMA PA project worksheets (PWs) for Categories A-H disaster-related activities, state appeals, and close out processes.
- William McGowen will serve as project manager. He will be responsible for implementation of the specific programs tasked by the City through purchase orders. He will also be responsible for program oversight, task order preparation, forecasting, and quality assurance. Mr. McGowen has 10 years of field experience helping clients respond to and recover from hurricanes, tornadoes, and ice storms with a unique understanding of the eligibility and requirements for accurate reimbursement from the FEMA and other funding agencies, preparing PWs to support debris estimates, and providing guidance regarding the laws, policies, and regulations associated with monitoring debris removal, collection, and disposal during declared disasters. Mr. McGowen is experienced in all aspects of disaster planning and recovery efforts, including mobilizing response teams, permitting temporary debris storage and reduction site (TDSRS) locations, staging logistics, and FEMA compliance monitoring protocol and reimbursement policies.
- Conrad King will serve as deputy project manager/operations manager. He will be responsible for the implementation of Tetra Tech's work plans, dispatch of field personnel, staffing, safety, field logistics, and training. He will verify eligibility, compliance, and collection and disposal operations oversight and coordinate directly with our project manager daily with progress reports and on specific issues. Mr. King has been in some of the most unique and technically challenging projects in the history of the FEMA PA program including the NJDEP waterways debris removal project following Hurricane Sandy, and the modified private property debris removal program in St. John the Baptist Parish, Louisiana, following Hurricane Isaac. He has extensive knowledge of FEMA 325 and 327 guidelines including implementation of right-of-way debris monitoring, debris

- site and tower monitoring, and hazardous tree removal. Mr. King is also one of Tetra Tech's designated staff trainers and is an expert in the operations of our ADMS, where he has trained over 200 field staff on the interworking of the system and its reporting capabilities.
- Jerry Assam will serve as data manager. He will be responsible for multiple functions during debris removal activities, including reporting and quality assurance/quality control of all ADMS documentation in the field along with storing the documentation in preparation for future audits. He will validate documentation and metrics being reported as accurate and on-schedule. Mr. Assam's areas of expertise are demolition documentation management, quality assurance/quality control (QA/QC), database management, management and field supervisor, and reporting. He has an in-depth understanding of FEMA eligibility and documentation requirements. Mr. Assam also has an in-depth understanding of our ADMS, including field implementation, troubleshooting, and reporting.
- Owen Chen will serve as GIS analyst. He will be needed to support several functions during debris removal. Mr. Chen will be called on to produce maps or overlays as a quality control function of our data manager or project manager as custom reports are requested by the City. This may also include field audits or analysis of disposal data as needed. Mr. Chen's areas of expertise are in GIS, documentation management, quality assurance/quality control (QA/QC), database management, and reporting. He has an in-depth understanding of FEMA eligibility and documentation requirements. Mr. Chen also has an in-depth understanding and active field use of our ADMS, including field implementation, troubleshooting, and reporting.
- Paris Atkinson will serve as billing/invoice manager. She will work with our data manager to enter, tabulate, and organize collection and disposal data into FEMA-required formats. She will develop regular updates on the quantities and types of debris collected and will provide quality assurance and quality control processes for the review and verification of field and debris contractor-provided data in support of invoices.
- Kerri O'Dell will serve as public information support manager. Ms. O'Dell possesses more than 10 years of disaster preparedness, emergency planning, and disaster response and recovery experience. Ms. O'Dell excels in delivering projects on-time and within budget. She has assisted numerous local, state and private sector businesses with continuity of operations planning, hazard mitigation planning; exercise design, implementation and evaluation; and recovery planning. Ms. O'Dell is also experienced in providing disaster debris monitoring services, including mobilizing support teams; assisting with staging operations; and managing the scheduling, dispatching and logistics operations of debris cleanup for some of the nation's worst natural disasters. In addition, Ms. O'Dell is highly knowledgeable of federal, state, and local emergency agencies and programs as well as funding sources and reimbursement procedures, having served as project manager on several debris monitoring and emergency management planning projects. She has also been responsible for the development of numerous disaster debris management plans that have been approved for the FEMA PA Pilot Program.

Exhibit C-8 shows our proposed project team organizational structure. Exhibit C-9 shows our area of expertise per personnel.

Exhibit C-8: Project Team Organizational Chart

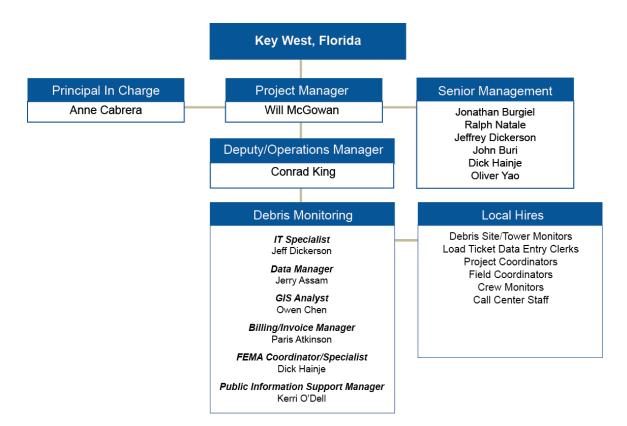


Exhibit C-9: Areas of Expertise

Name	Role	Years of Experience	Florida Experience	Large Project Experience (1M cys)	Private Property/ROE Administration	Waterways Clean-up and Reimbursement	Leaner/Hanger/Stump Removal	Hazardous Material Removal	Vessel and Vehicle Recovery	Asbestos Abatement	Data Management	Hauler Invoice Reconciliation and Contracting	FEMA Reimbursement/PW Development	FEMA Appeals Assistance
Senior Management Team														
Jonathan Burgiel	Vice President, Operations	30		•	•	-	•	•	•	•	•	•	•	•
Ralph Natale	Director, Post Disaster Programs	10			•	•		•	•	•		•		•
Jeff Dickerson	Logistics/IT Manager	20		•		-	•		•		•	•		
John Buri	Director, Post Disaster Programs	12			•	-		•	•	•		•	•	•
Dick Hainje	Senior Advisor, Post Disaster Programs	30				•			•					•
Oliver Yao	Deputy Director, Post Disaster Programs	9		•		•		•		•		•		•
Project Management Team														
Anne Cabrera	Principal In Charge	10												
William McGowen	Project Manager	10		•	•	-			•					•
Conrad King	Deputy Project Manager/Operations Manager	10	•		•	•	•		•		•		•	
Jerry Assam	Data Manager	3			•	-							•	-
Owen Chen	GIS Analyst	2			•		•						•	
Paris Atkinson	Billing/Invoice Manager	9	•			•	•		•		•	-		
Kerri O'Dell	Public Information Support Manager	10												

Résumés have been included at the end of this section.

## **Attachment C: Letters of Reference**





### **Transportation Department**

2525 13th Street, Suite 203 • Boulder, Colorado 80304 • Tel: 303.441.3900 • Fax: 303.441.4594 Mailing Address: P.O. Box 471 • Boulder, Colorado 80306 • www.bouldercounty.org

December 3, 2014

Jonathan Burgiel, Vice President Tetra Tech 2301 Lucien Way, Suite 120 Maitland, FL 32751

RE: Tetra Tech Letter of Recommendation

Dear Jonathan,

On behalf of Boulder County, Colorado, I would like to express my gratitude for Tetra Tech's work as the County's disaster debris monitoring firm.

The flood disaster of September 11, 2013 caused extensive damage throughout Boulder County and surrounding communities. Recognizing the debris removal effort that lie ahead, the County awarded a competitively bid contract to both a debris removal and debris monitoring firm. The two firms completed work in the County for a number of months. When it became time to enter additional phases of debris removal, the County made the decision to re-bid the monitoring contract which resulted in an award to Tetra Tech.

Having the unique ability to be able to compare the work of two debris monitoring firms, I feel confident saying that Tetra Tech's knowledge, professionalism and dedication are a clear differentiator.

Your staff are highly trained and have an in-depth understanding of the specific parameters and guidelines surrounding FEMA eligibility requirements. Most appreciated was the attention Tetra Tech's staff consistently focused on complying with FEMA documentation requirements to maximize reimbursement.

The firm's use of its automated debris management system (ADMS) provided insight into field operations and made accessible to the County data and reporting statistics that assisted us in project oversight. Your system provided unparalleled performance and was a clear distinction in technology from the previous firm. Your team's use of technology, real-time reporting, and knowledgeable on-site staff were critical to the success of this project. In closing, I want to personally thank you for all of your assistance. Your staff is extremely qualified, competent, and highly experienced. Tetra Tech performed above my expectations through this process. I would highly recommend the Tetra Tech for any future debris monitoring projects.

Sincerely,

Brian M. Graham, AICP Flood Recovery Coordinator

Brian M. Dahan



79 Elm Street • Hartford, CT 06106-5127

www.ct.gov/deep

Affirmative Action/Equal Opportunity Employer

January 25, 2013

To Whom It May Concern:

I would like to provide this letter of recommendation for Science Applications International Corporation (SAIC). In 2008, the State of Connecticut contracted with SAIC to provide for the close monitoring of the state's debris management contact operations to ensure that those operations are eligible for FEMA Public Assistance, grant funding, and for USFHWA Emergency Relief Program funding. Since 2008, the State has used their services for two prior significant natural disaster events and now the current storm. The State has been very satisfied with SAIC's execution of their contractual responsibilities.

The State of Connecticut has an Interagency Debris Management Taskforce that provides oversight for preparedness and implementation for responding to disaster debris cleanup. SAIC is a critical member of this taskforce. Once the contract is activated, SAIC's team of professionals immediately mobilize and report to the State Emergency Operations Center and the State's Interagency Debris Management Taskforce. SAIC's level of knowledge related to state-wide contracting, FEMA eligibility, reimbursement, documentation and reporting requirements, intergovernmental coordination, solid waste management, recycling and environmental permitting and regulations, and project close-out is comprehensive thereby ensuring maximum federal reimbursement. SAIC has assisted the State of Connecticut and its municipalities with the monitoring of just over one million cubic yards of debris in the 2011 and 2012 storms Irene, Alfred (October Nor'Easter Snowstorm), and Sandy.

SAIC remains a trusted and proven partner to the State of Connecticut. I would recommend their services and their staff of professionals to any State or municipality seeking debris management and consulting services.

Any questions, please contact me at 860-424-4008.

Sincerely,

-Macky McCleary

**Deputy Commissioner** 



# ST. JOHN THE BAPTIST PARISH

**Natalie Robottom** 

Office of the Parish President

Parish President

February 18, 2013

To Whom It May Concern:

I am pleased to provide a professional reference for Science Applications International Corporation (SAIC), the Debris Monitoring Company providing services to St. John the Baptist Parish in the aftermath of Hurricane Isaac.

SAIC hired and managed the staff required for debris monitoring and continues to provide day-to-day supervision of the debris removal process. They also serve as liaison between the parish and the debris removal contractor. SAIC provides daily reports generated by the Automated Debris Management System (ADMS), which is an electronic system that provides "real time" reports, cleaner paperwork (less human error), and a much more reliable system for audit purposes.

Early morning reports detail the daily schedule, previous day's activities, as well as daily and cumulative totals of debris removed. SAIC also provides mid-day reports to keep the parish abreast of the day's activities. Their supervisors do an incredible job of relaying information to parish administrators, council members and residents, which is important to the process. In addition, their professionalism and experience with debris monitoring has been a huge asset due to the large amount of debris and the total devastation due to Hurricane Isaac.

SAIC performed above expectations throughout this process and I would not hesitate to contract with them again for their services. Again, I am pleased to recommend them to anyone seeking debris monitoring services.

If you have any questions or need additional information, please do not hesitate to contact me at (985) 652-9869.

Sincerely,

Natalie Robottom

Netalie Rebitten

Parish President



#### DEPARTMENT OF TRANSPORTATION 1700 NORTH MAIN STREET SUFFOLK, VIRGINIA 23434

Gregory A. Whirley Commissioner

July 19, 2012

Science Applications International Corporation 2301 Lucien Way, Suite 120 Maitland, Florida 32751

Re: Letter of Recommendation

On August 27, 2011, Hurricane Irene made landfall as a Category 1 storm along the coast of North Carolina and Virginia. Although the storm hit our area as a small categorical storm it caused widespread damages over numerous cities and counties resting in the state of Virginia. The Hampton Roads District footprint was the hardest hit in our state. Hurricane Irene has become the 5<sup>th</sup> costliest storm in U.S. history. The Hampton Roads District felt damages in all 9 counties and in all 8 cities. The damages just in our district reached millions of dollars in cleanup cost and affected the quality of life in the coastal portions of our state. The Hampton Roads District collected 250,000 cu yds of debris, removed thousands of leaner's and hangers from tree damage and over 500 stumps.

Prior to landfall we (VDOT Hampton Roads) realized that the manpower that would be needed to monitor the debris removal of this particular storm would stress our workforce beyond its means. We realized that pulling essential personnel to monitor clean up efforts could pose a safety issue to the traveling public and citizens of our district. At that point we entered into a contract with SAIC to monitor the cleanup efforts that resulted from this storm.

SAIC's quick response to our specific needs were a true asset to the Commonwealth of Virginia, specifically the Virginia Department of Transportation. There were so many facets of this cleanup effort that your company provided to us that it would be difficult to mention each item specifically. Every day we were faced with new challenges that included right a way cleaning, customer complaints, temporary dump site coordination, safety issues, special traffic control issues, financial recovery efforts with FEMA and FHWA, etc. And your company answered the call each and every time.

I want to personally thank you for assisting the Commonwealth of Virginia in monitoring as well as the public assistance portion of the cleanup efforts of this costly and destructive storm. Your staff showed true professionalism and resolve over the 8 month process to clean up and restore the communities this storm impacted.

In closing, based on the experience I personally had in working with your company over the past 11 months since that sunny day in August 2011 when our paths crossed, I can truly recommend you for any future monitoring/management services related to disaster recovery.

Respectfully

Timothy Morrison

Virginia Department of Transportation

Hampton Roads District

District Maintenance Program Manager

1700 N. Main Street Suffolk Virginia 23434

## City of Galveston



### **Public Works Department**

P.O. Box 779 / Galveston, Texas 77553

December 1, 2008

To Whom It May Concern:

On September 13, 2008, Hurricane Ike made landfall in Galveston, Texas. The storm brought with it a storm surge that caused devastating flooding throughout the island. Following the storm's passing, it became apparent that the City would be facing a massive recovery effort.

The City called upon Beck Disaster Recovery (BDR) through a pre-position contract to assist with the process of documenting debris removal efforts in support of FEMA reimbursement. Senior BDR staff were on site immediately upon notification from the City that they were cleared to enter upon the island. For the first several days, BDR staff assisted the City in documenting emergency roadway clearance activities. BDR subsequently assisted the City with a wide range of activities including debris hauler contract negotiations, right of way debris monitoring, debris staging area permitting, household hazardous waste monitoring, and the monitoring of vehicle removal.

In sum, the scope of BDR's debris monitoring efforts was as follows:

- 1.2 million cubic yards of mixed debris and sand
- 2,900 hangers from hazardous trees
- · 1 million pounds of household hazardous waste
- 45,000 white goods
- 6,000 television sets / monitors

The estimated debris removal costs for the City are in excess of \$45 million.

The City of Galveston has been very pleased with the responsiveness, professionalism, and knowledge base provided by BDR. The City has benefited tremendously from BDR's vast experience in the disaster recovery business. We would highly recommend BDR for disaster recovery monitoring and consulting services to any other entity that has the misfortune of experiencing a natural disaster such as Hurricane Ike.

Sincerely,

City of Galveston, Texas

Brandon Wade, MPA, P.E. Deputy City Manager



miamidade.gov

Mr. Jonathan Burgiel Leidos, Inc., BDR Division 2301 Lucien Way Suite 120 Maitland, FL 32751 **Public Works and Waste Management** 

2525 NW 62nd Street • Suite 5100 Miami, Florida 33147 T 305-514-6666

> 111 NW 1st Street • Suite 1610 Miami, Florida 33128 T 305-375-2960

Subject: Letter of Recommendation

Dear Mr. Burgiel,

Following Hurricanes Katrina and Wilma in 2005, Miami-Dade County selected R.W. Beck (Beck), now part of Leidos, Inc., to provide debris management services. Your team diligently monitored and coordinated the debris removal efforts of the County's thirty two (32) prime contractors. This effort required strong coordination of contractor activities, distribution of police grids, GIS progress mapping, and reconciliation of over five hundred (500) contractor invoices and over 100,000 load tickets. Your team's extensive understanding of debris removal operations and FEMA and other reimbursement agency requirements gave us the confidence we needed to allow us to focus on our day-to-day business operations.

During the clean-up process, Beck was able to help the County to respond to the high standards of the community, completing the first pass by Thanksgiving and completing the entire clean-up by the Christmas Holiday. In total, Beck monitored and managed the removal of over 2.6 million cubic yards of debris. My understanding is the Beck team also managed a comprehensive leaner and hanger removal program for the Miami-Dade School District and Parks Department.

The County was also impressed with your firm's commitment to put displaced workers from the local community back to work. Your firm hired approximately 1,000 local residents at the peak of operations in an ongoing effort to boost our local economy and provide employment opportunities to those in need.

The County thanks your team for its tireless efforts, not only at the onset of the project, but also through the FEMA audit process and project closeout. We sincerely appreciate your team's dedication, responsiveness, professionalism, and assistance during our time of need. We would highly recommend Beck to any community that is faced with the enormous challenge of collecting and disposing of the debris from any natural or manmade disaster, particularly on a large scale and under unique or special circumstances.

Sincerely,

Paul J. Mauriello, AICP

Assistant Director for Waste Operations

Miami-Dade County, Florida

Office - 305.514.6623

Cell - 786.351.0307



November 18, 2013

Leidos, BDR Division 2301 Lucien Way, Suite 120 Maitland, FL 32751

Dear Sir or Ma'am:

Beck Disaster Recovery was selected to manage and provide debris monitoring and recovery support for the City of Orlando in the immediate aftermath of Hurricanes Charley, Frances, and Jeanne in 2004. The Orlando area was severely impacted by these three successive major storms and excellent performance of BDR contributed greatly to the timely recovery of our City. The BDR team provided a full range of debris monitoring and support services to assist Orlando's return to normal business. Since 2004, BDR has successfully supported the City through several levels of FEMA and FHWA audits.

BDR has continued to support Orlando's disaster preparedness and planning process by participating in annual training drills and exercises at no charge to the City. This training and support is important to Orlando's efforts to be ready for any disaster we might face.

In 2012, BDR was selected by the City to continue as our primary contractor for debris monitoring and disaster support services.

I have been the Debris Manager since 2004, including Charley, Frances and Jeanne, and am glad to answer any specific questions regarding the performance of the BDR team. If you have any questions, please call me at 407.246.2314 or mail at <a href="Michael.carroll@cityoforlando.net"><u>Michael.carroll@cityoforlando.net</u></a>.

Sincerely,

Mike Carroll

MWland

Solid Waste Division Manager



### CITY OF RAPID CITY

#### **RAPID CITY, SOUTH DAKOTA 57701**

#### **Public Works Department**

300 Sixth Street
Telephone: (605) 394-4165 FAX: (605) 355-3083
Web: www.rcgov.org

March 20, 2014

Mr. Jonathan Burgiel Leidos, Inc., BDR Division 2301 Lucien Way Suite 120 Maitland, FL 32751

Subject: Letter of Recommendation

Dear Mr. Burgiel,

In October 2013, Winter Storm Atlas covered our City with over 20 inches of snow leaving behind a trail of debris and over 8,000 hazardous hanging limbs and trees. Leidos was selected to assist the City with debris monitoring services immediately following the storm. Within hours, your team deployed to the City and began monitoring debris removal operations. The firm's use of its automated debris management system (ADMS) provided City staff with real-time information and aided in expediting the debris removal effort.

Additionally, from the beginning it was evident that your staff has an in-depth understanding of FEMA reimbursement guidelines and eligibility requirements. The City elected to participate in FEMA's Public Assistance Alternate Procedures program for debris related activities through which FEMA reimburses a greater cost share for expedited debris removal operations. Thanks to your team's timely response and review of the necessary documentation we were able to obtain an increased cost share representing a significant savings to the City.

In closing, the City sincerely appreciates your team's dedication, responsiveness, professionalism, and assistance during our time of need. I would highly recommend your firm to any community that is in need of debris monitoring services.

Sincerely,

Terry Wolterstorff, P.E.

en Wollisterf

Public Works Director



## Attachment C: Resumes





## Jonathan Burgiel Vice President, Operations

#### **EXPERIENCE SUMMARY**

As Vice President, Mr. Burgiel manages the business operations of all disaster recovery efforts, including preparedness planning, project staffing, logistics, grant administration and agency reimbursement support, program accounting/auditing oversight, and contract negotiations. Mr. Burgiel is dedicated to helping communities plan for and recover from disasters and provide the necessary documentation to receive the maximum allowable reimbursement from federal and state emergency management agencies.

Mr. Burgiel has 30 years of solid waste and disaster recovery experience. His disaster-related work has included serving as principal in charge of over 30 projects, helping clients throughout the country prepare for, respond to, and recover from natural and human-caused disasters.

Mr. Burgiel is intimately familiar with local, state, and federal solid waste and hazardous waste regulations, as well as U.S. Department of Housing and Urban Development (HUD), Federal Emergency Management Agency (FEMA), and Federal Highway Administration (FHWA) policies and reimbursement procedures as they relate to disaster management and recovery.

#### RELEVANT EXPERIENCE

Mr. Burgiel has provided senior management oversight to the following projects:

- New Jersey Department of Environmental Protection (NJDEP) Hurricane Sandy Disaster Vessel Recovery Program
- State of Connecticut Hurricane Sandy Disaster Debris Program
- State of Louisiana Hurricane Isaac Disaster Debris Program Management
- City of New Orleans, Louisiana Hurricane Katrina Residential Demolitions
- Bastrop County, Texas Wildfires
- City of Cedar Rapids, Iowa Severe Flooding

#### Senior Management (April 2012-May 2013)

#### State of Vermont | Federal Grant Management Services

Following Hurricane Irene, the State of Vermont faced the daunting task of maintaining critical operations. Under Mr. Burgiel's direction, within 48 hours our team deployed a team of experts to the state emergency operations center (EOC). Mr. Burgiel and our grant management team provided consulting services and managed the recovery process. Our team collected, reviewed, and offered technical assistance to applicants on their Hazard Mitigation Grant Program (HMGP) applications.

#### **EDUCATION**

University of Central Florida Master of Business Administration, 1989

Tufts University Bachelor of Arts, Economics, 1984

#### **AREA OF EXPERTISE**

- Solid and Hazardous Waste Management
- Disaster Recovery Program Management
- Federal Grant Management

#### **DISASTERS**

- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 4029 TX Wildfires
- 4024 Hurricane Irene
- 4106 CT Winter Storm
- 1791 Hurricane Ike
- 1786 Hurricane Gustav
- 1780 Hurricane Dolly
- 1679 FL Tornados
- 1606 Hurricane Rita
- 1609 Hurricane Wilma
- 1602 Hurricane Katrina
- 1595 Hurricane Dennis
- 1561 Hurricane Jeanne
- 1551 Hurricane Ivan
- 1545 Hurricane Frances
- 1539 Hurricane Charley

#### YEARS OF EXPERIENCE

30 years

#### Senior Management (September 2008-January 2009)

#### Harris County, Texas | Hurricane Ike Disaster Debris Program Management

In 2008, Hurricane Ike made landfall in Texas, causing extensive damage to Harris County, the fourth largest county in the United States. Mr. Burgiel rode out the storm in Harris County's EOC and assisted with the deployment of our response team following the storm. Our team assisted with monitoring and cost reimbursement for over 2.5 million cubic yards of debris from the public right-of-way (ROW) in response to Hurricane Ike.

#### Senior Management (September 2004-September 2009)

#### City of Orlando, Florida | Disaster Debris Program Management

Mr. Burgiel served in a senior leadership role and assisted the City of Orlando with a range of storm recovery monitoring and management activities. Mr. Burgiel was responsible for managing a full support team involved with staging operations, load inspections for storm debris cleanup performed by contract haulers, scheduling, dispatching, and logistics operations for the field inspectors assigned to storm debris cleanup. Our team's assistance enabled the City of Orlando to promptly apply for and receive reimbursement for the total cleanup cost from state and federal emergency management agencies.

#### **Senior Management (February-April 2007)**

Volusia County, Florida | Groundhog Day Tornado Disaster Recovery and Storm Debris Removal
Our team was retained by Volusia to assist with monitoring of cleanup efforts following the Groundhog Day
tornadoes that swept through Central Florida during the early morning hours, leaving 20 people dead and many
others injured and without homes. Under Mr. Burgiel's direction, our team mobilized a response team to the area
to help identify critical debris removal areas and initiate its ROW debris removal operation. Mr. Burgiel oversaw
the management of a full support team involved with staging operations, load inspections for storm debris
cleanup, and logistics operations for the field inspectors.

#### Senior Management (August 2005-October 2006)

Miami-Dade County, Florida | Hurricanes Katrina and Wilma Disaster Recovery and Debris Management After Hurricanes Katrina and Wilma struck Miami-Dade County, our team provided immediate on-site assistance and a wide range of disaster recovery management and storm debris cleanup monitoring services to help Miami-Dade County make a quick recovery. Under Mr. Burgiel's direction, our team assembled and deployed a full disaster recovery team to assist Miami-Dade County with removal of approximately 5.5 million cubic yards of debris. Mr. Burgiel oversaw the data management process and assisted Miami-Dade County with FEMA project worksheets and appeals.

#### **Senior Management (August 2004)**

Polk County, Florida | Hurricane Charley Program Management and Disposal Site Monitoring Assistance In the weeks following Hurricane Charley, Mr. Burgiel assisted Polk County with planning and managing disposal site monitoring activities. He was responsible for overseeing disposal site monitors, as well as spotters at Polk County's northeast, north central, and southeast landfills. Mr. Burgiel managed documentation efforts to help Polk County promptly apply for and receive reimbursement for the total cleanup cost from state and federal emergency management agencies.

#### Senior Management (September 2005-September 2008)

#### City of Pensacola, Florida | Hurricane Ivan Disaster Debris Program Management

Mr. Burgiel provided assistance to the City of Pensacola in performing a range of storm debris removal monitoring and management activities for this \$30 million debris removal process. Mr. Burgiel supervised debris removal efforts, including permitting of debris processing sites, collection and disposal site monitoring as required by FEMA, review and approval of contractor invoices, and the preparation of project worksheets required by FEMA for federal funding.



## Ralph Natale Director, Post Disaster Programs

#### **EXPERIENCE SUMMARY**

Mr. Ralph Natale is the Director of Post Disaster Programs for Tetra Tech, Inc. He provides daily project support, project oversight, guidance on health and safety, reimbursement policies, and fraud prevention protocols.

Mr. Natale has served as a principal in charge, project manager, data manager, and operations manager on some the of country's largest debrisgenerating disasters, including Hurricane Katrina, lke and most recently Sandy. This includes managing the removal of over 15 million cubic yards (CYs) of debris and 500,000 hazardous trees totaling over \$500 million dollars of reimbursed invoices.

#### RELEVANT EXPERIENCE

#### **Debris Specialist/Grant Consultant**

Mr. Natale has served as a debris specialist and grant consultant for states and local governments during his nine year career in disaster debris industry. This includes working on the State of Connecticut Emergency Operations Debris Task Force during the recovery operations following Hurricane Irene and Winter Storm Alfred.

Mr. Natale has also served as a project manager or operations manager on the following projects:

- City of Houston, Texas | Hurricane Ike (June 2009 Present)
- City of New Orleans, Louisiana | Hurricane Isaac (September December 2012)
- Texas Department of Transportation | FHWA-ER Statewide Training (January – July 2010)
- Connecticut Department of Transportation | Winter Storm Alfred (October 2011 – July 2012)
- State of Connecticut | IDMTF Task Force (August 2010 Present)
- Boulder County, Colorado | 2013 Floods (October 2013 Present)

#### Senior Management/Principal in Charge

Mr. Natale has focused his efforts on developing and improving our program management processes. These processes ensure the most efficient methods of managing debris removal programs to maximize federal reimbursement via the Federal Emergency Management Agency (FEMA) 325, and 327 guidelines. As a senior manager, Mr. Natale ensures quality control and quality assurance of our project mangers' deliverables always refining our project mangers work product.

#### **EDUCATION**

New Jersey Institute of Technology Bachelor of Science, Chemical Engineering (in progress)

#### **AREA OF EXPERTISE**

- Debris Removal Planning
- Debris Removal Monitoring
- Private Property Right-of-Way Debris Monitoring

#### **GRANT EXPERIENCE**

- FEMA PA
- NRCS EWP
- FHWA ER

#### **DISASTERS**

- 4145 CO Flooding
- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 4029 TX Wildfires
- 4024 Hurricane Irene
- 4106 CT Snow Storm
- 3268 NY Snowstorm
- 1971 AL Tornadoes
- 1791 Hurricane Ike
- 1786 Hurricane Gustav
- 1780 Hurricane Dolly
- 1763 IA Flooding
- 1609 Hurricane Wilma
- 1602 Hurricane Katrina

#### TRAINING/CERTIFICATIONS

- OSHA 40-Hour Asbestos Training
- IS-632: Debris Operations
- HSEEP-Certified
- OSHA Asbestos Health and Safety
- IS-30: Mitigation Grants System
- IS-100, 200, and 700: ICS and NIMS
- IS-630: Intro to the PA Process
- IS-631: PA Operations

#### YEARS OF EXPERIENCE

9 years

#### State of New Jersey | Hurricane Sandy Disaster Recovery Operations (October 2012 – January 2013)

Mr. Natale supported the debris monitoring efforts for 7 separate municipalities and state agencies following Hurricane Sandy. These clients included the City of Newark, City of Sayreville, Ocean Township, and the New Jersey Parks Department.

### State of Connecticut | Hurricane Sandy Statewide Debris Monitoring Operations (October – December 2012)

Mr. Natale oversaw statewide debris monitoring operations in response to Hurricane Sandy. Over 100 miles separated the 9 municipalities that our team responded to including the Town of Fairfield, City of New London, and the Town of Greenwich.

### City of New Orleans; Jefferson Parish; and St. John the Baptist Parish, LA | Hurricane Isaac Debris Monitoring Operations (September – December 2012)

Mr. Natale oversaw the debris monitoring efforts following Hurricane Isaac. During this effort, our team monitored the collection and disposal of over 670,000 cubic yards of debris. Mr. Natale coordinated with several local governments including the City of New Orleans, Jefferson Parish and St. John the Baptist Parish.

### State of Connecticut | Winter Strom Alfred Statewide Debris Monitoring Operations (October 2011 – April 2012)

Mr. Natale oversaw efforts to coordinate with 12 individual local governments and 45 Connecticut Department of Transportation Towns to collect more than 1.5 million cubic yards of vegetative debris and remove over 100,000 hazardous trees.

Mr. Natale has also served to provide senior management on the following projects:

- City of New Orleans, Louisiana | Hurricane Katrina Residential Demolitions (April 2010 Present)
- Bastrop County, Texas | Wildfires (September 2011 August 2013)
- City of Cedar Rapids, Iowa | Severe Flooding (May 2010 June 2011)
- University of Iowa | 2008 Severe Flooding (March 2012 Present)
- City of Houston, Texas | Standing Dead Trees (May 2010 June 2011)
- Terrebonne Parish, Louisiana | Hurricane Ike (July 2010 February 2011)
- State of Connecticut Hurricane Irene (9/20 11/20)

#### **Project Management**

On large debris projects, Mr. Natale will be temporally relieved of his practice manager duties by senior management support and focus on the management of a single project. As a result, Mr. Natale has managed some of the largest debris generating projects in the Country with great success.

### New Jersey Department of Environmental Protection (NJDEP) | Hurricane Sandy Waterway Debris Removal Project (February 2013 – January 2014)

Mr. Natale developed and implemented many of the protocols and procedures to effectively manage the wet debris removal process. This has included the implementation of our proprietary automated debris management system (ADMS) technology, which has increased NJDEP's visibility to the day-to-day operations and provided real-time reporting of debris quantities. Due to Mr. Natale's excellent project management, NJDEP then tasked our team with monitoring the sediment removal process in the northern and southern region.

### Connecticut Department of Transportation | Winter Storm Alfred Statewide Response (October 2011 – April 2012)

Mr. Natale oversaw a statewide operation that covered state roadways in 45 towns though western Connecticut. This program required side by side debris tracking of FEMA and FHWA crews. Debris removal costs were nearly 50 million dollars with over 500,000 CYs collected and 45,000 hazards trees removed.





#### **EXPERIENCE SUMMARY**

Mr. Jeffrey Dickerson has more than 20 years of experience in program management, with extensive experience in technical organizational management, training and readiness exercises. He is a 20+ year military veteran with skills in leadership, training, and personnel development. As the Director of Logistics and Software Application Systems, Mr. Dickerson is responsible for the planning, deployment, and support of emergency response operations for the firm.

Previously, Mr. Dickerson served as a Director of Information Technology (IT), where he led a team of 18 professionals and was responsible for the operation and management of the corporate network with a multimillion dollar budget. Mr. Dickerson led the analysis, design, installation, and testing of numerous computer networks. Additionally, he managed complex projects involving installation, testing, and repair of power generation equipment and nuclear power plant control and instrumentation.

Mr. Dickerson is intimately familiar with disaster response field and data operations. Mr. Dickerson has led deployment and logistics efforts for some the firm's largest debris monitoring efforts, including projects in Houston, Texas; Miami-Dade County, Florida; and the States of Connecticut, Virginia, North Carolina, Louisiana, and South Dakota.

Mr. Dickerson has managed numerous large disaster activities with over 1,000 field monitors, coordinated the operation of a round-the-clock data processing centers—some with over 90 personnel, and provided technical support for a debris management database to track the over 1,000 trucks and documentation for over 5 million cubic yards of debris brought to the client's debris management sites (DMS).

Mr. Dickerson has led the development and support of our automated debris management system (ADMS), RecoveryTrac<sup>™</sup>. RecoveryTrac<sup>™</sup> is a powerful suite of applications and mobile tools designed to simplify the collection of field documentation and increase the overall efficiency of monitoring debris removal efforts. RecoveryTrac<sup>™</sup> geospatial information system (GIS)-based reporting and analysis tools provide industry first GIS web service data feeds enabling direct integration into client GIS emergency management systems.

#### RELEVANT EXPERIENCE

## ADMS Application Manager (February 2014–May 2014) States of Georgia and South Carolina | Winter Storm Pax Disaster Debris Program Management

Mr. Dickerson managed the logistics and deployment of ADMS technology to 7 county and local clients in a multi-state activation, including over 265 handheld devices for over 110,000 hazardous limb and tree removals and over 1,000,000 cubic yards of debris. Advanced GIS web services and data

### Jeffrey Dickerson Logistics/IT Manager

#### YEARS OF EXPERIENCE

20 years

#### **AREA OF EXPERTISE**

- GIS Technology
- Resource Deployment and Tracking
- Readiness Training and Exercises
- Disaster Operations Support
- 20+ Years Military Experience

#### **DISASTERS**

- 4145 CO Flooding
- 4115 SD Winter Storm
- 4087 Hurricane Sandv
- 4084 Hurricane Isaac
- 4029 TX Wildfires
- 4024 Hurricane Irene
- 4106 CT Winter Storm
- 1791 Hurricane Ike
- 1609 Hurricane Wilma
- 1551 Hurricane Ivan

#### TRAINING/CERTIFICATIONS

- FEMA IS-632, IS-700, IS-922
- MCDBA, Microsoft Certified Database Administrator
- MCSE, Microsoft Certified Network Engineer
- MCT, Microsoft Certified Trainer

#### **EDUCATION**

Thomas Edison University Associate of Science, Nuclear Engineering Technology, 1997

analysis portals were used extensively in managing the projects and public information applications.

#### **ADMS Application Manager (October 2013–December 2013)**

City of Rapid City, South Dakota | Severe Winter Storm Disaster Debris Program Management Mr. Dickerson managed the logistics and deployment of ADMS technology, including over 60 handheld devices for over 7,500 hazardous limb and tree removals and over 100,000 cubic yards of debris. The RecoveyTrac<sup>TM</sup> GIS portal was used extensively for real time quality control of field operations and management of resources. Field operations were completed in less than 50 days, which enabled the City to take advantage of increase cost share funding.

#### **ADMS Application Manager (April 2013–June 2013)**

City of Sioux Falls, South Dakota | Severe Winter Storm Disaster Debris Program Management Mr. Dickerson managed the logistics and deployment of ADMS technology, including over 100 handheld devices for nearly 27,000 hazardous limb and tree removals and over 15,000 tons of debris. RecoveyTrac<sup>™</sup> GIS services provided the City with a real-time data feed of the debris operations that was integrated into the City's emergency operations management portal.

#### **ADMS Application Manager (October 2013–December 2013)**

### State of New Jersey Department Environmental Protection | Hurricane Sandy Disaster Debris Program Management

Mr. Dickerson managed the logistics and deployment of ADMS technology, including over 45 handheld devices for waterway debris and sediment removal for two-thirds of New Jersey's coastline. The RecoveyTrac<sup>™</sup> work documentation module was heavily used to document the step-by-step progress. Over 58,000 photos documenting the collection and disposal of the debris and sediment were recorded.

#### **ADMS Application Manager (August 2012–July 2013)**

St. John the Baptist Parish, Louisiana | Hurricane Isaac Disaster Debris Program Management
Mr. Dickerson managed the logistics and deployment of ADMS technology, including over 120 handhelds units
used by the Parish to expedite the recovery process collecting over 225,000 cubic yards of debris. Detailed
pickup locations and damage reports were used extensively to keep community leaders informed of progress

#### **ADMS Application Manager (September 2011–June 2013)**

#### City of Houston, Texas | Drought & Wildfires Debris Removal Monitoring

Mr. Dickerson managed the multi-year logistics and deployment of ADMS technology, including over 25 handheld devices in a multi-phased removal of thousands of trees following a severe drought documenting over 260,000 cubic yards of debris. His responsibilities include the deployment, support, and staff training of the ADMS mobile system and development of custom mapping and reports.

#### Logistics and Network Operations Manager (October 2011–March 2012)

Connecticut Department of Transportation | Winter Storm Alfred Disaster Management Support Services Following a severe winter storm, Mr. Dickerson managed the logistics and network infrastructure to support the project work for over 11 state, county, and local clients. His responsibilities included coordinating logistics activities and supporting and developing custom data and mapping applications.

#### Logistics and Network Operations Manager (August 2011–June 2012)

#### States of Virginia and North Carolina | Hurricane Irene Debris Removal Monitoring

Following Hurricane Irene, Mr. Dickerson managed the logistics and network infrastructure to support the project work for over 15 state, county, and local clients. His responsibilities included ensuring the availability of application and communication systems to support disaster operations. Logistical responsibilities included arranging travel, accommodations, equipment, and supplies needed to support field operations.



## John Buri Director, Post Disaster Programs

#### **EXPERIENCE SUMMARY**

Mr. Buri is a director of post disaster programs for Tetra Tech, Inc., and a member of our senior management team. His experience over the past 12 years includes emergency management planning, disaster mitigation, response, and recovery consulting on behalf of cities, counties, regional planning councils, and state governments. Mr. Buri has performed a role of senior management oversight manager on 16 major disasters declarations for over 100 clients since 2007 representing over \$1 billion in disaster related grants.

Mr. Buri has a thorough understanding and practical application of industry best-practices and federal guidance governing such efforts including the Stafford Act, Federal Emergency Management Agency (FEMA) Public Assistance (PA), Hazard Mitigation Grant Program (HMGP) and disaster funding strategies for local and state governments. Mr. Buri is also part of our Incident Management Team (IMT) dedicated to responding to our standby clients as part of the team deployed to the impacted region prior to or immediately after a disaster, including being present in the client's emergency operations center (EOC) within 24-48 hours after each incident.

#### RELEVANT EXPERIENCE

### **Subject Matter Expert/Senior Management Oversight (October 2013-December 2014)**

### **Boulder County, Colorado | Full Services Disaster Grant Management Consulting**

Mr. Buri is currently providing subject matter expertise and senior management to Boulder County, Colorado, following the devastating floods that occurred in September 2013. Mr. Buri is providing PA consulting, managing the County's HMGP, and assisting the County with Community Development Block Grant (CDBG) Disaster Recovery (DR) application support. In addition, he is also providing overall management on all debris recovery operational issues for the County.

#### Senior Management Oversight (February 2014-May 2014)

Counties of Barnwell; Colleton; Dorchester; Hampton; Sumter, South Carolina; City of Sumter, South Carolina; City of Augusta, Georgia | Winter Storm Pax Disaster Debris Program Management

Following the destructive effects of Winter Storm Pax in February 2014, our team was tasked with providing disaster debris program management to numerous communities in the States of South Carolina and Georgia. Mr. Buri was instrumental in the immediate deployment of our team and oversaw all disaster recovery operations, including leaner and hanger removal. In addition, Mr. Buri worked with each community to ensure that all eligible reimbursement was captured and documented.

#### **EDUCATION**

Texas State University Master of Arts, Public Administration, 2002

The University of Texas Bachelor of Arts, Government, 2000

#### **AREA OF EXPERTISE**

- Damage Assessment
- Policy and Procurement
- Debris Management
- Disaster Housing
- Grant Application Development
- Grant Accounting Systems
- Audit Process
- Closeout Procedures

#### **GRANT EXPERIENCE**

- FHWA-ER Program
- HUD CDBG-DR
- FEMA PA
- FEMA HMGP

#### **DISASTERS**

- 4166 SC Winter Storm
- 4165 GA Winter Storm
- 4145 Colorado Floods
- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 4029 TX Wildfires
- 4024 Hurricane Irene
- 4022 Tropical Storm Irene
- 4106 CT Winter Storm
- 4064 OK Tornado
- 1969 NC Tornados
- 1931 Hurricane Alex
- 1909 TN Floods
- 1791 Hurricane Ike
- 1786 Hurricane Gustav
- 1780 Hurricane Dolly
- 1735 OK Ice Storm
- 1606 Hurricane Rita
- 1551 Hurricane Ivan
- 1545 Hurricane Frances

#### YEARS OF EXPERIENCE

12 years

#### Subject Matter Expert/Senior Management Oversight (February 2013-January 2014)

New Jersey Department of Environmental Protection | Hurricane Sandy Waterway Debris Removal Project Mr. Buri provided subject matter expertise in the development and implementation of numerous protocols and procedures to effectively manage NJDEP's waterways debris removal program. Mr. Buri oversaw the implementation of our automated debris management system (ADMS) technology, which increased NJDEP's visibility to the day-to-day operations and provided real-time reporting of debris quantities. Due to the excellent senior and project management provided by our team, NJDEP then tasked our team with monitoring the sediment removal process in the northern and southern region.

#### Senior Management Oversight (September 2012-December 2012)

### City of New Orleans, Jefferson Parish, St. John the Baptist Parish, Louisiana | Hurricane Isaac Disaster Debris Program Management

Mr. Buri provided senior management oversight and operational and client support for the debris monitoring efforts following Hurricane Isaac to numerous communities in the State of Louisiana following Hurricane Isaac. During this effort, our team monitored the collection and disposal of over 670,000 cubic yards of debris.

#### Senior Management Oversight (October 2011-April 2012)

#### State of Connecticut | Winter Storm Alfred Disaster Debris Program Management

Mr. Buri provided senior management oversight to the State of Connecticut as a member of the Interagency Debris Management Task Force (IDMTF) at the state emergency operations center (EOC) for Winter Storm Alfred. He worked closely every day with members from Connecticut Division of Emergency Management and Homeland Security, the Connecticut National Guard, Department of Energy and Environmental Protection, and Connecticut Department of Transportation. This involved advising the State of Connecticut on all debris-related issues during response and recovery from the storms and providing operational and client support. In addition, Mr. Buri assisted in the management of12 individual local governments and 45 communities to collect more than 1.5 million cubic yards of vegetative debris and remove over 100,000 hazardous trees.

#### Senior Management Oversight/Client Liaison (September 2011-August 2013)

#### **Bastrop County, Texas | Wildfire Disaster Program Management**

Mr. Buri provided senior management oversight to Bastrop County's disaster recovery operations following the most devastating wildfires in Texas history. With 1,700 structures destroyed, Mr. Buri was vital in obtaining expedited project worksheets, coordinating directly with FEMA to develop disaster-specific documentation protocols, and orchestrating interlocal coordination with county municipalities, electrical co-ops, and regulatory agencies.

#### **Senior Management Oversight (August-December 2011)**

#### State of North Carolina | Hurricane Irene Disaster Debris Program Management

Mr. Buri provided senior management oversight to the State of North Carolina following the impact of Hurricane Irene and was instrumental in all disaster recovery operations. Mr. Buri oversaw a variety of projects for all 16 of our North Carolina clients, including right-of-way debris removal and disposal, removal of dangerous hanging limbs and leaning trees, residential debris disposal, FHWA debris segregation, and FEMA reimbursement.

#### Regional Program Manager (September 2008–September 2010)

### State of Texas – 78 Total Clients | Hurricane Ike Comprehensive Debris Management Operations and FEMA PA Administration and Management

Following Hurricane Ike, Mr. Buri served as regional program manager and provided senior management for approximately 78 clients in the state of Texas. Mr. Buri was instrumental in the immediate mobilization of our team and provided a full range of services and client support to each client. Mr. Buri also provided management and guidance to each client to ensure they received FEMA reimbursement.



### Richard Hainje Senior Advisor, Post Disaster Programs

#### **EXPERIENCE SUMMARY**

Mr. Hainje has spent his entire career in emergency management and has been involved in the deployment of almost every disaster over the last 30 years, including hurricanes, tornados, snow storms, and floods. He maintains strong relationships with state and federal partners, serves in a very critical role where he is involved in every stage of the disaster recovery process with every client, and has a deep passion for working with and assisting government entities with Federal Emergency Management Agency (FEMA) guidelines and federal funding. As a member of Tetra Tech's Incident Management Team (IMT), Mr. Hainje is dedicated to responding to our standby clients as part of the team deployed to the impacted region and focuses on providing senior management oversight to clients prior to or immediately after a disaster. His extensive experience working with senior first responders as well as local, state, and federal elected officials during times of crisis has included providing full briefings to the president of the United States five times at the scene of major disaster operations.

As former regional administrator of FEMA Region VII for eight years, Mr. Hainje was responsible for the preparedness, response, recovery, and mitigation of all disasters in Kansas, Iowa, Nebraska, and Missouri, and led the region through 60 presidentially declared disasters. Over the last 10 years, Mr. Hainje has supervised major emergency operations in Connecticut, Florida, Mississippi, Missouri, Iowa, Nebraska, and Kansas.

Mr. Hainje was the director of operations for Hurricane Charley, which struck Florida in 2004. He was responsible for the entire Florida operations division, which at the time was the largest deployment in FEMA's history. Following the four hurricanes that struck Florida, Mr. Hainje served as director of emergency housing, which was the largest emergency housing operation in more than a decade.

Due to the devastating effects of Hurricane Katrina in 2005, Secretary Chertoff chose principal federal official (PFO) teams for the 2006 hurricane season. Mr. Hainje was asked by Secretary Chertoff to serve as the deputy Principal Federal Official for the Mid-Atlantic States. Mr. Hainje was involved with every aspect of preparation for all of the states from Georgia to Delaware. Mr. Hainje also led the response, recovery, and mitigation for the historic 2008 Midwest flooding event. At the peak, Mr. Hainje was in charge of over 1,000 FEMA employees deployed to this event, briefed the Midwest governors and the president of the United States, as well as many U.S. senators and congresspersons.

Mr. Hainje is an essential member of Tetra Tech's senior management team and is actively involved in the interaction with every client following every

#### **EDUCATION**

Mid American Nazarene University Bachelor of Arts, Management and Human Relations, 2008

Killian College Associate of Science, Fire Science, 1994

#### **AREA OF EXPERTISE**

- Policy/Government Affairs
- Local, State, and Federal Disaster Response and Recovery Funding
- Post-Disaster Emergency Housing
- Grant Writing, Administration, and Implementation
- Regional Response
- Commodity Distribution
- Homeland Security
- Emergency Management and Response

#### **GRANT EXPERIENCE**

- FEMA Public Assistance
- Hazard Mitigation Grant Program
- Community Development Block Grant Program

#### TRAINING/CERTIFICATIONS

- Incident Command System
- Extensive Chief Fire Officer
   National Fire Academy Course
   Work
- Former Emergency Medical Technician

#### YEARS OF EXPERIENCE

30 years

activation, including being present in Joint Field Office (JFO) and engaging with officers to understand the nature of every disaster.

#### RELEVANT EXPERIENCE

#### **Financial Recovery Services Projects**

#### Senior Technical Advisor (October 2013-December 2014)

#### Boulder County, Colorado | Full Services Disaster Grant Management Consulting

Mr. Hainje is currently serving as senior technical advisor to Boulder County, Colorado, following the devastating floods that occurred in September 2013.

#### Principal in Charge (August 2010 – March 2013)

#### State of South Dakota | FEMA PA Closeout Services

As principal in charge, Mr. Hainje oversaw the PA closeout contract, which involved closing out over 200 project worksheets related to public utilities.

#### Principal in Charge (July 2010 – September 2013)

#### Port of Galveston, Texas | Federal Grant Administration

Mr. Hainje is assisting the Port of Galveston on a number of reimbursement-related issues. With Mr. Hainje's assistance, the Port of Galveston has received more than \$40 million in additional federal funding associated with permanent repairs to several of the port's piers following damage from Hurricane Ike in 2008.

#### **Senior Advisor (January – September 2011)**

**Texas Department of Transportation | Comprehensive FEMA PA and Federal Highway Administration** Mr. Hainje worked with the Texas Department of Transportation (TxDOT) and FEMA to resolve a number of outstanding projects, allowing TxDOT to receive millions in eligible funding.

#### Senior Management Oversight (February 2013-January 2014)

New Jersey Department of Environmental Protection | Hurricane Sandy Waterway Debris Removal Project Mr. Hainje was a member of the our staff's IMT for the New Jersey Department of Environmental Protection following Hurricane Sandy, where he met with FEMA officials and state coordinating officers.

#### Senior Debris Consultant and Advisor (October 2012-December 2012)

### State of Connecticut | Hurricanes Irene and Sandy, Winter Storm Alfred Disaster Debris Program Management

Mr. Hainje has assisted the State of Connecticut with debris management as a member of the Interagency Debris Management Task Force (IDMTF) at the state emergency operations center (EOC) for Hurricane Irene, Winter Storm Alfred, and Hurricane Sandy. He worked closely every day with members from Connecticut Division of Emergency Management and Homeland Security, the Connecticut National Guard, Department of Energy and Environmental Protection, and Connecticut Department of Transportation. This involved advising the State of Connecticut on all debris-related issues during response and recovery from the storms. Mr. Hainje was in the EOC working with the IDMTF prior to landfall for Hurricane Irene and Hurricane Sandy.

#### Senior Debris Consultant and Advisor (October 2012-December 2012)

### Multiple Cities and Towns in Connecticut, including the City of Hartford | Hurricanes Irene and Sandy, Winter Storm Alfred Disaster Debris Program Management

After Hurricane Irene, Hurricane Sandy, and Winter Storm Alfred, Mr. Hainje worked directly with Hartford, West Hartford, Manchester, Enfield, Danbury, Greenwich, Fairfield, New London, and several more communities on their debris management activities. Mr. Hainje traveled the state extensively during these operations, working with and advising public officials in more than 25 communities.





## Oliver Yao Deputy Director, Post Disaster Programs

#### **EXPERIENCE SUMMARY**

Mr. Oliver Yao serves as the deputy director of post disaster programs for Tetra Tech, Inc. Mr. Yao has over eight years of industry experience in emergency management, response, and recovery. Mr. Yao is responsible for managing project staffing, financials, operations, and safety of the practice. In addition, Mr. Yao is also responsible for the firm's data management and documentation operations, including project oversight, project reporting, contractor invoice reconciliation, and project close-out and audit support. Mr. Yao has supported response efforts to some of the largest disasters to affect the United States, including Hurricanes Katrina and Ike. Due to his experience, Mr. Yao also has unique knowledge and understanding of federal grant programs, including the Federal Highway Administration (FHWA) Emergency Relief (ER) Program and Federal Emergency Management Agency (FEMA) Public Assistance (PA) Program. This knowledge and experience has aided Mr. Yao in developing and implementing standard operating procedures (SOP) for documentation and data management that assist our clients during closeout and audit.

Mr. Yao also understands all aspects of our automated debris management system (ADMS), RecoveryTrac<sup>™</sup>. Due to his understanding, Mr. Yao is able to support all aspects of the ADMS handhelds, including field deployment, geospatial reporting, and future enhancements.

#### RELEVANT EXPERIENCE

### Senior Management and Data Oversight (February 2014–June 2014)

### **South Carolina | Winter Storm Pax Disaster Debris Program Management**

The jurisdictions of Colleton County, SC; City of Sumter, SC; Sumter County, SC; Dorchester County, SC; and Barnwell County, SC were significantly impacted by Winter Storm Pax. Mr. Yao provided senior management and data oversight to the project managers assigned to the South Carolina projects. With Mr. Yao's support the projects met Tetra Tech standards for project operations, timelines, deliverables, and budgets.

#### Senior Management Oversight (October 2013–December 2013)

### City of Rapid City, South Dakota | Winter Storm Atlas Debris Program Management

Mr. Yao provided senior management oversight for debris monitoring operations in the City of Rapid City, South Dakota. This included the application of our RecoveryTrac<sup>™</sup> ADMS handhelds to monitor and document debris removal activities.

#### YEARS OF EXPERIENCE

8 years

#### **AREA OF EXPERTISE**

- FEMA Reimbursement and Audit Support
- Reimbursement Policies and Procedures
- Disaster Debris Management
- Health and Safety
- Data Management
- FEMA-Compliant Disaster Planning
- RecoveryTrac<sup>TM</sup> ADMS

#### **GRANT EXPERIENCE**

- FEMA PA
- FHWA ER

#### **DISASTERS**

- 4177 AL Tornadoes
- 4166 SC Winter Storm
- 4145 CO Flooding
- 4155 SD Winter Storm
- 4145 CO Flooding
- 4086 Hurricane Sandy
- 4080 Hurricane Isaac
- 4029 TX Wildfires
- 4024 Hurricane Irene
- 1791 Hurricane Ike
- 1786 Hurricane Gustav
- 1780 Hurricane Dolly
- 1679 Tornadoes
- 1676 MO Winter Storms
- 1665 NY Snowstorm
- 1603 Hurricane Katrina

#### **EDUCATION**

Rollins College, Crummer School of Business Master of Business Administration, 2006

Rollins College Bachelor of Arts, Economics, 2003

#### Senior Management and Data Oversight (May 2014–August 2014)

### Blount County; Limestone County, Alabama | Severe Storms and Tornadoes Disaster Debris Program Management

Mr. Yao provided senior management and data oversight to two counties in the state of Alabama following severe storms and tornadoes that affected the area in May. Mr. Yao was responsible for overseeing data management and project deliverables. Mr. Yao also provided the project manager operational and safety guidance.

#### Data Manager (April 2013-August 2013)

#### City of Sioux Falls, South Dakota | Severe Winter Storm Debris Program Management

Mr. Yao was responsible for supporting all data management activities, including the administration of ADMS technology to document debris and hazard removal efforts. During the course of recovery operations, our team documented the removal of approximately 87,000 cubic yards of debris and nearly 27,000 hanging limbs and leaning trees.

#### Regional Data Manager (February 2013–January 2014)

### New Jersey Department of Environmental Protection | Hurricane Sandy Waterways Debris Removal Program Management

Mr. Yao provided data management and oversight of the application of ADMS technology in both the north and south regions of the state as part of long-term recovery efforts to remove disaster debris from waterways throughout the state.

#### Data Manager (April 2011-Ongoing)

#### City of New Orleans, Louisiana | Hurricane Katrina Residential Demolition Program

Mr. Yao served as a data manager and invoice reconciliation analyst for the City of New Orleans. In total, our team has supported the City of New Orleans in monitoring and documenting the demolition of over 1,700 damaged structures following Hurricane Katrina.

#### Senior Management and Data Oversight (March 2014–October 2014)

#### Boulder County, Colorado | Severe Flooding Disaster Debris Program Management

Mr. Yao provided senior management oversight and operational support to the Boulder County, Colorado debris management program. This program presented the unique challenge of removing debris from streams where there was limited access. Mr. Yao also provided integrity monitoring of data in support of consistent project deliverables.

#### Senior Oversight (September 2011–August 2013)

#### Bastrop County, Texas | Wildfire Disaster Program Management

Following the wildfires in Bastrop County, Mr. Yao was responsible for supporting all data management activities associated with the debris collection effort. The project resulted in 750 private property debris removals, the removal of 49,000 burnt trees, and the removal of 15,000 burnt trees from the right-of-way.

#### **Debris Management Consultant (June 2010–August 2013)**

#### Sarasota County, Florida | Pre-Event Disaster Planning Services

For several years, Mr. Yao has supported Sarasota County on a number of pre-event disaster planning services. Mr. Yao performed a review of the debris hauler RFP and also attended client meetings to discuss specialized debris removal activities such as dead animal carcasses.

#### Data Manager (September 2008–September 2011)

#### City of Houston, Texas | Hurricane Ike Disaster Debris Program Management

Mr. Yao was responsible for supporting all data management activities associated with the debris collection effort following Hurricane Ike. He helped install a debris management database to track the huge numbers of trucks and debris loads brought to the City of Houston's temporary debris storage and recovery sites.





### Anne Cabrera Principal In Charge

#### **EXPERIENCE SUMMARY**

Ms. Cabrera has worked on almost every major post-disaster activation since Hurricane Wilma in 2005, where she has served in a variety of roles focusing on reimbursement for more than \$2 billion from the Federal Emergency Management Agency (FEMA). Ms. Cabrera has worked on behalf of cities and counties throughout the United States and is a highly regarded expert in the debris management industry. In addition to her work with post disaster recovery operations, Ms. Cabrera has worked with a number of clients on their longer-term financial recovery, including serving as a technical resource to clients during implementation of the FEMA Public Assistance (PA) program and other federal grant programs and assisting in the preparation, development, and review of FEMA PA project worksheets (PWs) for Categories A-H disaster related activities, state appeals, and close out processes.

As Principal in Charge for the City, Ms. Cabrera will be responsible for managing the interactions with the City during times of normalcy, including any pre-season meetings and trainings. Ms. Cabrera will also serve as a consistent point of contact for the City's debris managers and will provide a bridge between any preparedness and post-disaster response activities.

#### **FEATURED EXPERIENCE**

### PA Consulting/Debris Subject Matter Expert (August 2014-October 2014)

### City of Napa, California | California Earthquake – PA Consulting Services

Ms. Cabrera provided technical assistance and subject matter expertise to the City of Napa, California, following the August 2014 earthquake. Ms. Cabrera assisted the City by identifying FEMA PA eligible work and the required supporting documentation. She then assisted with the development of Category A project worksheets for Federal reimbursement.

#### **Debris Subject Matter Expert (June 2008—Present)**

Broward County, Florida | County-Wide Debris Site Assessments Study Since 2008, Ms. Cabrera has provided consultation and debris subject matter expertise to Broward County in preparation for a potential FEMA declared disaster. Ms. Cabrera has worked closely with many members of various County departments to ensure information has been gathered based on past experiences and improvements made to proactively prepare for managing the execution of a Stafford Act PA Grant Program. In addition to providing management on several County planning projects, Ms. Cabrera has worked with the County's Solid Waste and Recycling accounting department to update their internal database systems to support account reconciliations necessary to control and report on County PW accounts, as well as, the

#### YEARS OF EXPERIENCE

9 years

#### **AREA OF EXPERTISE**

- FEMA Compliance Monitoring
- FEMA Reimbursement
- · Disaster Debris Management
- Reimbursement Policies and Procedures
- Data Management
- Invoice Reconciliation
- Database Systems
- Project Staffing
- Multiagency Coordination

#### **GRANT EXPERIENCE**

FEMA PA

#### **DISASTERS**

- 4145 CO Flooding
- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 4029 TX Wildfires
- 4024 Hurricane Irene
- 4106 CT Winter Storm
- 3268 NY Snowstorm
- 1791 Hurricane Ike
- 1786 Hurricane Gustav
- 1676 MO Winter Storms
- 1679 FL Tornados
- 1609 Hurricane Wilma
- 1602 Hurricane Katrina

#### **EDUCATION**

Florida Atlantic University Master of Business Administration, International Business, 2011

Bachelor of Arts, Liberal Arts, 1999

disposal accounts for the 31 separate applicant municipalities that may use the County solid waste disposal sites in a declared disaster event.

In 2010, Ms. Cabrera assisted with debris forecasting based on scenarios ranging from a tropical storm through a category 5 hurricane and determining anticipated cubic yards of debris and debris site requirements based on those numbers.

#### PA Consulting/Debris Subject Matter Expert (November 2013-April 2014)

#### Boulder County, Colorado | 2013 Flooding - Public Assistance Consulting Services

Ms. Cabrera provided technical assistance and subject matter expertise to Boulder County, Colorado, following the devastating floods that occurred in September 2013 causing extensive damage throughout Boulder County and surrounding communities. Ms. Cabrera focused on the debris removal efforts, first in assisting with the gathering of the documentation for and development of the Category A project worksheets and later involvement with private property debris removal and public right-of-way debris removal monitoring programs.

#### **Data Reconciliation Management (February 2013-January 2014)**

### New Jersey Department of Environmental Protection | Hurricane Sandy Waterways Debris Removal Program Management

Following Hurricane Sandy, Ms. Cabrera supported data management activities associated with the waterways debris removal effort. Ms. Cabrera also provided invoice reconciliation.

#### QA/QC Manager (November 2007-November 2013)

City of New Orleans, Louisiana | Hurricanes Katrina, Gustav, and Isaac Disaster Recovery Services Ms. Cabrera has supported the City of New Orleans following Hurricanes Katrina (2005), Gustav (2008) and Isaac (2012) as part of the data management and invoice reconciliation team for the City's numerous debris removal programs. She has worked closely with parish, debris contractor, and FEMA staff to provide regular updates on the quantities and types of debris collected to the City of New Orleans.

#### **Public Assistance Grant Administrator (January 2010–September 2012)**

#### Port of Galveston, Texas | Hurricane Ike Financial Recovery Services

Ms. Cabrera assisted with the PA Grant Administration for the Port of Galveston, Texas following Hurricane Ike. Ms. Cabrera's tasks included reviewing and reconciling PWs for State and FEMA close-out for Hurricane Ike. Ms. Cabrera was involved in the process of writing new PWs for the previously undocumented damage which included the formulation, review and management of damage descriptions, bid specifications, scope of work, contractors specifications, force account labor and equipment, logistics of project commencement and completion, invoicing, tracking of funds, site visits and photos, State and FEMA communication and monitoring the obligation and close-out process.

#### **Invoice Reconciliation Analyst (October 2005—August 2012)**

#### City of Hollywood, Florida | Hurricanes Katrina and Wilma Financial Recovery Services

Ms. Cabrera worked with the City of Hollywood as an invoice reconciliation analyst immediately following Hurricanes Katrina and Wilma when they impacted the area in 2005. She oversaw the data management process at an established local data center and worked with the City, their multiple debris contractors and FEMA staff to reconcile the invoices for debris removal work which provided the back-up for the FEMA PWs.

#### **Invoice Analyst (August 2005–October 2006)**

#### City of Fort Lauderdale, Florida | Hurricane Wilma Disaster Debris Program Management

Ms. Cabrera supported data management activities associated with the debris collection effort. She helped install a debris management database to track the huge numbers of trucks and debris loads brought to the City of Fort Lauderdale's debris management site (DMS) locations.





#### **EXPERIENCE SUMMARY**

Mr. McGowen is an operations and project field manager with ten years of field experience helping clients respond to and recover from hurricanes, tornadoes, and ice storms with a unique understanding of the eligibility and requirements for accurate reimbursement from the Federal Emergency Management Agency (FEMA) and other funding agencies, preparing project worksheets to support debris estimates, and providing guidance regarding the laws, policies, and regulations associated with monitoring debris removal, collection, and disposal during declared disasters. Mr. McGowen is also experienced in all aspects of disaster planning and recovery efforts, including mobilizing response teams, permitting temporary debris storage and reduction site (TDSRS) locations, staging logistics, and FEMA compliance monitoring protocol and reimbursement policies.

As Project Manager for Key West, Mr. McGowan will be responsible for implementation of the specific programs tasked by the City through purchase orders. He is also responsible for program oversight, task order preparation, forecasting, and quality assurance.

#### FEATURED EXPERIENCE

### Project Manager | Quality Control Manager (December 2007 – Ongoing)

### City of New Orleans, Louisiana | Hurricane Katrina Residential Demolition Program

Mr. McGowen has supported the City's demolition program for more than seven years. Due to his experience he is able to support any aspect of the program. During the first program, Mr. McGowen was responsible for the document management associated with the demolition of over 1,700 homes within the City of New Orleans. In this capacity, Mr. McGowen provided overall project oversight, ensuring the proper documentation of legal authority was in place prior to demolition. Since March of 2011, he has served as project manager for the City's demolition program.

#### **Project Manager (August 2012 – December 2012)**

City of New Orleans, Louisiana | Hurricane Isaac Program Management Mr. McGowen assisted the City of New Orleans with debris monitoring services following Hurricane Isaac. He was the project manager for the duration of the program and also assisted with close out and grants management.

#### **Project Manager (February 2010 – August 2012)**

### Terrebonne Parish, Louisiana | Hurricane Ike Residential Demolition Program

Following Hurricane Ike, Terrebonne Parish identified over 900 residential structures rendered uninhabitable due to wind and flood damage. Mr.

## William McGowen Project Manager

#### YEARS OF EXPERIENCE

10 years

#### **AREA OF EXPERTISE**

- Field Operations and Logistics
- Project Staffing
- FEMA Compliance Monitoring
- Public Assistance Support
- ROE Administration

#### **DISASTERS**

- 4084 Hurricane Isaac
- 4024 Hurricane Irene
- 3268 NY Snowstorm
- 1791 Hurricane Ike
- 1786 Hurricane Gustav
- 1676 MO Winter Storms
- 1609 Hurricane Wilma
- 1606 Hurricane Rita
- 1602 Hurricane Katrina
- 1595 Hurricane Dennis
- 1551 Hurricane Ivan

#### TRAINING/CERTIFICATIONS

- OSHA 510: 40-Hour Construction Safety
- OSHA 40-Hour HAZWOPER
- OSHA 7600 Disaster Site Worker
- OSHA 10-Hour Construction Safety
- NIMS IS-00700

#### **EDUCATION**

Pensacola State College Associate of Science, 2003

McGowen was part of our team that helped Terrebonne Parish survey and document these residential structures for submission to FEMA for public assistance funding. Of the properties submitted, 360 residential structures were approved and scheduled for demolition.

#### **Operations Manager (September 2005–September 2008)**

#### City of Pensacola, Florida | Hurricane Ivan Disaster Debris Program Management

Mr. McGowen was part of the immediate response team following the landfall of Hurricane Ivan. Mr. McGowen provided general oversight and supervised debris site monitoring services.

#### **Disposal Operations Manager (September 2004–October 2007)**

#### Escambia County, Florida | Hurricane Ivan Comprehensive Disaster Program Management

Following Hurricanes Dennis and Ivan, Mr. McGowen was part of the immediate response team deployed to Escambia County to assist with recovery efforts. Mr. McGowen assisted with the collection and disposal of approximately 10 million cubic yards of debris. He was also responsible for overseeing the monitoring of waterway cleanup.

#### **Project Manager (February–September 2007)**

#### City of Springfield, Missouri | Winter Storm Disaster Debris Program Management

Following snow and ice storms, Mr. McGowen oversaw all collection and disposal monitors and kept management informed of the cleanup progress throughout the city.

#### **Operations Manager (October 2006–January 2007)**

#### Town of North Tonawanda, New York | Winter Storm Disaster Debris Program Management

Mr. McGowen was a member of the first response team and was deployed to the western portion of upstate New York following a devastating early season ice storm that buried the town under nearly two feet of snow. Mr. McGowen was responsible for identifying and permitting the TDSRS locations, truck certification, collection and disposal monitoring, and preparation of project worksheets to document eligible debris estimates for approximately 80,000 cubic yards of debris. He also provided fleet management services to ensure the team's operations ran efficiently and effectively.

#### **Project Manager (October 2006–January 2007)**

#### City of Lackawanna, New York | Winter Storm Debris Monitoring

Mr. McGowen was a member of the first response team mobilized to upstate New York to assist with cleanup efforts after an early snowstorm hit the western part of the state. The weight of the snow brought down a lot of limbs, resulting in a tremendous amount of debris. Mr. McGowen's initial duties involved identifying and permitting TDSRS locations. He also worked closely with the City of Lackawanna to identify critical debris removal areas and mark hazardous trees and hanging limbs for removal. In addition to debris monitoring efforts, Mr. McGowen worked with the City of Lackawanna to identify damage and compile the necessary paperwork for A–G project worksheet submittals for emergency and permanent work.

#### **Operations Manager (August 2005–October 2006)**

**Miami-Dade County, Florida | Hurricanes Katrina and Wilma Disaster Recovery and Debris Management** Following Hurricane Wilma in 2005, Mr. McGowen was part of the immediate response team that was deployed to begin identifying and permitting suitable land for the collection and disposal of storm-generated debris in TDSRS locations.

#### **Operations Manager (July 2005–February 2006)**

#### Monroe County, Florida | Hurricane Wilma Disaster Debris Program Management

After Hurricane Wilma grazed the Florida Keys in July 2005, Mr. McGowen provided disaster debris monitoring services for over 150 miles from end to end of the Florida Keys. He also assisted with a FEMA-funded vessel recovery program, where he oversaw the removal of over 450 derelict vessels and over 60,000 crab traps.





## **Conrad King Deputy Project Manager**

#### **EXPERIENCE SUMMARY**

Mr. Conrad King has been involved in all aspects of debris removal monitoring operations, including some of the largest in the Country, since 2005. Mr. King has been in some of the most unique and technically challenging projects in the history of the Federal Emergency Management Agency (FEMA) Public Assistance (PA) program including the New Jersey Department of Environmental Protection (NJDEP) waterways debris removal project following Hurricane Sandy, and the modified private property debris removal program in St. John the Baptist Parish, Louisiana, following Hurricane Isaac. He has extensive knowledge of FEMA 325 and 327 guidelines including implementation of right-of-way debris monitoring, debris site and tower monitoring, and hazardous tree removal. Mr. King is also one of Tetra Tech's designated staff trainers and is an expert in the operations of our automated debris management system (ADMS), where he has trained over 200 field staff on the interworking of the system and its reporting capabilities.

As Deputy Project Manager/Operations Manager, Mr. King will be responsible for the implementation of Tetra Tech's work plans, dispatching field personnel, staffing, safety, field logistics, and training. He will verify eligibility, compliance, and collection and disposal operations oversight and coordinate directly with our project manager daily with progress reports and on specific issues.

#### **FEATURED EXPERIENCE**

#### **Project Manager (May 2014–July 2014)**

### Blount County, Alabama | Severe Storms and Tornadoes Disaster Debris Program Management

Following severe storms and tornadoes that impacted Blount County, Mr. King was deployed as a project manager to manage and monitor the removal of over 75,000 cubic yards of debris within the County. Mr. King also worked with the County, Alabama Emergency Management Agency (AEMA), and FEMA to execute additional programs to support recovery in the County including removal of hazardous trees and hangers and a waterways debris removal program.

#### **Operations Manager (February 2014–May 2014)**

### City of Augusta, Richmond County, Georgia | Winter Storm Pax Disaster Debris Program Management

Following Winter Storm Pax, Mr. King was deployed to manage the monitoring of nearly 90 debris removal trucks collecting over 500,000 cubic yards of vegetative debris in a four week period. As the project continued, Mr. King worked with the debris hauler to ensure appropriate crew numbers to meet the aggressive timeline set forth by the client. Mr. King worked closely

#### YEARS OF EXPERIENCE

10 years

#### **AREA OF EXPERTISE**

- Disaster Debris Management
- Right-of-Way Debris Removal
- Disposal Operations
- Private Property Programs
- Hazardous Tree Removal
- FEMA PA Category A documentation and eligibility requirements

#### **DISASTERS**

- 4176 AL Tornadoes
- 4165 GA Winter Storm
- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 4024 Hurricane Irene
- 1786 Hurricane Gustav
- 1609 Hurricane Wilma
- 1561 Hurricane Jeanne
- 1545 Hurricane Frances
- 1539 Hurricane Charley

with data managers and ADMS specialists to document and track operations as well as deliver expedient and accurate reporting to key stakeholders.

#### **Project Manager (January 2013–March 2013)**

New Jersey Department of Environmental Protection | Hurricane Sandy Vessel Removal Program Following Hurricane Sandy, Mr. King served as a project manager for the NJDEP on vessel recovery operations. This included the removal of over 40 abandoned vessels in a 1 month period. Mr. King ensured guideline compliance and documented vessel recovery from New Jersey waterways as well as oversaw the vessel aggregation site. Mr. King worked closely with the NJDEP and New Jersey State Police throughout the project.

#### **Project Manager (November 2012-December 2012)**

### Town of Fairfield, Connecticut | Hurricane Sandy Disaster Debris Program Management Following Hurricane Sandy, Mr. King served as a project manager for the Town of Fairfield, Connecticut. He

trained newly hired monitors for positions such as tower monitors, right-of-way vegetative field monitors, and construction and demolition debris collection monitors. He organized the staffing of monitor positions and tracked the progress of the debris collection. He worked with Town officials, contractor management, and disposal site operators to plan disposal site operations, traffic flow through the site, and debris staging strategies.

#### **Operations Manager (August 2012–October 2012)**

#### St. John the Baptist Parish, Louisiana | Hurricane Isaac Disaster Debris Program Management

Mr. King served as operations manager for St. John the Baptist Parish following Hurricane Isaac, where he trained monitors in truck certification, proper field monitoring, tower monitoring, and field supervising. Mr. King conducted operational and safety briefings and implemented our ADMS during cleanup in the Parish. He also coordinated the mapping of the project progress and provided the Parish with copies. In total, Mr. King managed the monitoring of over 225,000 cubic yards of debris from over 2,000 flooded homes.

#### Project Manager (August 2011–June 2012)

#### Virginia Department of Transportation | Hurricane Irene Disaster Debris Program Management

Following Hurricane Irene, Mr. King served as a project manager for The Virginia Department of Transportation (VDOT). He organized recovery efforts including the set up of disposal sites, tracking and verifying eligible stumps for removal, leaner and hanger operations, ROW vegetative debris collection, and tracking the progress and completion of recovering operations stretching thousands of VDOT roads. He met with VDOT officials regularly and made sure that they were well informed of progress and that all operational requests were fulfilled on time. He ensured that operational needs were met and guidelines were followed by meeting daily with the contact company management.

#### **Operations Manager (October 2005–January 2006)**

#### Collier County, Florida | Hurricane Wilma Disaster Debris Program Management

Mr. King served as an operations manager Collier County following Hurricane Wilma, where he trained monitors in truck certification, proper field monitoring, tower monitoring, and field supervising. Mr. King conducted operational and safety briefings and supervised monitoring staff during recovery efforts in the County.

#### Field Supervisor (August 2004 – November 2004)

### Orange County and Palm Beach County, Florida | Hurricane Charley Disaster Debris Program Management

Following Hurricane Charley in August 2004, Mr. King monitored crews as they collected ROW vegetative debris for Orange County. Within weeks of Hurricane Charley, Florida was struck by Hurricane Francis and Hurricane Jeanne in September 2004. Mr. King served as a field supervisor for both hurricanes, where he monitored crews that were collecting ROW vegetative debris, monitored trucks entering the debris disposal site, and checked tickets for errors. He also supervised the debris site and debris tower operations, supervised personnel, trained field and tower monitors, and worked with city officials to coordinate recovery efforts.





### Jerry Assam Data Manager

#### **EXPERIENCE SUMMARY**

Mr. Jerry Assam is an experienced quality control and data manager for Tetra Tech, Inc. His areas of expertise are demolition documentation management, quality assurance/quality control (QA/QC), database management, management and field supervisor, and reporting. He has an in depth understanding of Federal Emergency Management Agency (FEMA) eligibility and documentation requirements. Mr. Assam also has an in depth understanding of our automated debris management system (ADMS) including field implementation, troubleshooting, and reporting.

As data manager for the City of Key West, Mr. Assam will be responsible for multiple functions during debris removal activities, including reporting and QA/QC of all ADMS documentation in the field along with storing the documentation in preparation for future audits. He will also validate documentation and metrics being reported as accurate and on-schedule.

#### **FEATURED EXPERIENCE**

#### **Quality Control Manager (March 2012–Ongoing)**

City of New Orleans, Louisiana | Hurricane Katrina Demolition Program Mr. Assam is currently serving as a QC manager for the City of New Orleans's demolition program. His responsibilities include documentation management, packet management, updating the City's Land Management (LAMA), administration of our team's custom demolition database developed for the City, working closely with the City of New Orleans project representatives, QA/QC of project documentation, and contractor invoice reconciliation.

#### **Data Manager (January 2013 – April 2013)**

### New Jersey Department of Environmental Protection | Hurricane Sandy Waterways Debris Removal Program Management

Mr. Assam supported the New Jersey Department of Environmental Protection (NJDEP) waterways debris removal program as a data manager. Mr. Assam supported the implementation of our ADMS technology through all phases of operations including truck certifications, load collection, load disposal, and unit rate collections. Due to Mr. Assam's understanding of the project requirements, he also supported QA/QC checks to validate the client received the proper data and documentation to satisfy all FEMA requirements.

#### **Data Manager (September 2012 – December 2012)**

### New Orleans, Louisiana | Hurricane Isaac Disaster Debris Program Management

Following Hurricane Isaac, Mr. Assam served as a data manager for the City of New Orleans. Mr. Assam was responsible for project reporting, QA/QC of

#### YEARS OF EXPERIENCE

3 years

#### **AREA OF EXPERTISE**

- Data Management
- Quality Assurance/Quality Control
- Demolition Documentation
- Collection/Disposal Monitoring

#### **DISASTERS**

- 4086 Hurricane Sandy NJ
- 4080 Hurricane Isaac
- 4046 Winter Storm CT
- 4019 Hurricane Irene NC
- 1603 Hurricane Katrina

#### **EDUCATION**

University of Central Florida Bachelor of Science, Aerospace/Mechanical Engineering

field documentation, contractor damages tracking, and the supervision of supporting data staff.

#### **Data Manager (October 2011 – February 2012)**

#### State of Connecticut | Winter Storm Alfred Disaster Management Support Services

Mr. Assam served as a data manager for Winter Storm Alfred debris removal projects in the State of Connecticut. Mr. Assam was responsible for managing the project documentation and data entry staff for simultaneous projects being completed in the State of Connecticut. Mr. Assam's tasks included QA/QC of field documentation, photo documentation management, project reporting, and data staff management and scheduling.

#### Data Manager (August 2011 – December 2011)

#### North Carolina | Hurricane Irene Disaster Recovery Services

Mr. Assam served as a data manager for Hurricane Irene debris removal programs. Specifically, Mr. Assam managed data entry staff that processed field documentation nightly for project reporting. As a result, Mr. Assam supported data entry and project reporting for multiple North Carolina projects including but not limited to Dare County and the Towns of Nags Head, Kitty Hawk, Duck, and Southern Shores.



### Owen Chaoran Chen GIS Analyst

#### **EXPERIENCE SUMMARY**

Mr. Chen is an experienced quality control and data manager for Tetra Tech, Inc. His areas of expertise are in Geographic Information Systems, documentation management, quality assurance/quality control (QA/QC), database management, and reporting. He has an in depth understanding of Federal Emergency Management Agency (FEMA) eligibility and documentation requirements. Mr. Chen also has an in depth understanding and active field use of our automated debris management system (ADMS) including field implementation, troubleshooting, and reporting.

As GIS Analyst for Key West, Mr. Chen will be needed to support several functions during debris removal. Mr. Chen will be called on to produce maps or overlays as a quality control function of our data manager or project manager as custom reports are requested by the City. This may also include field audits or analysis of disposal data as needed.

#### FEATURED RELEVANT EXPERIENCE

#### **Quality Control Manager (March 2012–Ongoing)**

City of New Orleans, Louisiana | Hurricane Katrina Demolition Program Mr. Chen is currently serving as a QC manager for the City of New Orleans's demolition program. His responsibilities include documentation management, packet management, updating the City's Land Management (LAMA), administration of our team's custom demolition database developed for the City, working closely with the City of New Orleans project representatives, QA/QC of project documentation, and contractor invoice reconciliation.

### **Boulder County, Colorado | Severe Flooding Disaster Debris Program Management**

Mr. Chen served as data manager for Boulder County, Colorado following the severe flooding that affected the state in September 2013. Mr. Chen was supported the implementation of our ADMS technology through all phases of operations and was responsible for troubleshooting with our field team. Mr. Chen was also responsible for completing custom reports for Boulder County, providing FEMA compliance management, including quality assurance (QA)/quality control (QC) of right-of-way load collection; and managing the accuracy and organization for all project documents. Through GIS mapping services, Mr. Chen provided requested maps of project progression and custom requests for the County. Finally, Mr. Chen also provided Financial Recovery support in assisting with complete of FEMA-PA project worksheets.

#### Data Manager (February 2014–May 2014)

### Dorchester County, South Carolina | Winter Storm Pax Disaster Debris Program Management

Mr. Chen is served as data manager for the County of Dorchester, South Carolina following Winter Storm Pax. Mr. Chen was responsible for deploying

#### YEARS OF EXPERIENCE

2 years

#### **AREA OF EXPERTISE**

- Geographic Information Systems
- Data Management
- Quality Assurance/Quality Control
- Demolition Documentation
- Collection/Disposal Monitoring

#### **DISASTERS**

- 4086 Hurricane Sandy NJ
- Colorado Storms
- 4046 Napa Valley Earthquake

#### **EDUCATION**

University of Pensylvania Bachelors

and supporting field use of ADMS technology through all phases of operations including truck certifications, load collection, load disposal, and unit rate collections. Mr. Chen also aided in FEMA compliance management, including QA/ QC of right-of-way load collection; and managing the documentation for all hazardous tree and hanger removal. Finally, Mr. Chen assisted the county and project team through development of various maps related to the recovery project.

#### Data Manager (January 2013 – April 2013)

### New Jersey Department of Environmental Protection | Hurricane Sandy Waterways Debris Removal Program Management

Mr. Chen supported the New Jersey Department of Environmental Protection (NJDEP) waterways debris removal program as a data manager. Mr. Chen supported the implementation of our ADMS technology through all phases of operations including truck certifications, load collection, load disposal, and unit rate collections. Due to Mr. Chen's understanding of the project requirements, he also supported QA/QC checks to validate the client received the proper data and documentation to satisfy all FEMA requirements.



## Paris Atkinson Billing/Invoice Manager

#### **EXPERIENCE SUMMARY**

Ms. Paris Atkinson is a data manager and billing/invoice analyst, where her responsibilities include data management, management of monitoring documentation for the Federal Emergency Management Agency (FEMA), invoice reconciliation, and the use of our automated debris management system (ADMS).

As billing/invoice manager for Key West, Ms. Atkinson will work with our data manager to enter, tabulate, and organize collection and disposal data into FEMA-required formats. She will develop regular updates on the quantities and types of debris collected and will provide quality assurance and quality control processes for the review and verification of field and debris contractor-provided data in support of invoices.

#### FEATURED RELEVANT EXPERIENCE

#### **Data Manager (March 2014–Ongoing)**

### **Boulder County, Colorado | Severe Flooding Disaster Debris Program Management**

Ms. Atkinson is currently serving as data manager for Boulder County, Colorado following the severe flooding that affected the state in September 2013. Ms. Atkinson is responsible for managing invoice reconciliation with the debris contractor; creating custom reports for Boulder County; managing the data team in the field; providing FEMA compliance management, including quality assurance (QA)/quality control (QC) of right-of-way load collection; and managing the documentation for all hazardous tree and hanger removal. Ms. Atkinson also provides ADMS and database support for all staff members.

#### Data Manager (May 2014–August 2014)

### Blount County; Limestone County, Alabama | Severe Storms and Tornadoes Disaster Debris Program Management

Ms. Atkinson serviced as data manager for two counties in the state of Alabama following severe storms and tornadoes that affected the area in May. Ms. Atkinson was responsible for managing invoice reconciliation with the debris contractor; managing the data team in the field; providing FEMA compliance management, including QA/QC of right-of-way load collection; and managing the documentation for all hazardous tree and hanger removal.

#### Data Manager (February 2014–July 2014)

Barnwell County; Colleton County; Dorchester County; Sumter County, South Carolina; City of Sumter, South Carolina; City of Augusta, Georgia | Winter Storm Pax Disaster Debris Program Management Ms. Atkinson is currently serving as data manager for six municipalities in the states of South Carolina and Georgia following Winter Storm Pax. Ms. Atkinson is responsible for managing invoice reconciliation with the debris

#### YEARS OF EXPERIENCE

9 years

#### **AREA OF EXPERTISE**

- Data Management
- Debris Monitoring Compliance
- Vessel Removal
- Leaner and Hanger removal
- Invoice Reconciliation

#### **DISASTERS**

- 4166 SC Winter Storm
- 4165 GA Winter Storm
- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 3268 NY Snowstorm
- 1609 Hurricane Wilma

#### **EDUCATION**

University of Florida Bachelor of Science, Psychology, 2005

contractor; managing the data team in the field; providing FEMA compliance management, including QA/ QC of right-of-way load collection; and managing the documentation for all hazardous tree and hanger removal. Ms. Atkinson also provides ADMS and database support for all staff members.

#### Data Manager (February 2013–April 2014)

## New Jersey Department of Environmental Protection | Hurricane Sandy Waterways Debris Removal Program Management

Ms. Atkinson currently serves as data manager following Hurricane Sandy, where she is responsible for the management and data creation of vessel removal tracking in New Jersey waterways, photo management of vessel removals, data management and tabulation, monitoring document compliance, monitoring the removal of vessels in accordance with legal requirements established, and database support for staff.

#### **Data Manager (December 2012)**

Jersey City Housing Authority, New Jersey | Hurricane Sandy Disaster Debris Management Program Ms. Atkinson manages invoice reconciliation, data export creation, data management and tabulation, monitoring document compliance, database support for staff, and reimbursement support.

#### **Data Manager (September-November 2012)**

### Jefferson Parish and the City of New Orleans, Louisiana | Hurricane Isaac Disaster Debris Management Program

Ms. Atkinson served as data manager following Hurricane Isaac, where she was responsible for call center management, data center management, document compliance monitoring, management of hazardous tree and hanger photo documentation, database support for staff, and data monitoring to ensure FEMA compliance in field.

#### Project Manager (July 2012-September 2012)

#### Lake County, Florida | FEMA-Compliant Disaster Debris Management Plan

In August 2012, she assisted Lake County, Florida, with the development of a FEMA-compliant disaster debris management plan. In addition, she assisted the County in developing a scope of services for their request for proposal for debris contracting, where a large focus was on helping complete the debris hauling request for proposal and guiding the County through the bid process.

#### Data Manager (July 2012–August 2012)

#### Clay County, Florida | Tropical Storm Debby Disaster Debris Management Program

Ms. Atkinson was responsible for data entry, tabulation, data management of compliance documentation, and the organization of collection and disposal data.

#### **Operations Manager and Data Manager (February 2006–August 2006)**

Collier County, Florida | Hurricane Wilma Disaster Waterways Debris Removal Program Management Ms. Atkinson served as Operations Manager and data manager for Collier County, Florida, following Hurricane Wilma, where she was responsible for the supervision, support, and evaluation of field staff; documentation compliance; and ensuring waterway debris removal was compliant with Natural Resources Conservation Service contract specifications. Ms. Atkinson also developed standard operating procedures specific to the waterway debris removal project.

#### **Operations Manager (October 2005–February 2006)**

## City of Naples and Naples Airport Authority, Florida | Hurricane Wilma Disaster Debris Management Program

Ms. Atkinson served as Operations Manager following Hurricane Wilma, where she was responsible for the supervision, support, and evaluation of field staff; documentation compliance; management of hazardous tree and hanger photo documentation; and ensuring FEMA compliance in the field.





## Kerri O'Dell Public Information Support Manager

#### **EXPERIENCE SUMMARY**

Ms. O'Dell possesses more than ten years of disaster preparedness, emergency planning, and disaster response and recovery experience. Ms. O'Dell excels in delivering projects on-time and within budget. She has assisted numerous local, state and private sector businesses with continuity of operations planning (COOP); hazard mitigation planning; exercise design, implementation and evaluation; and recovery planning. Ms. O'Dell is also experienced in providing disaster debris monitoring services, including mobilizing support teams; assisting with staging operations; and managing the scheduling, dispatching and logistics operations of debris cleanup for some of the nation's worst natural disasters. In addition, Ms. O'Dell is highly knowledgeable of federal, state and local emergency agencies and programs. as well as funding sources and reimbursement procedures, having served as project manager on several debris monitoring and emergency management planning projects. She has also been responsible for the development of numerous disaster debris management plans (DDMPs) that have been approved for the Federal Emergency Management Agency (FEMA) Public Assistance (PA) Pilot Program.

#### RELEVANT EXPERIENCE

#### **Senior Recruiter**

### State of Connecticut | Hurricane Sandy Disaster Debris Program Management

Similar to the Nor'easter that impacted Connecticut, Ms. O'Dell was responsible for making sure that all projects were staffed appropriately with the expertise needed. Ms. O'Dell utilized her expertise to track all personnel in the field and make sure they were being utilized to their full potential.

#### **Project Manager**

## **Montgomery County, Texas | Hurricane Ike Program Management Debris Monitoring**

When Hurricane Ike approached the Houston/Galveston area, Ms. O'Dell headed to Texas and was ready to assist Montgomery County. While Montgomery County is located 40 miles northwest of Houston, the damage was significant. The County accumulated over 850,000 cubic yards of debris that was brought to six debris management sites throughout the County. Ms. O'Dell served as the project manager and provided leadership to over 150 individuals. Ms. O'Dell was responsible for the overall management of the project and ensured that the County followed the necessary local, state and federal guidelines for debris management.

#### **Collection Supervisor**

**Miami-Dade County, Florida | Storm Debris Clean-Up Management**Ms. O'Dell assisted the project manager of the Miami-Dade County project by

#### YEARS OF EXPERIENCE

10 years

#### **AREA OF EXPERTISE**

- Data Management
- Project Management
- Recovery Planning
- Exercise Design and Implementation
- COOP Planning
- Disaster Management Planning
- Disaster Response and Recovery Operations
- FEMA Compliance Monitoring and Oversight

#### TRAINING/CERTIFICATIONS

- IS-00546: Continuity of Operations Awareness Course
- IS-00700: NIMS and Introduction
- HSEEP Certified
- TS-13: Intro to the Federal Highway Administration Emergency Relief Program
- TS-12: Intro to the USDA-NRCS Watership Protection Program

#### **EDUCATION**

University of Central Florida Bachelor of Science, Finance, 2002

Résumé 1

serving as a collection supervisor. Ms. O'Dell was responsible for the oversight in paper work provided to the project manager. Ms. O'Dell was also responsible for the logistics of the monitors including the haulers that they were assigned to, determining a meeting location, communicating information throughout the day and ensuring that all documents were turned in at the end of the day.

#### **Project Manager**

## City of Fort Lauderdale, Florida | Hurricanes Katrina and Wilma Disaster Recovery and Debris Clean-up Management

Following Hurricanes Katrina and Wilma, Ms. O'Dell immediately responded to the City of Fort Lauderdale and served as the project manager for the debris management effort. Ms. O'Dell was responsible for the coordination and training of over 200 collection and disposal monitors, ten supervisors and all administrative staff. Ms. O'Dell was also responsible for the oversight of 12 contractors, combining to make a total of over 500 trucks.

#### **Field Supervisor**

#### Monroe County, Florida | Disaster Recovery Services

Ms. O'Dell helped set up the project and developed zone maps, trained collection monitors, and temporary debris storage and reduction site (TDSRS) monitors. Additionally, Ms. O'Dell supervised monitors during the project.

#### **Operations Manager**

#### City of Orlando, Florida | Hurricane Charley Disaster Recovery Services

Ms. O'Dell assisted the City of Orlando following the three devastating hurricanes that affected Florida in the fall of 2004. She was part of the initial team that was on-site immediately following Hurricane Charley to provide assistance to the City with recovery efforts. Ms. O'Dell provided TDSRS support, ROE management, staffing assistance and assisted with the development of data management tools to accurately record and monitor all project data.

#### **Field Supervisor**

#### City of Marathon, Florida | Disaster Recovery Services

Ms. O'Dell helped set up the project and developed zone maps, trained collection monitors, and TDSRS monitors. Additionally, Ms. O'Dell supervised monitors during the project.

#### **Operations Manager**

#### Volusia County, Florida | Tornado Disaster Debris Monitoring

Without notice, Volusia County was struck by a set of tornados which later became known as the "Groundhog Day Tornadoes". Ms. O'Dell was the first to respond to the County, assisting them with the logistics of starting a debris removal project. Ms. O'Dell provided oversight of the project and provided guidance to the County on the rules and regulations. In addition, with the help of Ms. O'Dell and the rest of the project team, the project was completed in less than two months and the County received maximum reimbursement.

#### **Project Manager**

#### City of Boca Raton, Florida | Debris Clean-up Management

Ms. O'Dell, as the assigned project manager, mobilized a full support team for deployment to the City's emergency operations center to provide a wide range of disaster recovery and storm debris management services. Ms. O'Dell assisted with the comprehensive collection and disposal monitoring related activities including hazardous stump removal, tree removal and some waterway cleanup for approximately 200,000 cubic yards of vegetative debris. In addition, she oversaw all data management activities associated with the debris collection effort.



#### ATTACHMENT D

#### PROPOSER'S MOST CURRENT FINANCIAL STATEMENT

Tetra Tech is a financially sound and successful firm with annual revenues of \$2.5 billion (FY14) and approximately 13,000 employees. To further demonstrate the firm's solid financial performance, we have provided a copy of our most recent Form 10-K (annual report) on the subsequent pages.

### Attachment D: Tetra Tech Form 10-K



Use these links to rapidly review the document TABLE OF CONTENTS
Item 8. Financial Statements and Supplementary Data

Table of Contents

any amendment to this Form 10-K.

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

	FORM 1	0-K
(Mark One) E	ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF SECURITIES EXCHANGE ACT OF 1934 For the Fiscal Year Ended	
	or TRANSITION REPORT PURSUANT TO SECTION 13 OR 15( For the Transition Period from _	The state of the s
	Commission File Nu	mber 0-19655
	TETRA TEC	CH. INC.
	(Exact name of registrant as s	
	<b>Delaware</b> (State or other jurisdiction of incorporation or organization)	95-4148514 (I.R.S. Employer Identification No.)
	3475 East Foothill Boulevard, P. (Address of principal executi	
	(626) 351~ (Registrant's telephone numbe	
	Securities registered pursuant to	Section 12(b) of the Act:
	Common Stock, \$.01 par value (Title of class)	The NASDAQ Stock Market LLC (Name of exchange)
	Securities registered pursuant to	Section 12(g) of the Act:
	None	
I F I I		Lie Dale 405 of the Constitution And Man Electric
indicate by cr	neck mark if the registrant is a well-known seasoned issuer, as defined	In Rule 405 of the Securities Act. Yes E No L
Indicate by cl	neck mark if the registrant is not required to file reports pursuant to S	ection 13 or Section 15(d) of the Act. Yes 🗆 No 🗷
during the pr		o be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 was required to file such reports), and (2) has been subject to such filing
be submitted		ested on its corporate Website, if any, every Interactive Data File required to its chapter) during the preceding 12 months (or for such shorter period that
Indicate by cl	heck mark if disclosure of delinquent filers pursuant to Item 405 of	Regulation S-K (§229.405 of this chapter) is not contained herein, and will

not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. Large accelerated filer Accelerated filer Do not check if a smaller reporting company) Do Smaller reporting company Do Smaller Rep

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes 🗆 No 🗷

The aggregate market value of the registrant's common stock held by non-affiliates on March 28, 2014, was \$1.9 billion (based upon the closing price of a share of registrant's common stock as reported by the Nasdaq National Market on that date).

On November 10, 2014, 62,605,098 shares of the registrant's common stock were outstanding.

#### DOCUMENT INCORPORATED BY REFERENCE

Portions of registrant's Proxy Statement for its 2014 Annual Meeting of Stockholders are incorporated by reference in Part III of this report where indicated.

#### Table of Contents

#### Item 8. Financial Statements and Supplementary Data

#### INDEX TO FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULE

	Page
Report of Independent Registered Public Accounting Firm	86
Consolidated Balance Sheets at September 28, 2014 and September 29, 2013	87
Consolidated Statements of Operations for each of the three years in the period ended September 28, 2014, September 29, 2013 and September 30, 2012	<u>88</u>
Consolidated Statements of Comprehensive Income (Loss) for each of the three years in the period ended September 28, 2014, September 29, 2013 and September 30, 2012	<u>89</u>
Consolidated Statements of Equity for each of the three years in the period ended September 28, 2014, September 29, 2013 and September 30, 2012	90
Consolidated Statements of Cash Flows for each of the three years in the period ended September 28, 2014, September 29, 2013 and September 30, 2012	91
Notes to Consolidated Financial Statements	92
Schedule II - Valuation and Qualifying Accounts and Reserves	134
85	

#### Table of Contents

#### REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders of Tetra Tech, Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, comprehensive income (loss), equity and cash flows present fairly, in all material respects, the financial position of Tetra Tech, Inc. and its subsidiaries at September 28, 2014 and September 29, 2013, and the results of their operations and their cash flows for each of the three years in the period ended September 28, 2014, in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the accompanying index presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of September 28, 2014 based on criteria established in Internal Control - Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements and the financial statement schedule, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting, appearing under Item 9A of this Form 10-K. Our responsibility is to express opinions on these financial statements, on the financial statement schedule and on the Company's internal control over financial reporting based on our integrated audits We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PRICEWATERHOUSECOOPERS LLP

Los Angeles, California November 19, 2014 Use these links to rapidly review the document TABLE OF CONTENTS
Item 8. Financial Statements and Supplementary Data

Table of Contents

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	(Exact name of registrant as s	
	<b>Delaware</b> (State or other jurisdiction of incorporation or organization)	95-4148514 (I.R.S. Employer Identification No.)
	3475 East Foothill Boulevard, P. (Address of principal executi	
	(626) 351~ (Registrant's telephone numbe	
	Securities registered pursuant to	Section 12(b) of the Act:
	Common Stock, \$.01 par value (Title of class)	The NASDAQ Stock Market LLC (Name of exchange)
	Securities registered pursuant to	Section 12(g) of the Act:
	None	
I F I I		Lie Dale 405 of the Constitution And Man Electric
indicate by cr	neck mark if the registrant is a well-known seasoned issuer, as defined	In Rule 405 of the Securities Act. Yes E No L
Indicate by cl	neck mark if the registrant is not required to file reports pursuant to S	ection 13 or Section 15(d) of the Act. Yes 🗆 No 🗷
during the pr		o be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 was required to file such reports), and (2) has been subject to such filing
be submitted		ested on its corporate Website, if any, every Interactive Data File required to its chapter) during the preceding 12 months (or for such shorter period that
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#### Table of Contents

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	Page
Report of Independent Registered Public Accounting Firm	86
Consolidated Balance Sheets at September 28, 2014 and September 29, 2013	87
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#### Table of Contents

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Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PRICEWATERHOUSECOOPERS LLP

Los Angeles, California November 19, 2014

#### TETRA TECH, INC. Consolidated Balance Sheets (in thousands, except par value)

ASSETS	Se	ptember 28, 2014	Se	ptember 29, 2013
Current assets:				
Cash and cash equivalents	\$	122,379	\$	129,305
Accounts receivable - net		701,892		660,847
Prepaid expenses and other current assets		52,256		61,446
Income taxes receivable		22,076		20,044
Total current assets		898,603		871,642
Property and equipment – net		73,864		88,026
Investments in and advances to unconsolidated joint ventures		2,140		2.198
Goodwill		714,190		722,792
Intangible assets – net		63,095		86,929
Other long-term assets		24,512		27,505
Total assets	\$	1,776,404	\$	1,799,092
LIABILITIES AND EQUITY				
Current liabilities:				
Accounts payable	\$	175,952	\$	142,813
Accrued compensation		110,186		114,810
Billings in excess of costs on uncompleted contracts		103,343		79,507
Deferred income taxes		20,387		18,170
Current portion of long-term debt		10,989		4,311
Estimated contingent earn-out liabilities		3,568		23,281
Other current liabilities		79,436		100,241
Total current liabilities		503,861		483,133
Deferred income taxes		28,786		30,525
Long-term debt		192,842		203,438
Long-term estimated contingent eam-out liabilities		3,462		58,508
Other long-term liabilities		34,397		24.685
Commitments and contingencies				
Equity:				
Preferred stock - Authorized, 2,000 shares of \$0.01 par value; no shares issued				
and outstanding at September 28, 2014, and September 29, 2013		-		-
Common stock – Authorized, 150,000 shares of \$0.01 par value; issued and outstanding, 62,591 and 64,134 shares at September 28, 2014, and				
September 29, 2013, respectively		626		641
Additional paid-in capital		402,516		443,099
Accumulated other comprehensive income (loss)		(42,538)		1,858
Retained earnings		651,475		552,165
Tetra Tech stockholders' equity	******	1,012,079		997,763
Noncontrolling interests		977		1,040
Total equity		1,013,056	-	998,803
	\$	1,776,404	\$	1,799,092
Total liabilities and equity	)	1,//0,404	Þ	1,799,092

# TETRA TECH, INC. Consolidated Statements of Operations (in thousands, except per share data)

	Fiscal Year Ended					
	September 28, 2014		Se	ptember 29, 2013	September 30 2012	
Revenue	S	2,483,814	\$	2,613,755	\$	2,711,075
Subcontractor costs		(623,896)		(588,923)		(689,005)
Other costs of revenue		(1,577,481)		(1,757,842)		(1,663,065)
Selling, general and administrative expenses		(187,298)		(199,732)		(210,970)
Contingent consideration - fair value adjustments		58,694		9,560		19,246
Impairment of goodwill		<del>-</del>		(56,600)		(914)
Operating income		153,833		20,218		166,367
Interest income		804		1,003		873
Interest expense		(10,294)		(8,689)		(6,444)
Income before income tax expense		144,343		12,532		160,796
Income tax expense		(35,668)		(14,038)		(56,064)
Net income (loss) including noncontrolling interests		108,675	_	(1,506)	-	104,732
Net income attributable to noncontrolling interests		(409)		(635)		(352)
Net income (loss) attributable to Tetra Tech	<u>\$</u>	108,266	\$	(2,141)	\$	104,380
Net income (loss) attributable to Tetra Tech per share:						
Basic	\$	1.68	\$	(0.03)	\$	1.65
Diluted	S	1.66	\$	(0.03)	\$	1.63
Weighted-average common shares outstanding:						
Basic		64,379		64,544		63,217
Diluted		65,146		64,544		63,934
Cash dividends paid per share	s	0.14	\$		s	-

# TETRA TECH, INC. Consolidated Statements of Comprehensive Income (Loss) (unaudited – in thousands)

	Fiscal Year Ended					
	September 28, 2014		September 29, 2013		•	ember 30, 2012
Net income (loss) including noncontrolling interests	\$	108,675	\$	(1,506)	\$	104,732
Other comprehensive income (loss), net of tax:						
Foreign currency translation adjustments		(45,480)		(28,817)		26,486
Gain (loss) on cash flow hedge valuations		1,029		(389)		(194)
Other comprehensive income (loss), net of tax	1000	(44,451)	The same	(29,206)		26,292
Comprehensive income (loss) including noncontrolling interests		64,224		(30,712)		131,024
Net income attributable to noncontrolling interests		(409)		(635)		(352)
Foreign currency translation adjustments, net of tax		55		47		(29)
Comprehensive income attributable to noncontrolling interests		(354)		(588)		(381)
Comprehensive income (loss) attributable to Tetra Tech	\$	63,870	S	(31,300)	\$	130,643

# TETRA TECH, INC. Consolidated Statements of Equity Fiscal Years Ended September 30, 2012, September 29, 2013, and September 28, 2014 (in thousands)

	Comm	on Stock	Additional Paid-in	Accumulated Other Comprehensive	Retained	Total Tetra Tech	Non- Controlling	Total
	Shares	Amount	Capital	Income	Earnings	Equity	Interests	Equity
BALANCE AT OCTOBER 2, 2011	62,495	\$ 625	\$ 399,420	s 4,754	\$ 449,926 \$	854,725	\$ 525 S	855,250
Comprehensive income, net of								
Net income					104,380	104,380	352	104,732
Foreign currency translation adjustments				26.457		26,457		26,486
Loss on cash flow hedge								
valuations				(194	-	(194		(194)
Comprehensive income, net of tax					_	130,643	381	131,024
Distributions paid to noncontrolling						E A		Ma.
interests Stock-based							(9)	(9)
compensation Stock options			10,839			10.839		10,839
exercised Shares issued for	1,053	10	17,525			17,535		17,535
Employee Stock Purchase Plan	289	3	5.297			5,300		5,300
Tax benefit for stock options	209	T i	(72	)		(72		(72)
BALANCE AT								
SEPTEMBER 30, 2012	63,837	638	433,009	31,017	554,306	1,018.970	897	1,019,867
Comprehensive income, net of tax:								
Net income (loss)					(2,141)	(2.141	) 635	(1,506)
Foreign currency translation								
adjustments Loss on cash flow hedge				(28,770	)	(28,770	) (47)	(28,817)
valuations Comprehensive				(389	)	(389		(389)
income (loss), net of tax						(31,300	) 588	(30,712)
Distributions paid to noncontrolling								
interests Stock-based							(445)	(445)
compensation			8,775			8,775		8,775
Stock options exercised	899	9				14,881		14,881
Shares issued for Employee Stock Purchase								
Plan	253					5,551		5,551
Stock repurchases Fax expense for stock options	(855	) (9	) (19.991 886			(20.000		(20,000)
BALANCE AT SEPTEMBER 29, 2013	64,134	641	443,099	<del></del>	552,165	997,763		998,803
Comprehensive income, net of								
Net income								
(loss)					108,266	108,266	409	108,675

			(45,425)		(45,425)	(55)	(45,480)
			1,029		1,029		1,029
					63,870	354	64,224
				-		(417)	(417)
				(8,956)	(8,956)		(8,956)
		10,374			10,374		10,374
1,263	13	22,956			22,969		22,969
246	,	5 507			5 500		5,599
							(80,000)
(3,032)	(30)	(17,770)			(00,000)		(00,000)
		460			460		460
62.591 S	626 <b>\$</b>	402.516 \$	(42.538)\$	651 475 \$	1 012 079 \$	977 \$	1.013,056
	<b>246</b> (3,052)	246 2 (3,052) (30)	1,263 13 22,956  246 2 5,597 (3,052) (30) (79,970)  460	10,374 1,263 13 22,956  246 2 5.597 (3,052) (30) (79,970) 460	1,029  (8,956)  10,374  1,263 13 22,956  246 2 5,597 (3,052) (30) (79,970)  460	1,029  1,029  63,870  (8,956) (8,956)  10,374  10,374  1,263 13 22,956  22,969  246 2 5,597 2,969  246 2 5,597 (3,052) (30) (79,970) (80,000)  460  460  460	1,029 1,029  63,870 354  (417)  (8,956) (8,956)  10,374 10,374  1,263 13 22,956 22,969  246 2 5.597 5.599 (3,052) (30) (79,970) (80,000)  460 460

See accompanying Notes to Consolidated Financial Statements.

#### TETRA TECH, INC. Consolidated Statements of Cash Flows (in thousands)

	Sep	tember 28, 2014		Year Ended tember 29, 2013	September 30, 2012	
Cash flows from operating activities:				1000		
Net income (loss) including noncontrolling interests	s	108.675	s	(1,506)	\$	104,732
Adjustments to reconcile net income (loss) to net cash from operating activities:						
Depreciation and amortization		54,540		62,605		56,902
Loss on settlement of foreign currency forward contract		-		270		286
Equity in income of unconsolidated joint ventures		(2,804)		(3,461)		(2,916)
Distributions of earnings from unconsolidated joint ventures		2,724		4,458		3,194
Stock-based compensation		10,374		8,775		10,839
Excess tax benefits from stock-based compensation		(904)		(886)		(624
Deferred income taxes		(145)		(11,468)		(5,512)
Provision for doubtful accounts		1,467		13,818		4,768
Impairment of goodwill		_		56,600		914
Fair value adjustments to contingent consideration		(58,694)		(9,560)		(19,246)
Fair value adjustment to assets held for sale		(,,		(-,)		3,437
Foreign exchange (gain) loss		(104)		754		(139)
Lease termination costs and related asset impairment		2,416		7,188		1,261
(Gain) loss on disposal of property and equipment		58		(287)		191
		30		(201)		
Changes in operating assets and liabilities, net of effects of business acquisitions:  Accounts receivable		(32,020)		87,367		(39,960)
Prepaid expenses and other assets		(4,481)		(11,782)		26,284
Open Control Control Control Of State (Control O						
Accounts payable		31,772 (4,728)		(34,191)		15,678
Accrued compensation						
Billings in excess of costs on uncompleted contracts  Other liabilities		23,833		(16,830)		2,425 7,371
		(9,315)				
Income taxes receivable/payable		4,712		(19,218)	_	2,665
Net cash provided by operating activities		127,376	_	137,750		158,021
Cash flows from investing activities:		*** ***		100 616		
Capital expenditures		(19,404)		(27,545)		(25,106)
Payments for business acquisitions, net of cash acquired		(30,230)		(171,329)		(55,014)
Payment in settlement of foreign currency forward contract		-		(4,177)		(4.192
Receipt in settlement of foreign currency forward contract		_		3,907		3,906
Changes in restricted cash		_		470		-
Investments in unconsolidated joint ventures		(21)		(20)		(430)
Proceeds from sale of property and equipment		4,594		2,089		1.037
Payment received on note for sale of operation		3,900		-		-
Net cash used in investing activities		(41,161)		(196,605)		(79,799)
Cash flows from financing activities:		(4.270)		(171 400)		(120.702
Payments on long-term debt		(4,379)		(171,400)		(120,792
Proceeds from borrowings		(10.644)		296,389		52,672
Payments of earn-out liabilities		(18,663)		(33,672)		(18.055
Payment of debt issuance cost		44181		(2,136)		-
Distributions paid to noncontrolling interests		(417)		(445)		(9
Excess tax benefits from stock-based compensation		904		886		624
Repurchases of common stock		(80,000)		(20,000)		-
Net proceeds from issuance of common stock		23,834		15,993		18,166
Dividend paid		(8,956)	_		_	
Net cash provided by (used in) financing activities		(87,677)	_	85,615	_	(67,394)
Effect of foreign exchange rate changes on cash		(5,464)		(2,303)		3,526
Net increase (decrease) in cash and cash equivalents		(6,926)		24,457		14,354
Cash and cash equivalents at beginning of year		129,305		104,848		90,494
Cash and cash equivalents at end of year	S	122,379	S	129,305	\$	104,848
Supplemental information:	-				_	
Cash paid during the year for						
Interest	S	8,293	S	5,049	S	5,279
Income taxes, net of refunds received	5	28,092	S	35,796	S	58,126
mount when the or retained to control	0	20,072	0	33,170		30,120

### TETRA TECH, INC. NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

#### 1. Description of Business

We are a leading provider of consulting, engineering, technical services, program management, and construction management services that focus on addressing fundamental needs for water, environment, infrastructure, resource management and energy. We typically begin at the earliest stage of a project, leading with science, identifying technical solutions to problems and developing execution plans tailored to our clients' needs and resources. Our solutions may span the entire life cycle of consulting and engineering projects and include applied science, research and development, information technology, engineering, design, construction management, and operations and maintenance.

#### 2. Basis of Presentation and Preparation

Principles of Consolidation and Presentation. The consolidated financial statements include our accounts and those of joint ventures of which we are the primary beneficiary. All significant intercompany balances and transactions have been eliminated in consolidation.

Fiscal Year. We report results of operations based on 52 or 53-week periods ending on the Sunday nearest September 30. Fiscal years 2014, 2013 and 2012 each contained 52 weeks.

Use of Estimates. The preparation of financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions. These estimates and assumptions affect the amounts reported in our consolidated financial statements and accompanying notes. Although such estimates and assumptions are based on management's best knowledge of current events and actions we may take in the future, actual results could differ materially from those estimates.

Revenue Recognition and Contract Costs. We recognize revenue for most of our contracts using the percentage-of-completion method, primarily based on contract costs incurred to date compared to total estimated contract costs. We generally utilize the cost-to-cost approach to estimate the progress towards completion in order to determine the amount of revenue and profit to recognize. Revenue and cost estimates for each significant contract are reviewed and reassessed quarterly. Changes in those estimates could result in recognition of cumulative catch-up adjustments to the contract's inception-to-date revenue, costs and profit in the period in which such changes are made. Changes in revenue and cost estimates could also result in a projected loss that would be recorded immediately in earnings. For fiscal years 2014, 2013 and 2012, we recognized net favorable (unfavorable) operating income adjustments of (\$35.9) million, (\$40.1) million and \$0.5 million, respectively, due to changes in estimates. As of September 28, 2014 and September 29, 2013, we recorded a liability for anticipated losses of \$18.6 million and \$13.3 million, respectively. The estimated cost to complete the related contracts as of September 28, 2014 was \$103 million.

Certain of our contracts are service-related contracts, such as providing operations and maintenance services or a variety of technical assistance services. Our service contracts are accounted for using the proportional performance method under which revenue is recognized in proportion to the number of service activities performed, in proportion to the direct costs of performing the service activities, or evenly across the period of performance depending upon the nature of the services provided.

We recognize revenue for work performed under three major types of contracts: fixed-price, time-and-materials and cost-plus

#### ATTACHMENT E

#### LIST OF AVAILABLE EQUIPMENT AND FACILITIES

(Including Location)

(List may also be attached.)

EQUIPMENT	TYPE	QUANTITY
72		
	ACCESS TAN	
	1	

A list of Tetra Tech's equipment and supplies is provided on the subsequent page.

# Attachment E: Equipment and Supplies



#### ATTACHMENT E: LIST OF AVAILABLE EQUIPMENT AND SUPPLIES

Tetra Tech understands the critical nature of asset management and logistics following a disaster. To support timely mobilization, we maintain an inventory of the equipment and resources required following a disaster event. The inventory is checked and tested annually to verify readiness. *Tetra Tech maintains a warehouse located in Orlando, Florida, with over 120 fully stocked bays of debris monitoring supplies capable of supporting over 50 simultaneous recovery operations for over 90 days.* Many of the critical resource items we use during a recovery effort are housed at this location, which will allow Tetra Tech to begin deploying resources 24 hours prior to landfall within a 100-mile perimeter of expected impact to safely stage equipment and personnel away from the direct path of the storm. In addition to our warehouse, Tetra Tech owns a fleet of project-ready supply and satellite trailers that can be mobilized at a moment's notice. *Our team has consistently deployed large-scale mobilizations of hundreds of staff and thousands of dollars' worth of equipment to multiple clients in a matter of days and on very short notice.* 

*In compliance with Attachment E of the City's Request for Proposals,* Exhibit E-1 lists available equipment and facilities readily available upon activation.

**Exhibit E-1: Resource List** 

Field Documents* Currently in our warehouse	
ADMS Handheld Units	825
Time and Materials Forms	9,446
Truck Certification Forms (printer rolls)	1,000
ADMS Ticket Stubs	530,000
Haul Out Ticket Stubs	50,000
Placards	4,500
Kits	
Project Manager Kits (1 per 100 monitors)	40
Project Coordinator Kits (1 per 100 monitors)	20
Human Resources Kits (1 per 100 monitors)	40
Collection Monitor Kits (1 per 25 monitors)	90
Disposal Monitor Kits (1 kit per disposal site)	40
Leaner/Hanger/Stump Kits (1 per 50 monitors)	40
Equipment**	
Laptops	250
Air Cards	250
Scanners	35
Printers	45
Mobile Command Office	3
Gas Trucks	To be obtained from pre-contracted vendor
Modular Work Locations	To be obtained from pre-contracted vendor
Generators	To be obtained from pre-contracted vendor
Portable Facilities	To be obtained from pre-contracted vendor

<sup>\*</sup>All field documents are replenished as they are needed. Tetra Tech has several emergency vendors with the ability to fulfill supply needs in 24 hours or less.



<sup>\*\*</sup> ADMS units are readily available and can be ordered as needed on a 24-hour turnaround.

#### ATTACHMENT F

#### STATEMENT THAT PROPOSER IS FAMILIAR WITH CITY'S TDMS SITES

#### SUMMARY OF LOCATIONS FOR TEMPORARY DEBRIS STORAGE AND REDUCTION SITES

#### PRIMARY SITES (debris storage and reduction):

- 1. Truman Waterfront Property approximately 5 acres
- 2. 5701 College Road approximately 4 acres
- 3. Wickers Football Field approximately 3 acres

#### SECONDARY SITES (debris storage only):

- 1. Trumbo Road Property approximately 2 acres
- 2. Indigenous Park approximately 1 acre
- 3. South Roosevelt Boulevard Bridal Path approximately 4 acres

See Tetra Tech's response on the subsequent page.

# Attachment F: TDMS Site Understanding



#### KEY WEST TEMPORARY DEBRIS MANAGEMENT SITE UNDERSTANDING

In compliance with *Attachment F of the City's RFP*, we can confirm that the temporary debris management site (TDMS) sites listed therein <u>are adequate</u> for the purposes of debris storage, given the City's proposed scenario if a foot stack height of 15 feet is obtained.

For a scenario that consists of 146,000 CY of vegetative debris (consistent with Attachment B) with the understanding that the primary sites are listed below

DMS	Approximate Acres	Estimated Cy Hauled To Each Site	Estimated Storage Requirements (Acres)	Minimum "Foot Stack Height" <sup>1</sup>	Conclusion
Truman Waterfront Property	5	61,320	4.21	15 Ft	Adequate
5701 College Road	4	48,180	3.30	15ft	Adequate
Wickers Football Field	3	36,500	2.50	15ft	Adequate



<sup>&</sup>lt;sup>1</sup> Using USACE Debris Storage Site Requirement Calculator

#### ATTACHMENT G

#### DESCRIPTION OF AND SAMPLE OF PROPOSER'S TICKETS AND FORMS

- O Sample Load Ticket
- 0 Sample Truck Capacity Certification Form
- O Sample Force Labor Ticket
- D Description and Print Screens of Proposers Ticket Tracking Data Base

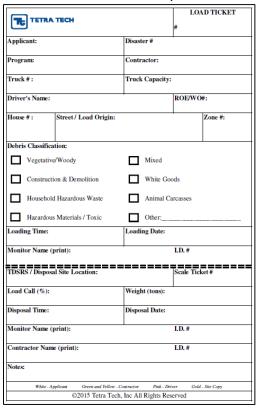
Tetra Tech's sample tickets and forms are provided on the subsequent pages.

# Attachment G: Sample Tickets and Forms

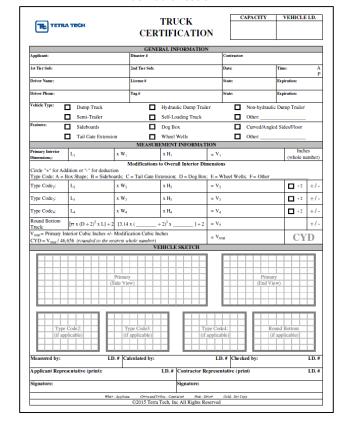


#### **SAMPLE TICKETS AND FORMS**

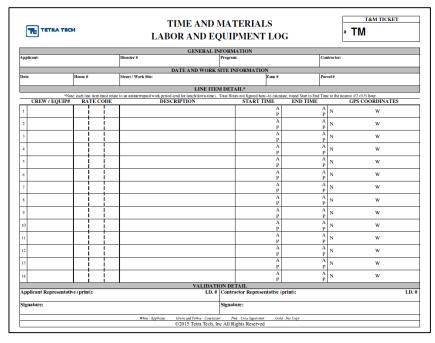
#### Load Ticket Sample



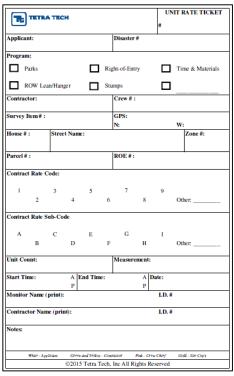
#### **Truck Certification**



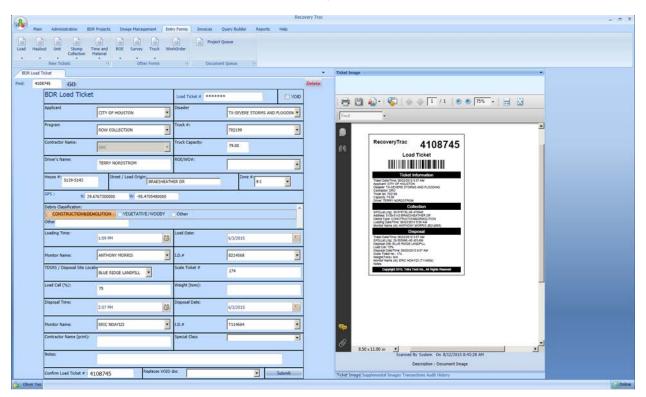
#### **Time and Materials Ticket**



#### Unit Rate Ticket



#### **Ticket Tracking Screenshot**



#### ATTACHMENT H

#### **PUBLIC ENTITY CRIMES CERTIFICATION**

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1,	This sworn statement is submitted to the City of Key West, Florida, by Jonathan Burgiel, Vice President  (Print individual's name and title)
	for: _Tetra Tech, Inc.
	(print name of entity submitting sworn statement)
	Whose business address is: 2301 Lucien Way, Suite 120, Maitland, FL 32751  And (if applicable) its Federal Employer Identification Number (FEIN) is 95-4148514
	(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement):
).	lunderstand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with

- I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any Proposal or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.
- 3. I understand that "conviction" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
- I understand that an "affiliate" as defined in Paragraph 287.133(1) (a), Florida Statutes, means:
  - A predecessor or successor of a person convicted of a public entity crime; or
  - 2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment of income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

- Junderstand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which Proposals or applies to Proposal on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.
- 6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement (indicate which statement applies).

X Neither the entity submitting this sworn statement, or any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

\_The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before an Administrative Law Judge of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Administrative Law Judge determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (Attach a copy of the final order)

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH ONE (1) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES, FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

SIGNATURE)

September 28, 2015

(DATE)

STATE OF Florida

COUNTY OF Orange

#### PERSONALLY APPEARED BEFORE ME, the undersigned authority

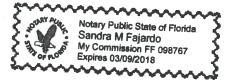
Tetra Tech, Inc.	who, after first being sworn by me
Jonathan Burgiel (name of indi	vidual) affixed his/her signature in the space
provided above on this 28th day of Se	ptember, 2015.

NOTARY PUBLIC

Sandra Fajaldo

Printed Name

My commission expires:



#### ATTACHMENT I

#### **ANTI-KICKBACK AFFIDAVIT**

STATE OF FLORIDA

SS:

COUNTY OF MONROE

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS,

This sworn statement is submitted to the City of Key West, Florida, by Jonathan Burgiel, Vice President

(Print individual's name and title)

Tetra Tech, Inc.

(Print name of entity submitting sworn statement)

Whose business address is: 2301 Lucien Way, Suite 120, Maitland, FL 32751

And (if applicable) its Federal Employer Identification Number (FEIN) is 95-4148514

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement):

I, the undersigned, being hereby duly sworn, depose and say that no sum has been paid and no sum will be paid to any employee or elected official of the City of Key West as a commission, kickback, reward or gift, directly or indirectly, by me or any member of my company, or by any officer or agent of the corporation.

BY:

TITLE: Jonathan Burgiel, Vice President

Sworn and prescribed before me this 28th day of September, 2015.

NOTARY PUBLIC, State of Florida

My commission expires:

#### ATTACHMENT J

#### CONFLICT OF INTEREST STATEMENT

Proposer must disclose the name of any person that is an employee of the City and also an officer, director, employee or agent of the Proposer, or a relative of an officer, director, employee or agent of the Proposer. Further, each Proposer must disclose the name of any City employee that owns, directly or indirectly, an interest of one percent (1%) or more in the Proposer's company, its affiliates, or parent or subsidiary organizations.

#### N/A

Persons Name

#### Describe the Persons Possible Conflict of Interest

Tetra Tech nor any employee thereof, has any conflict of interest, either direct or indirect, in connection with the services sought in the City's request for proposals.

In addition, within the past seven years, Tetra Tech has not had a contract related to debris removal monitoring cancelled due to lack of performance.

#### N/A ATTACHMENT K

#### LOCAL VENDOR CERTIFICATION PURSUANT TO CKW ORDINANCE 09-22 SECTION 2-798

The undersigned, as a duly authorized representative of the vendor listed herein, certifies to the best of his/her knowledge and belief, that the vendor meets the definition of a "Local Business." For purposes of this section, "local business" shall mean a business which:

- a. Principle address as registered with the FL Department of State located within 30 miles of the boundaries of the city, listed with the chief licensing official as having a Business tax receipt with its principle address within 30 miles of the boundaries of the city for at least one year immediately prior to the issuance of the solicitation.
- Maintains a workforce of at least 50 percent of its employees from the city or within 30 miles of its boundaries.
- c. Having paid all current license taxes and any other fees due the city at least 24 hours prior to the publication of the call for bids or request for proposals.
  - Not a local vendor pursuant to Ordinance 09-22 Section 2-798
  - · Qualifies as a local vendor pursuant to Ordinance 09-22 Section 2-798

If you qualify, please complete the following in support of the self-certification & submit copies of your County and City business licenses. Failure to provide the information requested will result in denial of certification as a local business.

Business Name:	Phone:		
Current Local Address: — — — — — — — (P.O Box numbers may not be use	d to establish status)		
Length of time at this address — ———			
Signature of Authorized Representative	Date		
STATE OF			
COUNTY OF			
The foregoing instrument was acknowledge 2015	d before me thisday of		
By (Name of officer or agent, title of officer or agent ackn	of nowledging) Name of corporation		
Or has produced(Type o	fidentification)as identification		
	Signature of Notary		
Return Completed form with supporting documents to: City of Key West Purchasing	Print, Type or Stamp Name of Notary		
3	Title or Rank		

#### ATTACHMENT L

#### ACKNOWLEDGEMENT OF CONFORMANCE WITH O.S.H.A. STANDARDS

TO: CITY OF KEY WEST	
Proposer's Name: Tetra Tech, Inc.	, hereby acknowledge
and agree that they have the sole responsib	ility for compliance with all requirements of the
Federal Occupational Safety and Health Act	t of 1970, and all State and Local Safety and
Health regulations, and agree to indemnify	and hold harmless the CITY, its officers, agents,
employees, and consultants against any and	d all legal liability or loss the CITY, its officers,
Agents, employees, and consultants may in	cur due to failure to comply with such act.
ATTEST Betty Kamara Contracts Administrator	Tetra Tech, Inc. PROPOSERS NAME
ATTEST Stephanie Kilgore Marketing Coordinator	By: Jonathan Burgiel  Title - Vice President
	September 28, 2015 DATE

#### ATTACHMENT M

COPY OF STATE OF FLORIDA CORPORATE
FILINGS; OR

ARTICLES OF INCORPORATION AS REQUIRED BY
THE SECRETARY OF STATE, FLORIDA
City of Key West Business Tax Receipt
General Service
"Debris Removal"

A copy of Tetra Tech's Certificate of Status, certifying the firm is authorized to transact business in the State of Florida, is provided on the subsequent page.

### Attachment M: Florida Certificate of Good Standing



# State of Florida Department of State

I certify from the records of this office that TETRA TECH, INC. is a Delaware corporation authorized to transact business in the State of Florida, qualified on April 28, 1988.

The document number of this corporation is P19034.

I further certify that said corporation has paid all fees due this office through December 31, 2015, that its most recent annual report/uniform business report was filed on January 7, 2015,, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twenty-fifth day of March, 2015



Secretary of State

Tracking Number: CU4501686020

To authenticate this certificate, visit the following site, enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

#### ATTACHMENT N

#### MINIMUM REQUIREMENTS FOR EVIDENCE OF INSURABILITY

To the fullest extent permitted by law, the CONTRACTOR expressly agrees to indemnify and hold harmless the City of Key West, their officers, directors, agents and employees \*(herein called the "indemnitees") from liabilities, damages, losses and costs, including but not limited to, reasonable attorney's fees and court costs, such legal expenses to include costs incurred in establishing the indemnification and other rights agreed to in this Paragraph, to persons or property, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR, its Subcontractors or persons employed or utilized by them in the performance of the Contract. Claims by indemnitees for indemnification shall be limited to the amount of CONTRACTOR's insurance or \$1 million per occurrence, whichever is greater. The parties acknowledge that the amount of the indemnity required hereunder bears a reasonable commercial relationship to the Contract and it is part of the project specifications or the bid documents, if any.

The indemnification obligations under the Contract shall not be restricted in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the CONTRACTOR under Workers' Compensation acts, disability benefits acts, or other employee benefits acts, and shall extend to and include any actions brought by or in the name of any employee of the CONTRACTOR or of any third party to whom CONTRACTOR may subcontract a part or all of the Work. This indemnification shall continue beyond the date of completion of the work.

CONTRACT	TOR: Tetra Tech, Inc.	SEAL:
	2301 Lucien Way, Suite 120, Maitland, FL 32751  Address  Signature  Jonathan Burgiel	FEB 1988
	Print Name	
	Vice President	
	Title	
DATE:	September 28, 2015	

#### **CONTRACTOR** Insurance/Indemnity Language

#### Insurance

**CONTRACTOR** is to secure, pay for, and file with the City of Key West, prior to commencing any work under the Contract, all certificates for Workers' Compensation, Public Liability, and Property Damage Liability Insurance and such other insurance coverages as may be required by specifications and addenda thereto, in at least the following minimum amounts with specification amounts to prevail if greater than minimum amounts indicated. Notwithstanding any other provision of the Contract, the **CONTRACTOR** shall provide the minimum limits of liability insurance coverages as follows:

Auto Liability	\$1,000,000	Combined Single Limit
General Liability	\$2,000,000	Aggregate (Per Project)
	\$2,000,000	<b>Products Aggregate</b>
	\$1,000,000	Any One Occurrence
	\$1,000,000	Personal Injury
	\$ 300,000	Fire Damage/Legal
Additional Umbrella Liability	\$2,000,000	Occurrence/Aggregate

CONTRACTOR shall furnish an original Certificate of Insurance indicating, and such policy providing coverage to, City of Key West named as "Additional Insured" on PRIMARY and NON CONTRIBUTORY basis utilizing an ISO standard endorsement at least as broad as CG 2010 (11/85) or its Equivalent, (COMBINATION OF CG 20 10 07 04 and CG 20 37 07 04, providing coverage for completed operations is acceptable) INCLUDING A "Waiver of Subrogation" clause in favor of City of Key West on all policies. CONTRACTOR will maintain the General Liability and Umbrella Liability insurance coverages summarized above with coverage continuing in full force including the "additional insured" endorsement until at least 3 years beyond completion and delivery of the work contracted herein.

Notwithstanding any other provision of the Contract, the **CONTRACTOR** shall maintain complete Workers' Compensation coverage for each and every employee, principal, officer, representative, or agent of the **CONTRACTOR** who is performing any labor, services, or material under the Contract. Further, **CONTRACTOR** shall additionally maintain the following minimum limits of coverage:

Bodily Injury Each Accident	\$1,000,000
Bodily Injury by Disease Each Employee	\$1,000,000
Bodily Injury by Disease Policy Limit	\$1,000,000

If the work is being done on or near a navigable waterway, **CONTRACTOR's** Workers' Compensation policy shall be endorsed to provide **USL&H** Act **(WC 00 01 06 A)** and **Jones Act (WC 00 02 01 A)** coverage if specified by the City of Key West. **CONTRACTOR** shall provide the City of Key West with a Certificate of Insurance verifying compliance with the workman's compensation coverage as set forth herein and shall provide as often as required by the City of Key West such certification which shall also show the insurance company, policy number, effective and expiration date, and the limits of workman's compensation coverage under each policy.

**CONTRACTOR's** insurance policies shall be endorsed to give 30 days' written notice to the City of Key West in the event of cancellation or material change, using form CG 02 24, or its equivalent.

Certificates of Insurance submitted to the City of Key West will not be accepted without copies of the endorsements being requested. This includes additional insured endorsements, cancellation/material change notice endorsements, and waivers of subrogation. Copies of USL&H Act and Jones Act endorsements will also be required if necessary. PLEASE ADVISE YOUR INSURANCE AGENT ACCORDINGLY.

**CONTRACTOR** will comply with any and all safety regulations required by any agency or regulatory body including but not limited to OSHA. **CONTRACTOR** will notify City of Key West immediately by telephone at (305) 809-3811 of any accident or injury to anyone that occurs on the jobsite and is related to any of the work being performed by the **CONTRACTOR**.

Tetra Tech has an excellent insurance program for its professional services and we are confident that we can comply with the insurance requirements set forth by the City.

A copy of Tetra Tech's Evidence of Insurance is provided on the subsequent page.

### **Attachment N: Evidence of Insurance**





#### CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY) 10/02/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER AON Risk Insurance Services West, Inc.		CONTACT NAME: PHONE (A/C. No. Ext):	(866) 283-7122	FAX (A/C. No.): (800) 363-01	05
Los Angeles CA Office 707 Wilshire Boulevard Suite 2600 Los Angeles CA 90017-0460 USA		E-MAIL ADDRESS:		(A/C. No.):	
	A		INSURER(S) AFFORDING	COVERAGE	NAIC#
INSURED		INSURER A:	National Union Fire	Ins Co of Pittsburgh	19445
Tetra Tech, Inc. 1 South Wacker Drive, 37th Floor Chicago, IL 60606		INSURER B:	The Insurance Co of	the State of PA	19429
	h Floor	INSURER C:	AIG Europe Limited		AA1120841
cago, 11 00000		INSURER D:	Lexington Insurance	Company	19437
		INSURER E:			
		INSURER F:			
COVERAGES	CERTIFICATE NUMBER:	<u> </u>	REVISI	ON NUMBER:	<u> </u>

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSP		I ADDITISTIRE	OI .	POLICY EFF	POLICY EXP		own are as requested
INSR LTR	TYPE OF INSURANCE	ADDL SUBF	POLICY NUMBER	(MM/DD/YYYY)	(MM/DD/YYYY)	LIMITS	3
Α	X COMMERCIAL GENERAL LIABILITY		GL5388413	10/01/2014	10/01/2015	EACH OCCURRENCE	\$2,000,000
	CLAIMS-MADE X OCCUR					DAMAGE TO RENTED PREMISES (Ea occurrence)	\$1,000,000
	X Contractural Liability					MED EXP (Any one person)	\$10,000
	X X,C,U					PERSONAL & ADV INJURY	\$2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:					GENERAL AGGREGATE	\$4,000,000
	POLICY X PRO- JECT X LOC					PRODUCTS - COMP/OP AGG	\$4,000,000
	OTHER:						
Α	AUTOMOBILE LIABILITY		CA5101755	10/01/2014	10/01/2015	COMBINED SINGLE LIMIT (Ea accident)	\$2,000,000
	X ANY AUTO					BODILY INJURY ( Per person)	
	ALL OWNED SCHEDULED					BODILY INJURY (Per accident)	
	X HIRED AUTOS X NON-OWNED AUTOS					PROPERTY DAMAGE (Per accident)	
С	X UMBRELLA LIAB X OCCUR		TH1400061	10/01/2014	10/01/2015	EACH OCCURRENCE	\$5,000,000
	EXCESS LIAB CLAIMS-MADE					AGGREGATE	\$5,000,000
	DED RETENTION						
В	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		WC028328161		10/01/2015	X PER STATUTE OTH-	
	ANY PROPRIETOR / PARTNER / EXECUTIVE		WC028328165 WC028328166	10/01/2014 10/01/2014	10/01/2015	E.L. EACH ACCIDENT	\$1,000,000
	(Mandatory in NH)	N/A	wC028328167	10/01/2014		E.L. DISEASE-EA EMPLOYEE	\$1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below					E.L. DISEASE-POLICY LIMIT	\$1,000,000
D	Professional Liability and Contractor's Pollution Liability		028182375	10/01/2014	10/01/2015	Each Claim Aggregate	\$5,000,000 \$5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required) Includes Stop Gap: OH, ND, WA, WY

CERTIFICATE HOLDER	CANCELLATION		
Evidence of Insurance	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.		
	AUTHORIZED REPRESENTATIVE		
	Aon Rish Insurance Services West, Inc.		

#### **ATTACHMENT O**

REQUEST FOR PROPOSALS FOR PROFESSIONAL SERVICES FOR MONITORING
DEBRIS REMOVAL AND RELATED SERVICES PROVIDER: COPY OF DRAFT
CONTRACT DOCUMENTS

A copy of Tetra Tech's standard Professional Services Agreement is provided on the subsequent pages.

### Attachment O: Tetra Tech Professional Services Agreement





<b>EFFECTIVE DATE:</b>			•		
CONTRACT NO.:	RFP# 09-015		TETRA TECH, INC	. FED TAX II	D: <u>95-4148514</u>
CLIENT:	CITY OF KEY WEST, FLORIDA				
ADDRESS:	3126 Flagler Avenue, Key West, FL 33040	l			
INVOICING ADDRESS:					
PROJECT CONTACT:		TEL:		_ EMAIL:	
PAYMENT CONTACT:		TEL:		_ EMAIL:	
CONSULTANT:	TETRA TECH, INC.				
ADDRESS:	2301 Lucien Way, Suite 120				
	Maitland, FL 32751				
TECHNICAL CONTACT:	Anne Cabrera	TEL:	(954) 559-4951	_ EMAIL:	anne.cabrera@tetratech.com
CONTRACTUAL CONTACT:	Betty Kamara	TEL:	(321) 441-8518	_ FAX:	betty.kamara@tetratech.com
PAYMENT ADDRESS:	Tetra Tech, Inc., PO 911642, Denver, CO	80291-16	042		
PROJECT DESCRIPTION:	Monitoring of Debris Removal and Related	Services	3		
CITY OF KEY WEST RI	FP# 09-015 (See Exhibit A)		SCOPE OI	FSERVICE	S (See Exhibit B)
FEE SCHEDULE (See Ex	xhibit C)				

#### TERMS AND CONDITIONS

#### 1. DEFINITIONS AND CONTRACT FORMATION.

- (a) "Client" shall mean the person or entity identified in the Tetra Tech, Inc. "TT" Proposal for whom Services are to be performed.
- (b) "TT" shall mean Tetra Tech, Inc.
- (c) "Client Order" shall mean the purchase order, request, authorization or other notification, and additions or modifications thereto whereby Client indicates its desire that TT furnish Services.
- (d) "TT Proposal" shall mean these terms and conditions and the letter, proposal, quotation, or other notification, including any response to the Client Order, wherein TT offers to furnish Services.
- (e) "Services" shall mean the Services of TT personnel described in the TT Proposal or Client Order and any other Services as may be added to, or performed in connection with, the Contract provided, however, that TT shall have no responsibility as a generator, operator, transporter, disposer or arranger of the transportation and/or disposal of Hazardous Substances as defined in Article 8 below.
- (f) "Contract" shall mean these Terms and Conditions and the TT Proposal, and shall include, only to the extent not inconsistent with any aspect of the TT Proposal and these Terms and Conditions, the provisions of the Client Order. Upon execution by Client or commencement of Services at Client's request, TT's Proposal and these Terms and Conditions shall constitute a binding Contract and govern exclusively any Services provided.



#### 2. INTRODUCTION.

TT acting as an independent Contractor, is a Contractor with extensive experience in providing emergency management planning, disaster management and recovery services and shall provide said services in a professional manner in accordance with the terms and conditions of this Agreement and the standards of care practiced by professionals performing similar services.

Client wishes to enter into a contractual agreement with TT to provide professional monitoring of debris removal and related services in accordance with RFP No. 09-015, attached hereto as Exhibit A.

TT wishes to provide said services to Client in accordance with and as set forth in TT's response to RFP No. 09-015 (See Exhibit B, Scope of Services and Exhibit C, Hourly Labor Rates), which exhibits are hereby incorporated and made a part of this Agreement.

Task Orders shall be issued for specific deliverables under this Agreement. Such deliverables to be provided by TT will be specified in writing on each Task Order. TT is authorized to commence work upon receipt of a written notice to proceed issued by the Client.

#### 3. COMPENSATION.

The fee for the services under this Agreement will be based on either a fixed fee basis or the actual hours of services furnished multiplied by TT's Billing Rates as set forth in Exhibit B, plus all expenses directly related to the services furnished under this Agreement.

TT shall be compensated in accordance with each Task Order issued under this Agreement and the terms of this Article. TT's invoices are rendered monthly and are payable upon receipt. **Payment shall be made to the following address: Tetra Tech, Inc., PO 911642, Denver, CO 80291-1642.** Client will review invoices for acceptance within ten (10) calendar days of the date of the invoice to which Client shall immediately notify TT of any invoice discrepancies. TT and Client will work in good faith to resolve any such discrepancies within ten (10) days after notification. Should a discrepancy result in a partial rejection of any item(s) invoiced, Client shall proceed with partial payment within Net 30 days of the date of the invoice.

Interest shall accrue at the rate of two percent (2%) over prevailing prime rate and shall be charged on a monthly basis (or the maximum percentage allowed by law, whichever is less) on any amounts not paid within thirty (30) days of invoice submittal. In the event legal action is necessary to enforce the provisions of this Contract, TT shall be entitled to collect from the Client any judgment or settlement sums due, reasonable attorneys' fees, court costs and expenses incurred by TT in connection therewith and, in addition, the reasonable value of TT's time and expenses spent in connection with such action, computed at TT's prevailing fee schedule and expense policies. TT may, but is not required to, terminate its services if any invoice is unpaid for sixty (60) days. TT, its officers, employees, or consultants may be asked or required to appear as a witness or deponent, to furnish information or data through interrogatories, or otherwise be compelled to participate in, administrative or judicial proceedings arising in connection with Client's project. In that event and notwithstanding expiration or termination or this Contract, Client shall compensate TT in accordance with this Article and reimburse TT for reasonable legal expenses incurred in connection therewith, provided, however, that the provisions of Article 6, below, shall govern in the event TT is found to be at fault.

Under no circumstances shall payment of TT's invoices be contingent on reimbursement of Client by any third party authority or funding source. Any interest charges due from Client on past due invoices are in addition to amounts otherwise due under this Agreement.

4. CONFIDENTIALITY, ACCESS TO SITE, USE OF FACILITIES AND INFORMATION. Client shall provide TT with access to facilities and information conducive to the efficient and accurate provision of Services, including such maps, drawings, records, and site access as are needed for the proper conduct of the Services, and shall indicate the reliability of all information provided. TT will maintain in confidence and return to Client any information designated by Client as confidential. If site visits are included in the Scope of Services, but not field construction or remediation, TT INC. shall visit the project and/or construction site at appropriate intervals to become generally familiar with the progress, quality of work (contractors' work) and if applicable to determine if the work is proceeding in general accordance with the Contract Documents. Visits to the project site and observations made by TT as part of Services during construction under Agreement shall not make TT responsible for, nor relieve the construction contractor(s) of the obligation to conduct comprehensive monitoring of the work sufficient to ensure conformance with the intent of the Contract Documents, and shall not make TT responsible for, nor relieve the construction contractor(s) of the full responsibility for all construction means, methods, techniques, sequences, and procedures necessary for coordinating and completing all portions of the work under the construction contract(s) and for all safety precautions incidental thereto.



#### INSURANCE.

Contractor is to secure, pay for, and file with the City of Key West, prior to commencing any work under the Contract, all certificates for Workers' Compensation, Public Liability, and Property Damage Liability Insurance and such other insurance coverages as may be required by specifications and addenda thereto, in at least the following minimum amounts with specification amounts to prevail if greater than minimum amounts indicated. Notwithstanding any other provision of the Contract, the Contractor shall provide the minimum limits of liability insurance coverages as follows:

Auto Liability	\$1,000,000	Combined Single Limit
General Liability	\$2,000,000	Aggregate (Per Project)
	\$2,000,000	Products Aggregate
	\$1,000,000	Any One Occurrence
	\$1,000,000	Personal Injury
	\$ 300,000	Fire Damage/Legal
Additional Umbrella Liability	\$2,000,000	Occurrence/ Aggregate

Contractor shall furnish an original Certificate of Insurance indicating, and such policy providing coverage to, City of Key West named as "Additional Insured" on PRIMARY and NON CONTRIBUTORY basis utilizing an ISO standard endorsement at least as broad as CG 2010 (11/85) or its Equivalent, (COMBINATION OF CG 20 10 07 04 and CG 20 37 07 04. providing coverage for completed operations is acceptable) INCLUDING A "Waiver of Subrogation" clause in favor of City of Key West on all policies. Contractor will maintain the General Liability and Umbrella Liability insurance coverages summarized above with coverage continuing in full force including the "additional insured" endorsement until at least 3 years beyond completion and delivery of the work contracted herein.

Notwithstanding any other provision of the Contract, the Contractor shall maintain complete Workers' Compensation coverage for each and every employee, principal, officer, representative, or agent of the Contractor who is performing any labor, services, or material under the Contract. Further, Contractor shall additionally maintain the following minimum limits of coverage:

Bodily Injury Each Accident \$1,000,000 Bodily Injury by Disease Each Employee \$1,000,000 Bodily Injury by Disease Policy Limit \$1,000,000

If the work is being done on or near a navigable waterway, Contractor's Workers' Compensation policy shall be endorsed to provide USL&H Act (WC 00 01 06 A) and Jones Act (WC 00 02 01 A) coverage if specified by the City of Key West. Contractor shall provide the City of Key West with a Certificate of Insurance verifying compliance with the workman's compensation coverage as set forth herein and shall provide as often as required by the City of Key West such certification which shall also show the insurance company, policy number, effective and expiration date, and the limits of workman's compensation coverage under each policy.

CONTRACTOR's insurance policies shall be endorsed to give 30 days' written notice to the City of Key West in the event of cancellation or material change, using form CG 02 24, or its equivalent.

Certificates of Insurance submitted to the City of Key West will not be accepted without copies of the endorsements being requested. This includes additional insured endorsements, cancellation/material change notice endorsements, and waivers of subrogation. Copies of USL&H Act and Jones Act endorsements will also be required if necessary. PLEASE ADVISE YOUR INSURANCE AGENT ACCORDINGLY.

Contractor will comply with any and all safety regulations required by any agency or regulatory body including but not limited to OSHA. Contractor will notify City of Key West immediately by telephone at (305) 809-3811 of any accident or injury to anyone that occurs on the jobsite and is related to any of the work being performed by the Contractor.

- 6. INDEMNIFICATION. TT shall indemnify and save harmless Client from claims, actions and judgments arising out of bodily injury, death or damage to property of third parties to the extent caused by the negligence of TT, provided, however, that "Hazardous Substance Claims" as defined in Article 8, below, shall be governed by that Article.
- 7. WARRANTY OF SERVICES. TT warrants that TT and its employees shall, in performing Services hereunder, exercise the degree of skill, care and diligence consistent with customarily accepted good practices and procedures at the time and location and for the type of Services performed. Should TT fail to perform to those standards, it shall (a) without cost to Client, reperform and correct any substandard Services; and (b) reimburse Client for Client's direct damages or otherwise correct faulty construction, to the extent resulting from such substandard Services. Services involving such activities as the prediction of ecological or health impacts, clean-up criteria, extent or degree of contamination or dispersion, air or water movement, geologic and hydrogeologic conditions, extent of appropriate investigation, scheduling, and cost estimating are highly sensitive to changes in regulatory and scientific criteria, methodologies and interpretations thereof and require the balance of diverse, often conflicting, Client business, economic, legal and other priorities. Client acknowledges these conditions and accepts the risk that, although TT may perform to the above standards, the Client's goals or desires may nevertheless not be realized. TT makes no other warranties, express or implied, with respect to its performance under this Contract. TT's liability hereunder, including any for damage to or loss of Client property, shall in no event extend beyond one year after completion of the Services in question or exceed the amount specified in Article 9 below.



- 8. HAZARDOUS SUBSTANCE CLAIMS. (a) In the event that TT's negligence is found, by final judicial determination, to have caused a Hazardous Substance Claim as defined below, TT shall reimburse Client for its costs and liabilities including cost incurred by Client in case of any required defense of TT incurred under this Article 8, to the extent caused by TT; (b) "Hazardous Substance Claim" shall mean any and all claims, losses, costs, expenses, judgments, damages, and liabilities of any form or nature including but not limited to any for personal or emotional injury, death or damage to property arising out of or in connection with any actual, threatened or feared release, discharge or exposure to any toxic or hazardous waste, substance, material, or vapor, including without limitation, PCB's, petroleum, hydrocarbons, asbestos, mixed, radioactive or nuclear wastes and any other substance designated as hazardous or toxic under CERCLA, TSCA, RCRA or other statute or regulation ("Hazardous Substances").
- 9. TT LIABILITY. Except as provided in Article 8(a) above, TT's total aggregate liability in connection with or arising out of the Contract or Services, including without limitation any under Articles 6, 7 and 8 above, shall in no event exceed the amount actually paid to TT under this Agreement, or under the specific task order at issue, whichever is less.
- 10. CONSEQUENTIAL DAMAGES AND OTHER LIABILITIES. TT and its employees shall in no event be liable for any special, indirect or consequential damages, including specifically but without limitation, any based on loss of profits or revenue, loss of or interference, whether or not by third parties, with full or partial use of any equipment, facility or property, including real property, cost of replacement power, energy or product, delay in or failure to perform or to obtain permits or approvals, cost of capital, loss of goodwill, claims of customers, fines or penalties assessed against client or similar damages. These terms provide allocations of risk and reward consistent with the nature and extent of the Services and to that end include (i) protections against, and limitations on, liability of TT and (ii) specific remedies of Client which shall be its sole and exclusive remedies. The allocations, including without limitation those set forth above and under Articles 7, 8, 9 and 14, shall survive this contract and apply to the fullest extent allowed by law irrespective of whether liability of TT is claimed, or found, to be based in contract, tort or otherwise (including negligence, warranty, indemnity and strict liability) and Client hereby waives all rights of recovery and assumes all risks beyond those explicitly allocated to TT herein.
- 11. SITE CONTRACTORS. For the benefit of Client and TT, Client agrees that it will cause provisions acceptable to TT governing insurance and indemnity to be inserted in each of Client's agreements for remediation or other construction or site services or work related to the Services.
- 12. **DELAYS**. Neither party shall be considered in default in the performance of its obligations hereunder to the extent that the performance of such obligations is prevented or delayed by any cause which is beyond the reasonable control of the affected party, and the time for performance of either party hereunder shall in such event be extended for a period equal to any time lost as a result thereof, and an equitable adjustment shall be made to TT's compensation.
- 13. THIRD PARTY INTERESTS. This Contract and the Services and Work Product produced hereunder are solely for the benefit of Client and are not intended to be for the benefit, or to be construed as creating rights in favor, of any third party. If Client is not the ultimate beneficiary of the Services or TT's work product is used in such a way as to create or induce any reliance by any third party, Client represents and warrants (i) that it shall bind its clients and/or such third parties to limitations on and protections against liability "protective provisions" commensurate with those afforded TT hereunder and that such protective provisions will, in fact, inure to the benefit of TT, and/or (ii) that Client has the power to act on behalf of its clients and/or such third parties and does hereby bind such parties to these protective provisions.
- 14. CHANGES AND TERMINATION. This Contract shall not be modified except by written agreement signed by both parties. Client shall have the right to make changes within the general scope of Services upon execution of a mutually accepted change order. Client shall also have the right to terminate this Contract prior to completion of the Services, after reasonable notice to TT in writing, in which event Client shall pay TT all amounts due TT hereunder up to the effective date of termination, plus TT's reasonable costs incurred after such date in terminating the Services. In the event that Client alleges breach on behalf of TT, Client shall afford TT in 30 days written notice to submit a reasonably acceptable plan to cure any alleged deficiency prior to termination. Recognizing that termination prior to completion may involve risks and exposures both as to cost of work and third party claims, Client shall in such event indemnify, protect and defend TT from claims arising out of any incomplete aspect of the Services. Both parties have the right to terminate this Contract for convenience with thirty (30) day notice to the other party.
- 15. TERM. This Agreement shall be effective as of the date first above written (the "Effective Date"), and shall continue in full force for five (5) years. Client shall have the option of renewing this agreement for an additional three (3) years.
- 15. GOVERNING LAW, PRECEDENCE AND DIVISIBILITY. Unless specified otherwise in Client orders, this Agreement shall be governed by the laws of the State of Florida excluding choice of law rules, which direct application of the laws of another jurisdiction. The provisions of the TT Proposal and these Terms and Conditions shall govern exclusively any Services furnished by TT and shall prevail over and render void any inconsistent or conflicting provision of the Client Order. If any term, condition, provision or portion of this Contract is declared void or unenforceable, or limited in its application or effect, such event shall not affect any other provision or portion hereof. All other provisions and unaffected portions thereof shall remain fully enforceable and an adjustment in the compensation or other provisions shall be made with the purpose of equitably affecting the intent of the Contract to the maximum extent allowed by law.
- 16. ENTIRE AGREEMENT. This Contract contains the entire agreement between the parties as to the Services rendered hereunder. All previous or contemporaneous agreements, representations, warranties, promises, and conditions relating to the subject matter of this Contract are superseded by this Contract.



<b>TETRA TECH, INC.</b> – Accepted by:	CITY OF KEY WEST, FLORIDA Accepted b		
Jonathan Burgiel			
BY TT (PRINT NAME)	BY (PRINT NAME)		
Vice President/Operations Manager			
TITLE	TITLE		
SIGNATURE /DATE	SIGNATURE /DATE		
ATTEST:	ATTEST:		
Betty Kamara, Contracts Administrator	·		

#### ATTACHMENT P

#### DOMESTIC PARTNER BENEFITS

Except where otherwise exempt or prohibited by law, a contractor awarded a contract pursuant to a bid process shall provide benefits to domestic partners of its employees on the same basis as it provides benefits to employees spouses.

Such certification shall be in writing and shall be signed by an authorized officer of the contractor and delivered, along with a description of the contractor's employee benefits plan, to the City's procurement director prior to entering a contract.

If the contractor fails to comply with this section, the City may terminate the contract and all monies due or to become due under the contract may be retained by the City

See Tetra Tech's Corporate EEO Statement on the subsequent page.

#### Attachment P: Tetra Tech Corporate EEO Statement



### TETRA TECH, INC. AND SUBSIDIARIES Corporate EEO Statement

It is and will continue to be the policy of Tetra Tech, Inc., all its office locations and subsidiaries, to practice equal opportunity in all aspects of employment. All persons will be treated on the basis of qualifications, competence, and merit without regard to race, color, religion, gender, sexual orientation, national origin, ancestry, age, disability, veteran status, genetics, or other categories as required by law.

Decisions concerning employment have and will continue to be based on those considerations which further the principle of equal employment opportunity. All other personnel actions such as compensation, benefits, transfers, layoffs, returns from layoff, company-sponsored training, education and tuition assistance, and social programs are and will continue to be administered in accordance with the Company's EEO policy. Every member of management is held responsible for assuring non-discriminatory equal employment opportunity within his or her assigned area of responsibility.

Any questions or situations arising regarding equal opportunity should be directed to the Human Resources Department.

#### ATTACHMENT Q

#### **CONE OF SILENCE**

STATE OF FLORIDA
SS:
COUNTY OF MONROE
I the undersigned hereby duly sworn, depose and say that all owners(s), partners, officers, directors employees and agents representing the firm of
West issued competitive solicitations pursuant to City of Key West Ordinance Section 2-773 Cone of silence.
BY: Snathon Burgiel, Vice President/Operations Manager
Sword and prescribed before me this 28th day of September, 2015
Sanda Agardo NOTARY PUBLIC, State of Florida
My commission expires;

Notary Public State of Florida Sandra M Fajardo My Commission FF 098767 Expires 03/09/2018