TETRA TECH

# City of Coral Gables, Florida




## Disaster Debris Monitoring Services
## (RFP 2018-001)

Proposal | Copy | March 2018

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TETRA TECH

March 1, 2018

Mr. Yusbel Gonzalez, CPPB
Procurement Specialist
City of Coral Gables Procurement Division
2800 SW 72nd Avenue
Miami, FL 33155

**Subject: RFP No. 2018-001, Disaster Debris Monitoring Services**

Dear Mr. Gonzalez and Members of the Evaluation Committee,

Tetra Tech, Inc. (Tetra Tech) is pleased to submit the enclosed proposal to provide emergency disaster debris monitoring services to the City of Coral Gables (City). Tetra Tech is a leading provider of consulting, engineering, and technical services worldwide. Our team of leading disaster response and recovery experts is well suited to assist the City for the following reasons:

- **Nationally Recognized Leader in Debris Monitoring and Disaster Grant Management.** Tetra Tech has assisted clients with response to **every major disaster affecting the United States in the past 15 years**, including hurricanes (Hurricanes Jeanne, Frances, Charley, Sandy, Katrina, Ike, Matthew, and most recently Harvey and Irma), floods (Vermont, Colorado, South Carolina, Texas, and Louisiana), fires (California, Texas), earthquakes, and ice storms. Collectively, our team has **overseen and managed the recovery of over 100 million cubic yards (CYs) of debris on behalf of over 300 public sector clients and has assisted clients with obtaining and managing over $6 billion in post-disaster grants.** We are intimately familiar with obtaining post-disaster grants for our clients and helping them successfully utilize and document these grants to meet federal grant program requirements.
- **Immediate Response Capability.** With our disaster recovery team based in Maitland, Florida, and recovery experts located throughout the state, Tetra Tech can stage a full-scale mobilization in the City within hours of a disaster. **Our team has never failed to respond to a client's needs, providing each community with a dedicated project team.** For example, **following Hurricane Irma, Tetra Tech simultaneously deployed over 2,400 staff in response to 67 clients in the State of Florida**. Tetra Tech stands ready to work with the City as a trusted partner who will respond immediately and provide high-quality services throughout the engagement.
- **Unmatched Florida Disaster Response and Recovery Experience.** Since 2004, our team has monitored collection and removal of almost **50 million CY of debris in Florida**. Our team has assisted numerous communities in Florida with response and recovery efforts after Hurricanes Charley, Frances, Jeanne, Ivan, Dennis, Katrina, Wilma, Matthew and most recently, Irma. Tetra Tech is proud of our experience in Florida and is committed to successfully managing all phases of debris monitoring for our clients after a debris-generating event. Cities including Boca Raton, Cocoa Beach, Fort Lauderdale, Marathon, Naples, Orlando, Pensacola, and Port Orange as well as the Cities of Brevard, Broward, Clay, Collier, Escambia, Lake, Miami-Dade, Monroe, Pasco, Polk, Santa Rosa, Sarasota, St. Johns, and Volusia have called on our team to provide debris monitoring services and grant application, administration, and management. In addition, our firm maintains 24 offices and approximately 750 staff throughout the State of Florida. **Tetra Tech has the qualifications and expertise necessary to support the City after a disaster.**
- **South Florida Knowledge and Experience.** Tetra Tech has provided disaster recovery and preparedness services for more than 20 South Florida communities over the past 13 years. Services performed have included debris monitoring, financial recovery, Federal Emergency Management Agency (FEMA) reimbursement consulting, hurricane response planning, and emergency management planning and training. Additionally, our team includes ***Ms. Anne Cabrera and Ms. Kerri Genden-O'Dell, both South Florida Residents***, who have worked nationwide on numerous major post-disaster activations since Hurricane Wilma

Tetra Tech, Inc.
2301 Lucien Way, Suite 120, Maitland, FL 32751
Tel 321-441-8500 Fax 321-441-8501 tetratech.com

in 2005, where they served in a variety of roles focusing on reimbursement of more than $2 billion from the FEMA. ***This in-depth understanding will ensure our team helps the City design the most successful and cost-effective debris operation.***

- **Scalable Response**. Our team of experts has monitored and obtained FEMA and FHWA reimbursement on 20 debris removal projects in excess of 1 million cubic yards, representing many of the largest hurricane-prone communities in the nation. Tetra Tech has also provided superior end-to-end disaster debris monitoring and program management services to many communities with 51,000 residents or fewer. Tetra Tech understands the importance of proper staffing based on the magnitude of an event and the scale of the impacted area. Our team is prepared to activate the appropriate number of staff required to efficiently respond to each engagement.
- **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 live street-level pass maps (geoportal), which will meet the unique data needs of the City. **In addition, RecoveryTrac™ is one of only three systems validated by the United States Army Corps of Engineers (USACE) and is the ADMS preferred by the USACE debris contractors.** The specifications set forth by the USACE are designed to support the largest and most devastating disasters.
- **Full-Service Disaster Recovery Firm.** Tetra Tech is one of the only firms in the country that can provide debris monitoring, emergency management, and FEMA reimbursement and disaster grant support combined with engineering capabilities to offer full-service disaster support solutions. Tetra Tech is ready and able to support the City with any of its disaster-related needs.
- **FEMA Reimbursement Experts.** Tetra Tech maintains a staff of reimbursement experts who have recovered millions of dollars of eligible FEMA Public Assistance reimbursement costs incurred by our clients. A key member of our team is ***Mr. Dick Hainje***, former regional administrator of FEMA Region VII. As regional administrator of Region VII, Mr. Hainje led Region VII through 60 presidentially declared disasters in Kansas, Iowa, Nebraska, and Missouri and assisted Region IV with the 2004 Florida hurricane FEMA response.

Tetra Tech would be honored to serve as the City's debris monitoring and consulting services provider. For questions regarding this response, please feel free to contact the representatives listed below.

**Technical representative:**
**Ms. Anne Cabrera**
(954) 559-4951 | anne.cabrera@tetratech.com

**Contractual representative:**
**Ms. Betty Kamara**
(407) 803-2551 | betty.kamara@tetratech.com

Sincerely,
**Tetra Tech, Inc.**

Jonathan Burgiel
Vice President/Operations Manager

# Title Page

# Disaster Debris Monitoring Services

**RFP #2018-001**

March 1, 2018

**PRESENTED TO**

**City of Coral Gables**
Yusbel Gonzalez, CPPB
Procurement Division
2800 SW 72nd Avenue
Miami, FL 33155

**PRESENTED BY**

**Tetra Tech, Inc.**
Jonathan Burgiel
2301 Lucien Way
Suite 120
Maitland, FL 32751

P +1-321-441-8500
F +1-321-441-8501
tetratech.com

**For technical questions, please contact:**

**Anne Cabrera –** Deputy Director, Post Disaster Programs
Phone: (954) 559-4951 | Email: anne.cabrera@tetratech.com

**For contractual questions, please contact:**

**Ms. Betty Kamara –** Contracts Administrator
Phone: (407) 803-2551 | Email: betty.kamara@tetratech.com

# TABLE OF CONTENTS

# CITY OF CORAL GABLES, FL

2800 SW 72nd Avenue, Miami, FL 33155
Finance Department / Procurement Division
Tel: 305-460-5102 / Fax: 305-261-1601

# PROPOSER'S ACKNOWLEDGEMENT

| | |
|---|---|
| **RFP Title:**<br>**DISASTER DEBRIS MONITORING SERVICES**<br><br>**RFP No. 2018-001**<br><br>A cone of silence is in effect with respect to this RFP. The Cone of Silence prohibits certain communication between potential vendors and the City. For further information, please refer to the City Code Section 2-1027 of the City of Coral Gables Procurement Code. | Sealed response submittals must be received prior to **2:00 p.m., Thursday, February 8, 2018**, by the Procurement Office, located at 2800 S.W. 72nd Avenue, Miami, FL 33155; and are to remain valid for 120 calendar days. Submittals received after the specified date and time will be returned unopened.<br><br>Contact: Yusbel Gonzalez, CPPB<br>Title: Procurement Specialist<br>Telephone: 305-460-5107<br>Facsimile: 305-261-1601<br>Email:ygonzalez@coralgables.com / contracts@coralgables.com |

| | |
|---|---|
| Proposer Name:<br>Tetra Tech, Inc. | FEIN or SS Number:<br>95-4148514 |
| Complete Mailing Address:<br>2301 Lucien Way, Suite 120, Maitland, FL 32751 | Telephone No.: (321) 441-8518<br>Cellular No.: (407) 803-2251 |
| Indicate type of organization below:<br>Corporation: X Partnership: __ Individual: __ Other:__ | Fax No.:<br>(321) 441-8501 |
| Bid Bond / Security Bond (*if applicable*) 5 % | Email:<br>betty.kamara@tetratech.com |

**ATTENTION: THIS FORM ALONG WITH ALL REQUIRED RFP FORMS MUST BE COMPLETED, SIGNED (PREFERABLY IN BLUE INK), AND SUBMITTED WITH THE RESPONSE PRIOR TO THE SUBMITTAL DEADLINE. FAILURE TO DO SO MAY DEEM PROPOSER NON-RESPONSIVE.**

THE PROPOSER CERTIFIES THAT THIS SUBMITTAL IS BASED UPON ALL CONDITIONS AS LISTED IN THE RFP DOCUMENTS AND THAT THE PROPOSER HAS MADE NO CHANGES IN THE RFP DOCUMENT AS RECEIVED. THE PROPOSER FURTHER AGREES IF THE RFP IS ACCEPTED, THE PROPOSER WILL EXECUTE AN APPROPRIATE AGREEMENT FOR THE PURPOSE OF ESTABLISHING A FORMAL CONTRACTUAL RELATIONSHIP BETWEEN THE PROPOSER AND THE CITY OF CORAL GABLES FOR THE PERFORMANCE OF ALL REQUIREMENTS TO WHICH THIS RFP PERTAINS. FURTHER, BY SIGNING BELOW PREFERABLY IN **BLUE INK,** ALL RFP PAGES ARE ACKNOWLEDGED AND ACCEPTED AS WELL AS ANY SPECIAL INSTRUCTION SHEET(S) IF APPLICABLE. THE UNDERSIGNED HEREBY DECLARES (OR CERTIFIES) ACKNOWLEDGEMENT OF THESE REQUIREMENTS AND THAT HE/SHE IS AUTHORIZED TO BIND PERFORMANCE OF THIS RFP FOR THE ABOVE PROPOSER.

| Jonathan Burgiel | Vice President/Operations Manager | 02/07/2018 |
|---|---|---|
| *Authorized Name and Signature* | *Title* | *Date* |

# SOLICITATION SUBMISSION CHECKLIST

## Request for Proposals (RFP) No. 2018-001

COMPANY NAME: (Please Print): Tetra Tech, Inc.

Phone: (407) 803-2551 Email: betty.kamara@tetratech.com

**Please provide the PAGE NUMBER in the blanks provided as to where compliance information is located in your Submittal for each of the required submittal items listed below:**

**SUBMITTAL - SECTION I: TITLE PAGE, TABLE OF CONTENTS, REQUIRED FORMS, AND MINIMUM QUALIFICATION REQUIREMENTS.**

1) Title Page: Show the RFP number and title, the name of your firm, address, telephone number, name of contact person, e-mail address, and date. Section 1
2) Provide a Table of Contents in accordance with and in the same order as the respective "Sections" listed below. Clearly identify the material by section and page number. Section 1
3) Fill out, sign, and submit the Proposer's Acknowledgement Form. Section 1
4) Fill out and submit the Solicitation Submission Check List. Section 1
5) Fill out, sign, notarize (as applicable), and submit the Proposer's Affidavit and Schedules A through L. Section 1
6) Include a Bid Bond, in accordance with Section 1.17 of the RFP. Section 1
7) Minimum Qualification Requirements: submit detailed verifiable information affirmatively documenting compliance with the Minimum Qualifications Requirements shown in Section 3. Section 1

**SUBMITTAL - SECTION II: PROPOSER'S QUALIFICATIONS**

**(i) FOR PROPOSER:**

1) Provide a complete history and description of your company, including, but not limited to, the number of years in business, size, number of employees, office location where work is to be performed, copy of applicable licenses/certifications, credentials, capabilities and capacity to meet the City's needs. Page 2-1
2) Describe the Proposer's relevant experience in providing the services described in the "Scope of Services", to public sector agencies similar in size to the City of Coral Gables. Pages 2-2 and 2-3
3) Describe the Proposer's knowledge and experience with programs, procedures, reimbursement guidelines of FEMA, FHWA, NRCS, including but not limited to any experience with FEMA reimbursable disaster debris removal projects related to declared disasters, and any other applicable Federal or State agencies associated with funding of debris removal and recovery efforts. Page 2-4
4) Describe the Proposer's knowledge and experience with all aspects of emergency management including but not limited to, procurement, deployment and management of field staff operations, planning, contract management and accounting/reporting systems. Pages 2-5 through 2-8
5) Describe the Proposer's professional development program, including policy/procedures/measures in place ensuring all key personnel assigned to the City have continuing education and receive specialized training in the services solicited herein. Page 2-8 and 2-9

6) The Proposer must not have a vested interest in a debris removal contract or contractor(s) with the City. Also, there must be no conflict of interest between the Proposer and a debris removal contractor(s). Proposer shall include a statement confirming the latter, including certification that neither Proposer nor any employee thereof, has a conflict of interest, either direct or indirect, in connection with the services sought herein pursuant to Federal and state law. . Page 2-9

**(ii) FOR KEY PERSONNEL:**

1) Provide a summary of the qualifications, copy of applicable licenses/certifications, and experience of all proposed key personnel (i.e., Project Management Team, including sub-consultants). Include resumes (listing experience, education, licenses/certifications) for your proposed key personnel and specify the role and responsibilities of each team member in providing the services outlined in the RFP. Page 2-9 *(resumes included at the end of the section)*

2) Provide an organizational chart of all key personnel that will be used. Page 2-10

3) For each key team member, please describe the experience in providing the services solicited herein, including but not limited to any experience with Federal, State and local emergency management agencies, programs, funding sources and reimbursement processes. Pages 2-10 through 2-13

**SUBMITTAL - SECTION III: PROJECT UNDERSTANDING, PROPOSED APPROACH, AND METHODOLOGY**

1) Describe in detail, your approach to perform the services and tasks solicited herein, namely Disaster Debris Monitoring, Emergency Management Planning and Training, and Public Assistance Consulting Services. Include detailed information, as applicable, which addresses, but need not be limited to: understanding of the RFP scope and requirements, implementation plan, strategies for assuring assigned work is completed on time and communication with City staff. Indicate how the Proposer intends to positively and innovatively work with the City in providing the services outlined in this RFP. Pages 3-1 through 3-16

2) Describe Proposer's database reporting system and capabilities, including but not limited to: a) the ability to capture data and provide electronic reports; b) integrate with the City's GIS system (ESRI or equivalent) and tree management software system (TreeKeeper Management Software by Davey Tree Expert Company or equivalent). Pages 3-20 through 3-23

3) Provide current and projected workload for the Proposer and key personnel assigned to the City's account. Explain how this potential contract will fit into the Proposer's workload and how it plans to distribute resources and personnel, amongst its various clients, during a disaster event. For each current and projected engagement, please indicate: a) client name; b) current and projected workload; c) estimated dollar amount of engagement; d) key personnel assigned. Pages 3-23 and 3-24

4) Explain how Proposer has complied with the public policies of the Federal Government. These include amongst other things, past and current compliance with:

   a. Equal opportunity and nondiscrimination laws as required in 41 C.F.R. Part 60-1.4(b) Page 3-24

   b. Affirmative steps described in 2 CFR § 200.321(b) for all subcontracting under contracts supported by FEMA financial assistance. Document Proposer's efforts to utilize M/WBE firms, including what firms were solicited as suppliers and/or subcontractors. Page 3-25

**SUBMITTAL – SECTION IV: PAST PERFORMANCE AND REFERENCES**

1) Provide a minimum of three (3) references (but no more than five (5)) from public sector agencies, similar in size to the City of Coral Gables, for which Proposer has provided the services described in the RFP. Please include: (1) client name, (2) address, (3) contact name, (4) contact telephone number, (5) contact email address, (6) term of contract (start and end date), (7) total dollar value of the contract, (8) services provided, (9) agency's size (number of residents and square miles), (10) volume of debris managed and disposed. **DO NOT include work/services performed for the City of Coral Gables or City employees as reference.** Pages 4-1 through 4-3

2) Provide a list with contact information of public sector clients, if any, that have discontinued use of Proposer's services within the past two (2) years and indicate the reasons for the same. The City reserves the right to contact any reference as part of the evaluation process. Page 4-3

3) Provide specific instances in the last three (3) years whereby a client's documentation/reimbursed amounts were challenged by a funding agency and the Proposer assisted in resolving said disputes to the advantage of the client. Page 4-4

**SUBMITTAL – SECTION V: PRICE PROPOSAL**

1) Provide pricing utilizing the Price Proposal form under Section 8. Section 5

***--NOTICE--***

**BEFORE SUBMITTING YOUR RFP RESPONSE MAKE SURE YOU:**

1. Carefully read and have a clear understanding of the RFP, including the Scope of Services and enclosed Professional Services Agreement (*draft*).

2. Carefully follow the Submission Requirements outlined in Section 6 of the RFP.

3. Prepare and submit ONE ORIGINAL RESPONSE and SEVEN (7) PHOTOCOPIES with ONE (1) digital copy on a CD or flash drive.

4. Clearly mark the following on the outside of your submittal package: RFP Number, RFP Title, Proposer's Name and Return Address, Submittal Deadline.

5. Make sure your Response is submitted prior to the submittal deadline. **Late responses will not be accepted.**

**FAILURE TO SUBMIT THIS CHECKLIST AND THE REQUESTED DOCUMENTATION MAY RENDER YOUR RESPONSE SUBMITTAL NON-RESPONSIVE AND CONSTITUTE GROUNDS FOR REJECTION. THIS PAGE IS TO BE RETURNED WITH YOUR RESPONSE PACKAGE.**

## PROPOSER'S AFFIDAVIT

**SUBMITTED TO:** City of Coral Gables
Procurement Division
2800 SW 72 Avenue
Miami, Florida 33155

The undersigned acknowledges and understands the information contained in response to this RFP Schedules A through L shall be relied upon by Owner awarding the contract and such information is warranted by Proposer to be true and correct. The discovery of any omission or misstatements that materially affects the Proposer to perform under the contract shall be cause for the City to reject the solicitation submittal, and if necessary, terminate the award and/or contract. I further certify that the undersigned name(s) and official signatures of those persons are authorized as *(Owner, Partner, Officer, Representative or Agent of the Proposer that has submitted the attached Response).* Schedules A through L are subject to Local, State and Federal laws (as applicable); both criminal and civil.

- SCHEDULE A – CERTIFICATE OF PROPOSER
- SCHEDULE B – NON-COLLUSION AND CONTINGENT FEE AFFIDAVIT
- SCHEDULE C – DRUG-FREE STATEMENT
- SCHEDULE D – PROPOSER'S QUALIFICATION STATEMENT
- SCHEDULE E – CODE OF ETHICS, CONFLICT OF INTEREST, AND CONE OF SILENCE
- SCHEDULE F – AMERICANS WITH DISABILITIES ACT (ADA)
- SCHEDULE G – PUBLIC ENTITY CRIMES
- SCHEDULE H – ACKNOWLEDGEMENT OF ADDENDA
- SCHEDULE I – APPENDIX A, 44 C.F.R. PART 18-CERTIFICATION REGARDING LOBBYING
- SCHEDULE J –CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION
- SCHEDULE K – FEDERAL GRANT FUNDING SPECIAL PROPOSAL CONDITIONS
- SCHEDULE L – WORK HOURS & SAFETY CERTIFICATION

This affidavit is to be furnished to the City of Coral Gables with its RFP response. It is to be filled in, executed by the Proposer and notarized. If the Response is made by a Corporation, then it should be executed by its Chief Officer. This document MUST be submitted with the Response.

Jonathan Burgiel _____ Vice President/Operations Manager 02/07/2018
*Authorized Name and Signature* *Title* *Date*

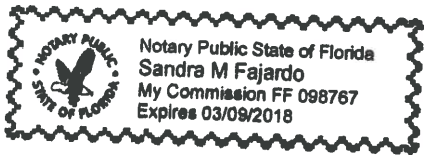
STATE OF Florida

COUNTY OF Orange

On this 7th day of February, 2018, before me the undersigned Notary Public of the State of Florida, personally appeared Jonathan Burgiel
(Name(s) of individual(s) who appeared before Notary

And whose name(s) is/are subscribes to within the instrument(s), and acknowledges it's execution.

Sandra M Fajardo
NOTARY PUBLIC, STATE OF Florida




Sandra M. Fajardo
(Name of notary Public; Print, Stamp or Type as Commissioned.)

NOTARY PUBLIC
SEAL OF OFFICE:

Personally know to me, or Produced Identification:

(Type of Identification Produced)

## SCHEDULE "A" - CITY OF CORAL GABLES - CERTIFICATE OF PROPOSER

Neither I, nor the firm, hereby represent has:

a. employed or retained for a commission, percentage brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the Proposer) to solicit or secure this contract.

b. agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or

c. paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the Proposer) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the contract except as here expressly stated (if any):

## SCHEDULE "B" - CITY OF CORAL GABLES - NON-COLLUSION AND CONTINGENT FEE AFFIDAVIT

1. He/she is the Jonathan Burgiel
(*Owner, Partner, Officer, Representative or Agent)*

of the Proposer that has submitted the attached Response.

2. He/she is fully informed with respect to the preparation and contents of the attached Response and of all pertinent circumstances respecting such Response;

3. Said Response is made without any connection or common interest in the profits with any other persons making any Response to this solicitation. Said Response is on our part in all respects fair and without collusion or fraud. No head of any department, any employee or any officer of the City of Coral Gables is directly or indirectly interested therein. If any relatives of Proposer's officers or employees are employed by the City, indicate name and relationship below.

Name: None Relationship:_____

Name:_____ Relationship:_____

4. No lobbyist or other Proposer is to be paid on a contingent or percentage fee basis in connection with the award of this Contract.

## SCHEDULE "C" CITY OF CORAL GABLES - VENDOR DRUG-FREE STATEMENT

Preference may be given to vendors submitting a certification with their bid/proposal certifying they have a drug- free workplace in accordance with Section 287.087, Florida Statutes. This requirement affects all public entities of the State and becomes effective January 1, 1991. The special condition is as follows:

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.

2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under solicitation a copy of the statement specified in subsection (1).

4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under solicitation, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.

5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.

6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section. As the person authorized to sign the statement, I certify that this form complies fully with the above requirements.

The company submitting this solicitation has established a Drug Free work place program in accordance with Sate Statute 287.087

## SCHEDULE "D" CITY OF CORAL GABLES – PROPOSER'S QUALIFICATION STATEMENT

The undersigned declares the truth and correctness of all statements and all answers to questions made hereinafter:

Company Name: Tetra Tech, Inc.

Address: 2301 Lucien Way, Suite 120 (Street) Maitland (City) FL (State) 32751 (Zip Code)

Telephone No: (407) 803-2551 Fax No: (321) 441-8501 Email: betty.kamara@tetratech.com

How many years has your organization been in business under its present name? 51 Years

If Proposer is operating under Fictitious Name, submit evidence of compliance with Florida Fictitious Name Statue:

None

Under what former names has your business operated? : Beck Disaster Recovery (BDR), Science Applications International Corporation (SAIC), Leidos.

At what address was that business located? 2301 Lucien Way, Suite 120, Maitland, FL 32751

Are You Certified? Yes_____ No X If Yes, **ATTACH COPY** of Certification.
Are You Licensed? Yes_____ No X If Yes, **ATTACH COPY** of License

Has your company or its senior officers ever declared bankruptcy?

Yes_____ No X If yes, explain:_____

Please identify each incident within the last five (5) years where (a) a civil, criminal, administrative, other similar proceeding was filed or is pending, if such proceeding arises from or is a dispute concerning the Proposer's rights, remedies or duties under a contract for the same or similar type services to be provided under this RFP:

Tetra Tech certifies that it has no current claims, arbitrations, administrative hearings, mediations and lawsuits related to disaster debris removal management and monitoring services; no pending lawsuits related to disaster debris removal management and monitoring services; and no judgements from lawsuits related to disaster debris removal management and monitoring services within last five (5) years.

Have you ever been debarred or suspended from doing business with any government entity?

Yes ___ No X If Yes, explain _____

**SCHEDULE "E" CITY OF CORAL GABLES – CODE OF ETHICS, CONFLICT OF INTEREST, AND CONE OF SILENCE**

THESE SECTIONS OF THE CITY CODE CAN BE FOUND ON THE CITY'S WEBSITE, UNDER GOVERNMENT, CITY DEPARTMENT, PROCUREMENT, PROCUREMENT CODE (CITY CODE CHAPTER 2 ARTICLE VIII); SEC 2-1023; SEC 2-606; AND SEC 2-1027, RESPECTIVELY.

IT IS HEREBY ACKNOWLEDGED THAT THE ABOVE NOTED SECTIONS OF THE CITY OF CORAL GABLES CITY CODE ARE TO BE ADHERED TO PURSUANT TO THIS SOLICITATION.

**SCHEDULE "F" CITY OF CORAL GABLES - AMERICANS WITH DISABILITIES ACT (ADA)**
DISABILITY NONDISCRIMINATION STATEMENT

I understand that the above named firm, corporation or organization is in compliance with and agreed to continue to comply with, and assure that any sub-contractor, or third party contractor under this project complies with all applicable requirements of the laws listed below including, but not limited to, those provisions pertaining to employment, provision of programs and service, transportation, communications, access to facilities, renovations, and new construction.

The American with Disabilities Act of 1990 (ADA), Pub. L. 101-336, 104 Stat 327, 42 U.S.C. 12101,12213 and 47 U.S.C. Sections 225 and 661 including Title I, Employment; Title 11, Public Services; Title III, Public Accommodations and Services Operated by Private Entities; Title IV, Telecommunications; and Title V, Miscellaneous Provisions.

The Florida Americans with Disabilities Accessibility Implementation Act of 1993, Sections 5553.501-553.513, Florida Statutes

The Rehabilitation Act of 1973, 229 U.S.C. Section 794

The Federal Transit Act, as amended, 49 U.S.C. Section 1612

The Fair Housing Act as amended, 42 U.S.C. Section 3601-3631

**SCHEDULE "G" CITY OF CORAL GABLES - STATEMENT PURSUANT TO SECTION 287.133 (3) (a), FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES**

1. I understand that a "public entity crime" as define 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.

2. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), **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, non-jury trial, or entry of a plea of guilty or nolo contendere.

3. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), **Florida Statutes**, means:

1. 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 or 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.

4. I understand 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.

5. 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, nor 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 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 subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer 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 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.**

**SCHEDULE "H" CITY OF CORAL GABLES - ACKNOWLEDGEMENT OF ADDENDA**

1. The undersigned agrees, if this RFP is accepted, to enter in a Contract with the CITY to perform and furnish all work as specified or indicated in the RFP and Contract Documents within the Contract time indicated in the RFP and in accordance with the other terms and conditions of the solicitation and contract documents.

2. Acknowledgement is hereby made of the following Addenda, if any (identified by number) received since issuance of the Request for Proposal.

Addendum No. 1 Date January 23, 2018 Addendum No._____ Date_____

Addendum No. 2 Date February 8, 2018 Addendum No._____ Date_____

Addendum No. 3 Date February 14, 2018 Addendum No._____ Date_____

**SCHEDULE "I" - APPENDIX A, 44 C.F.R. PART 18-CERTIFICATION REGARDING LOBBYING**

**LOBBYING - 31 U.S.C. 1352, as amended**

APPENDIX A, 44 CFR PART 18--CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements
*(To be submitted with each bid or offer exceeding $100,000)*

The undersigned [Professional] certifies, to the best of his or her knowledge and belief, that:

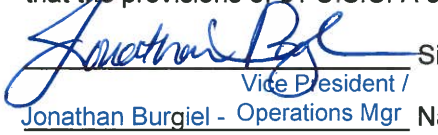
1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Professional, Jonathan Burgiel, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq., apply* to this certification and disclosure, if any.



Signature of Professional's Authorized Official

Vice President /
Jonathan Burgiel - Operations Mgr Name and Title of Professional's Authorized Official

02/07/2018 Date

## SCHEDULE "J" – CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

### Government Debarment & Suspension

### Instructions

1. By signing and submitting this form, the prospective lower tier participant is providing the certification set out in accordance with these instructions.

2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.

3. The prospective lower tier participant shall provide immediate written notice to the person(s) to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549, at 2 C.F.R. Parts 180 and 417. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

5. The prospective lower tier participant agrees by submitting this form that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

6. The prospective lower tier participant further agrees by submitting this form that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the System for Award Management (SAM) database.

8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

9. Except for transactions authorized under paragraph (5) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion Lower Tier Covered Transactions**

The following statement is made in accordance with the Privacy Act of 1974 (5 U.S.C. § 552(a), as amended). This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, and 2 C.F.R.
§§ 180.300, 180.355, Participants' responsibilities. The regulations were amended and published on August 31, 2005, in 70 Fed. Reg. 51865-51880.

**[READ INSTRUCTIONS ON PREVIOUS PAGE BEFORE COMPLETING CERTIFICATION]**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency;

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal

Jonathan Burgiel, Vice President / Operations Manager
Printed Name and Title of Authorized Representative

Signature

02/07/2018
Date

## SCHEDULE "K" FEDERAL GRANT FUNDING SPECIAL PROPOSAL CONDITIONS

This procurement is fully or partially Federally Grant funded. Proposer certifies that it shall comply with the applicable clauses as enumerated below.

1. **Drug Free Workplace Requirements:** Drug-free workplace requirements in accordance with Drug Free Workplace Act of 1988 (Pub I 100-690, Title V, Subtitle D) All proposers entering into Federal funded contracts over $100,000 must comply with Federal Drug Free workplace requirements as Drug Free Workplace Act of 1988.

2. **Proposer Compliance**: The proposer shall comply with all uniform administrative requirements, cost principles, and audit requirements for federal awards.

3. **Conflict of Interest**: The proposer must disclose in writing any potential conflict of interest to the city or pass-through entity in accordance with applicable Federal policy.

4. **Mandatory Disclosures**: The proposer must disclose in writing all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award.

5. **Utilization of Minority and Women Firms (M/WBE):** The proposer must take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible, in accordance with 2CFR 200.321. If subcontracts are to be let, prime proposer will require compliance by all sub-contractor. Prior to contract award, the proposer shall document efforts (see Attachment B) to utilize M/WBE firms including what firms were solicited as suppliers and/or subcontractor as applicable and submit this information with their bid submittal. Information regarding certified M/WBE firms can be obtained from:

   Florida Department of Management Services (Office of Supplier Diversity)
   Florida Department of Transportation
   Minority Business Development Center in most large cities and
   Local Government M/DBE programs in many large counties and cities

6. **Equal Employment Opportunity/Nondiscrimination**: (As per Executive Order 11246) The proposer may not discriminate against any employee or applicant for employment because of age, race, color, creed, sex, disability or national origin. The proposer agrees to take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their age, race, color, creed, sex, disability or national origin. Such action shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship.

7. **Davis-Bacon Act:** If applicable to this contract, the proposer agrees to comply with all provisions of the Davis Bacon Act as amended (40 U.S.C. 3141-3148). Proposers are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, proposers must be required to pay wages not less than once a week. If the grant award contains Davis Bacon provisions, the City will place a copy of the current prevailing wage determination issued by the Department of Labor in the solicitation document. The decision to award a contract shall be conditioned upon the acceptance of the wage determination.

8. **Copeland Anti Kick Back Act:** If applicable to this contract, proposers shall comply with all the requirements of 18 U.S.C. § 874, 40 U.S.C. § 3145, 29 CFR Part 3 which are incorporated by reference to this contract. Proposers are prohibited from inducing by any means any person employed in the construction, completion or repair of public work to give up any part of the compensation to which he or she is otherwise entitled.

9. **Contract Work Hours and Safety Standards Act** (40 U.S.C. 3701–3708): Where applicable, all contracts awarded in excess of $100,000 that involve the employment of mechanics or laborers must be in compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each proposer is required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

10. **Clean Air Act (42 U.S.C. 7401–7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251–1387):** as amended—The Proposer agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401–7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251–1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

11. **Debarment and Suspension** (Executive Orders 12549 and 12689): A contract award (see 2 CFR 180.220 and 2 CFR pt. 300) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension. SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. The proposer shall certify compliance. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions and subcontracts.

12. **Byrd Anti-Lobbying Amendment** (31 U.S.C. 1352): Proposers that apply or bid for an award exceeding $100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award. The proposer shall certify compliance.

13. **Rights to Inventions Made Under a Contract or Agreement**: If the Federal award meets the definition of "funding agreement" under 37 CFR § 401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401,"Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

14. **Procurement of Recovered Materials**: Proposers must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired during the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

15. **Access to Records and Reports:**
Proposer will make available to the City's granting agency, the granting agency's Office of Inspector General, the Government Accountability Office, the Comptroller General of the United States, Okaloosa City, Okaloosa City Clerk of Court's Inspector General, or any of their duly authorized representatives any books, documents, papers or other records, including electronic records, of the proposer that are pertinent to the City's grant award, in order to make audits, investigations, examinations, excerpts, transcripts, and copies of such documents. The right also includes timely and reasonable access to the proposer's personnel during normal business hours for the purpose of interview and discussion related to such documents. This right of access shall continue as long as records are retained.

16. **Record Retention:**
Proposer will retain of all required records pertinent to this contract for a period of three years, beginning on a date as described in 2 C.F.R. §200.333 and retained in compliance with 2 C.F.R. §200.333.

17. **Federal Changes:** Proposer shall comply with all applicable Federal agency regulations, policies, procedures and directives, including without limitation those listed directly or by reference, as they may be amended or promulgated from time to time during the term of the contract.

18. **Termination for Default (Breach or Cause):** If a contract is entered into, the Proposer acknowledges that if it fails to perform in the manner called for in the contract, or if the Proposer fails to comply with any other provisions of the contract, the City may terminate the contract for default. Termination shall be effected by serving a notice of termination on the proposer setting forth the manner in which the Proposer is in default. The proposer will only be paid the contract price for supplies delivered and accepted, or services performed in accordance with the manner of performance set forth in the contract.

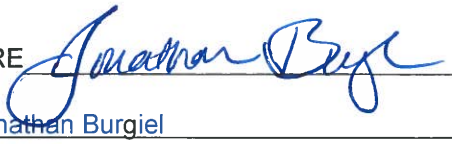
19. **Safeguarding Personal Identifiable Information:** Proposer will take reasonable measures to safeguard protected personally identifiable information and other information designated as sensitive by the awarding agency or is considered sensitive consistent with applicable Federal, state and/or local laws regarding privacy and obligations of confidentiality.

20. **Prohibition on utilization of cost plus a percentage of cost contracts**: The City will not award contracts containing Federal funding on a cost plus percentage of cost basis.

21. **Energy Policy and Conservation Act (43 U.S.C.§6201):** All contracts except micro-purchases ($3000 or less, except for construction contracts over $2000). Contracts shall comply with mandatory standards and policies relating to energy efficiency, stating in the state energy conservation plan issued in compliance with the Energy Policy and Conservation act. (Pub. L. 94-163, 89 Stat. 871) [53 FR 8078, 8087, Mar. 11, 1988, as amended at 60 FR 19639, 19645, Apr. 19, 1995].

As the person authorized to sign this statement, I certify that this company complies/will comply fully with the above applicable requirements. I further certify that any subcontractor will also be required to comply with the requirements above.

DATE 02/07/2018

SIGNATURE 

COMPANY: Tetra Tech, Inc.

NAME: Jonathan Burgiel

ADDRESS 2301 Lucien Way,
Suite 120,
Maitland, FL 32751

TITLE: Vice President / Operations Manager

E-MAIL: betty.kamara@tetratech.com

PHONE NO (407) 803-2551

## SCHEDULE "L" - CONTRACTOR CERTIFICATION WORK HOURS AND SAFETY STANDARDS ADDENDUM

This certification is incorporated as part of the contract for Disaster Debris Monitoring Services.

The Contractor acknowledges and certifies that in accordance with the mandatory requirement that this provision be set forth in all FEMA related contracts, that it shall comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5).

Under 40 U.S.C. s. 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week.

The requirements of 40 U.S.C. s. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

More particularly, as set forth in 29 CFR s.5.5(b) which provides the required contract clauses:

(1) *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of $25 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) *Withholding for unpaid wages and liquidated damages.* The (write in the name of the Federal agency or the loan or grant recipient) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

Tetra Tech, Inc., hereby certifies that it shall adhere to the Work Hours and Safety Standards regulations throughout the duration of this Contract as set forth above.

Contractor Signature

Date: 02/07/2018

# *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, 2018, that its most recent annual report/uniform business report was filed on January 3, 2018, 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 Fifth day of February, 2018***

Ken Detzner

***Secretary of State***

**Tracking Number: CU1493210055**

**To authenticate this certificate,visit the following site,enter this number, and then follow the instructions displayed.**

**https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication**

Sunbiz.org DIVISION of CORPORATIONS
an official State of Florida website

Department of State / Division of Corporations / Search Records / Detail By Document Number /

Previous On List  Next On List  Return to List  Entity Name Search  Search

Events  **No Name History**

# Detail by Entity Name

Foreign Profit Corporation
TETRA TECH, INC.

## Filing Information

| | |
|---|---|
| **Document Number** | P19034 |
| **FEI/EIN Number** | 95-4148514 |
| **Date Filed** | 04/28/1988 |
| **State** | DE |
| **Status** | ACTIVE |
| **Last Event** | CORPORATE MERGER |
| **Event Date Filed** | 12/30/2003 |
| **Event Effective Date** | 01/02/2004 |

## Principal Address

3475 E. FOOTHILL BLVD.
PASADENA, CA 91107

Changed: 07/14/2003

## Mailing Address

3475 E. FOOTHILL BLVD.
PASADENA, CA 91107

Changed: 07/14/2003

## Registered Agent Name & Address

CT CORPORATION SYSTEM
1200 S. PINE ISLAND ROAD
PLANTATION, FL 33324

Name Changed: 03/18/1992

Check included in an envelope with the original proposal.

0000627 Office AU # | 11-24 1210(8)

# CASHIER'S CHECK

SERIAL #: 0062701639

ACCOUNT#: 4861-511483

Remitter: TETRA TECH INC
Purchaser: TETRA TECH INC
Purchaser Account: 4100060904
Operator I.D.: u526035 u379249
Funding Source: Paper Items(s)

**February 02, 2018**

PAY TO THE ORDER OF ***CITY OF CORAL GABLES ,FL***

***Twenty-two thousand three hundred six dollars and 80 cents*** **$22,306.80**

Payee Address:
Memo:

**WELLS FARGO BANK, N.A.**
1000 LAKES DR
WEST COVINA, CA 91790
FOR INQUIRIES CALL (480) 394-3122

NOTICE TO PURCHASER – IF THIS INSTRUMENT IS LOST, STOLEN OR DESTROYED, YOU MAY REQUEST CANCELLATION AND REISSUANCE. AS A CONDITION TO CANCELLATION AND REISSUANCE, WELLS FARGO BANK MAY IMPOSE A FEE AND REQUIRE AN INDEMNITY AGREEMENT AND BOND.

VOID IF OVER US $ 22,306.80

**NON-NEGOTIABLE**

## Purchaser Copy

FB004 M4203 60157996

PRINTED ON LINEMARK PAPER - HOLD TO LIGHT TO VIEW. FOR ADDITIONAL SECURITY FEATURES SEE BACK.

0000627 Office AU # | 11-24 1210(8)

CASHIER'S CHECK

0062701639

Remitter: TETRA TECH INC
Operator I.D.: u526035 u379249

February 02, 2018

PAY TO THE ORDER OF ***CITY OF CORAL GABLES ,FL***

***Twenty-two thousand three hundred six dollars and 80 cents*** **$22,306.80**

Payee Address:
Memo:

WELLS FARGO BANK, N.A.
1000 LAKES DR
WEST COVINA, CA 91790
FOR INQUIRIES CALL (480) 394-3122

VOID IF OVER US $ 22,306.80

AUTHORIZED SIGNATURE

Details on Back. Security Features Included.

⑈0062701639⑈ ⑆121000248⑆4861 511483⑈

# A. PROPOSER REQUIREMENTS

## A1. MINIMUM FIVE YEARS EXPERIENCE

Our team has assisted more local governments with debris monitoring efforts following catastrophic natural disasters than any other firm in the nation. As depicted in Exhibit 1-1 below, ***over the last 17 years*** Tetra Tech has provided debris monitoring services ***in response to 55 disasters.*** Collectively, we have overseen and managed the recovery of ***over 103 million cubic yards (CYs) of debris*** on behalf of ***over 300 public sector clients,*** resulting in excess of ***$6 billion in reimbursable costs to our clients.***

Exhibit 1-1: Experience Summary

## A2. PROOF OF ACTIVE STATUS – FLORIDA DEPARTMENT OF STATE

A copy of Tetra Tech's Certificate of Good Standing from the Florida Secretary of State is included below.

# *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, 2018, that its most recent annual report/uniform business report was filed on January 3, 2018, 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 Fifth day of February, 2018***

***Secretary of State***

Tracking Number: CU1493210055

To authenticate this certificate,visit the following site,enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

# A3. PERFORMED SERVICES FOR AT LEAST 3 AGENCIES SIMILAR IN SIZE

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. ***Our team has responded to 18 major disaster declarations since 2012, totaling over 150 clients throughout the country.*** Exhibit 1-2 provides an abbreviated experience matrix for projects conducted since 2012.

While the table reflects Tetra Tech's corporate experience in managing many large debris monitoring efforts, we are also very proud of our ability to scale our response and support clients with even the smallest of disasters or communities similar in size to the City of Coral Gables (City). These clients have included the Cities of Port Orange, Naples, Dunedin, Doral, and Pinellas Park, FL. ***Profiles and references for these projects are featured in Section 4 of our proposal. Tetra Tech can provide additional projects and information upon request.***

Exhibit 1-2: Experience Matrix (2012–Present)

| 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 | ADMS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **HURRICANE IRMA – 2017 [1]** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 18,773,000 (Estimated) \| Total Clients – 67 \| Representative Clients:** | | | | | | | | | | | | | | | |
| **Miami-Dade County, FL** | 2017 | 3,553,326 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **Polk County, FL** | 2017 | 2,150,846 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **Collier County, FL** | 2017 | 3,110,652 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **City of Miami, FL** | 2017 | 540,053 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **Seminole County, FL** | 2017 | 821,301 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **HURRICANE HARVEY – 2017 [1] (Ongoing)** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 13,000,000 (Estimated) \| Total Clients – 38 \| Representative Clients:** | | | | | | | | | | | | | | | |
| **Harris County, TX** | 2017 | 1,129,653[1] | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **City of Houston, TX** | 2017 | 1,144,031[1] | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **Fort Bend County, TX** | 2017 | 453,985[1] | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **City of Corpus Christi, TX** | 2017 | 536,181[1] | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **City of Victoria, TX** | 2017 | 31,373[1] | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |

[1] Ongoing debris collection operations

| 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 | ADMS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **TEXAS TORNADOES – 2017** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 93,000 \| Total Clients – 1** | | | | | | | | | | | | | | | |
| **Texas Department of Transportation** | 2017 | 93,000 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **GEORGIA TORNADOES – 2017** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 920,000 \| Total Clients – 2** | | | | | | | | | | | | | | | |
| **Albany County, GA** | 2017 | 380,000 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **Dougherty County, GA** | 2017 | 540,000 | ■ | ■ | ■ | | ■ | | | ■ | | ■ | ■ | ■ | ■ |
| **HURRICANE MATTHEW – 2016[2]** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 8,739,550 (Estimated) \| Total Clients – 34 \| Representative clients listed below.** | | | | | | | | | | | | | | | |
| **Brevard County, FL** | 2016 | 820,779 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **City of Deltona, FL** | 2016 | 116,935 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **Flagler County, FL** | 2016 | 129,687 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **City of Holly Hill, FL** | 2016 | 137,094 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **Liberty County, GA** | 2016 | 182,468 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **City of New Smyrna Beach, FL** | 2016 | 203,981 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **City of Port Orange, FL** | 2016 | 428,244 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **St. Johns County, FL** | 2016 | 712,705 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **City of South Daytona, FL** | 2016 | 93,120 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **Volusia County, FL** | 2016 | 1,058,334 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **Beaufort County, SC** | 2016 | 1,609,243 | ■ | ■ | ■ | | ■ | | | | ■ | ■ | ■ | ■ | ■ |
| **Hilton Head Island, SC** | 2016 | 2,187,080 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **Horry County, SC** | 2016 | 187,395 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **City of Myrtle Beach, SC** | 2016 | 128,174 | ■ | ■ | ■ | | ■ | | | | | ■ | ■ | ■ | ■ |
| **SEVERE STORMS AND FLOODING – 2016[2]** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 436,264 \| Total Clients – 2** | | | | | | | | | | | | | | | |
| **Ascension Parish, LA** | 2016 | 390,000 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **Iberville Parish, LA** | 2016 | 46,264 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |

[2] Ongoing debris collection operations

| 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 | ADMS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **WILDFIRES – 2016[2]** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 2,875 \| Total Clients – 2** | | | | | | | | | | | | | | | |
| **Kern County, CA** | 2016 | T&M[2] | ■ | ■ | ■ | ■ | ■ | ■ | | ■ | | ■ | ■ | ■ | ■ |
| **Monterey County, CA** | 2016 | T&M[3] | ■ | | | | | ■ | | | | ■ | ■ | ■ | ■ |
| **SEVERE STORMS AND FLOODING – 2016** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 313,800 \| Total Clients – 6** | | | | | | | | | | | | | | | |
| **Brazoria County, TX** | 2016 | 19,000 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **City of Houston, TX** | 2016 | 193,951 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **Harris County, TX** | 2016 | 39,940 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **Montgomery County, TX** | 2016 | 53,208 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **Waller County, TX** | 2016 | 1,294 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **General Land Office, TX** | 2016 | 6,395 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **WILDFIRES – 2015[1]** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 38,000 \| Total Clients – 2** | | | | | | | | | | | | | | | |
| **Lake County, CA** | 2015 | 38,000 | ■ | ■ | ■ | | ■ | ■ | | ■ | | ■ | ■ | ■ | ■ |
| **Calaveras County, CA** | 2015 | T&M[2] | ■ | ■ | ■ | | ■ | ■ | | ■ | | ■ | ■ | ■ | ■ |
| **SEVERE STORMS – 2015[1]** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 199,578 \| Total Clients – 3** | | | | | | | | | | | | | | | |
| **Friendswood, TX** | 2015 | 8,800 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **Hays County, TX** | 2015 | 132,100 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **Caldwell County, TX** | 2015 | 58,678 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **FLOODING – 2015[1]** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 293,750 \| Total Clients – 10 \| Representative clients listed below.** | | | | | | | | | | | | | | | |
| **City of Houston, TX** | 2015 | 240,725 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **Hays County, TX** | 2015 | 10,900 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **Town of Wimberley, TX** | 2015 | 18,922 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **Caldwell County, TX** | 2015 | 1,320 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |

[3] Time and materials contract documentation

| 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 | ADMS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **City of San Marcos, TX** | 2015 | 5,590 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **FLOODING – 2014** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 10,000 \| Total Clients – 1** | | | | | | | | | | | | | | | |
| **Escambia County, FL** | 2014 | 10,000 | ■ | ■ | ■ | | | | | | | ■ | ■ | ■ | ■ |
| **TORNADO – 2014** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 179,851 \| Total Clients – 2** | | | | | | | | | | | | | | | |
| **Limestone County, AL** | 2014 | 104,256 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **Blount County, AL** | 2014 | 75,595 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **ICE STORM – 2014** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 1,041,047 \| Total Clients – 7** | | | | | | | | | | | | | | | |
| **Augusta-Richmond County, GA** | 2014 | 739,640 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **Sumter County, SC** | 2014 | 104,722 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **Dorchester County, SC** | 2014 | 91,850 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **Barnwell County, SC** | 2014 | 85,703 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **Colleton County, SC** | 2014 | 61,883 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **City of Sumter, SC** | 2014 | 35,424 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **Hampton County, SC** | 2014 | 15,495 | ■ | ■ | ■ | | | ■ | | | | ■ | ■ | ■ | ■ |
| **FLOODING – 2013** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 140,000* \| Total Clients – 1** | | | | | | | | | | | | | | | |
| **Boulder County, CO** | 2013 | 140,000* | ■ | ■ | ■ | | ■ | ■ | | ■ | | ■ | ■ | ■ | ■ |
| **ICE STORM – 2013** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 100,664 \| Total Clients - 1** | | | | | | | | | | | | | | | |
| **City of Rapid City, SD** | 2013 | 100,664 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **ICE STORM – 2013** | | | | | | | | | | | | | | | |
| **Total Tons of Debris – 79,925 \| Total Clients – 1** | | | | | | | | | | | | | | | |
| **City of Sioux Falls, SD** | 2013 | 79,925* | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **HURRICANE SANDY – 2012** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 272,931 \| Total Clients – 13 \| Representative clients listed below.** | | | | | | | | | | | | | | | |

| 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 | ADMS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **New Jersey Department of Environmental Protection** | 2012 | 193,706 | ■ | ■ | ■ | ■ | | | ■ | | ■ | ■ | ■ | ■ | ■ |
| **Borough of Sayreville, NJ** | 2012 | 27,800 | ■ | ■ | ■ | ■ | | ■ | | | | ■ | ■ | ■ | ■ |
| **Town of Fairfield, CT** | 2012 | 13,300 | ■ | ■ | ■ | ■ | ■ | | | | | ■ | ■ | ■ | |
| **HURRICANE ISAAC – 2012** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 721,672 \| Total Clients – 5 \| Representative clients listed below.** | | | | | | | | | | | | | | | |
| **Jefferson Parish, LA** | 2012 | 270,136 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | |
| **St. John the Baptist Parish, LA** | 2012 | 225,000 | ■ | ■ | ■ | ■ | ■ | ■ | | | | ■ | ■ | ■ | ■ |
| **City of New Orleans, LA** | 2012 | 177,443 | ■ | ■ | ■ | | ■ | ■ | | | | ■ | ■ | ■ | |
| **TROPICAL STORM DEBBY – 2012** | | | | | | | | | | | | | | | |
| **Total Cubic Yards of Debris – 7,253 \| Total Clients – 3 \| Representative clients listed below.** | | | | | | | | | | | | | | | |
| **Clay County, FL** | 2012 | 3,777 | | ■ | ■ | | | | | | | ■ | ■ | | |
| **Pasco County, FL** | 2012 | 2,583 | | ■ | ■ | | | | | | | ■ | ■ | | |

## B. KEY PERSONNEL REQUIREMENTS

Tetra Tech has assembled a team with hands-on experience in recent disasters and emergencies as well as prevention, mitigation, preparedness, response, and recovery programs. These individuals meet or exceed the personnel requirements listed on page 23 of the City's request for proposal. A summary of the key personnel's years of experience is provided in the exhibit below. **More detailed information about our key personnel and additional team member's experience is included in Section 2 of this proposal.**

Exhibit 1-3: Key Personnel

| Staff Name/Role/Years of Experience | Years of Experience | Representative Experience |
|---|---|---|
| **Phil Ivey**<br>*Project Manager* | 12 | • City of Houston, TX –Hurricane Ike (2008); Flooding (2015/2016); Hurricane Harvey (2017)<br>• Boulder County, CO – Flooding (2013)<br>• New Jersey Department of Environmental Protection – Hurricane Sandy [NJDEP] (2013)<br>• City of New Orleans, LA – Hurricane Katrina (2007) |

| Staff Name/Role/Years of Experience | Years of Experience | Representative Experience |
|---|---|---|
| | | • City of Pensacola, FL – Hurricane Ivan (2005)<br>• Collier County, FL – Hurricane Wilma (2005) |
| **Tim Quade**<br>*Operations Manager* | 2 | • Helena, CA – California Wildfires (2017)<br>• Beaufort County, SC – Hurricane Matthew (2016)<br>• Dougherty County, GA – Tornadoes (2017)<br>• Lake County, CA – Wildfires (2015) |
| **Owen Chen**<br>*Data Manager* | 5 | • Beaufort County, SC – Hurricane Matthew (2016)<br>• Calaveras County, CA – Wildfires (2016)<br>• Lake County, CA – Wildfires (2015)<br>• Hays County, TX – Flooding (2015)<br>• Boulder County, CO – Flooding (2014)<br>• NJDEP – Hurricane Sandy (2013) |

Additionally, all locally hired collection and disposal monitors must have a high school diploma or GED, and 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.

# A. EXPERIENCE AND QUALIFICATIONS OF FIRM

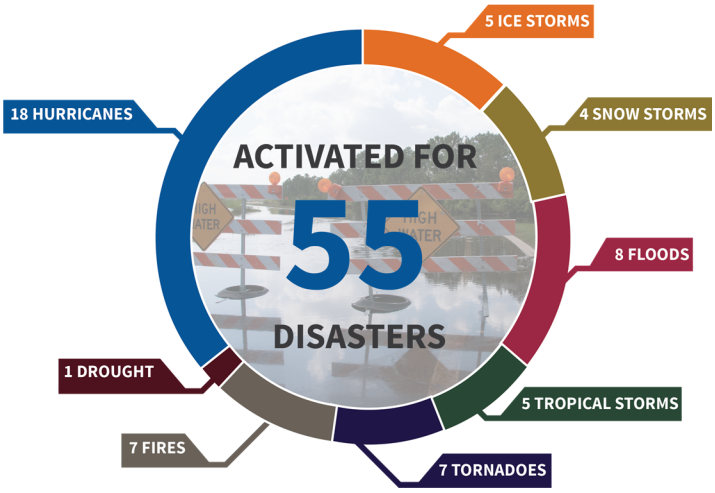
## A1. DESCRIPTION AND HISTORY OF THE FIRM

Tetra Tech, Inc., (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; 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 16,000 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.***

***In 2017, Tetra Tech simultaneously deployed in Texas, Florida, Puerto Rico, and the Virgin Islands in response to three hurricanes (Harvey, Irma, and Maria), representing more than 100 government clients.***

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 $6 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 ***103 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:

- We are duly qualified to perform the scope of work outlined in the City of Coral Gables' (City) 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.
- We are 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 our commitment to the to the City to perform in a timely manner.
- We offer a proven and successful technical and management approach that has been refined in disaster activations across the United States, including 16 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 State of Florida.
- We offer detailed reporting, real-time debris collection tracking, and mapping capabilities that are driven by our RecoveryTrac™ automated debris management system (ADMS) technology, which allows our staff to monitor

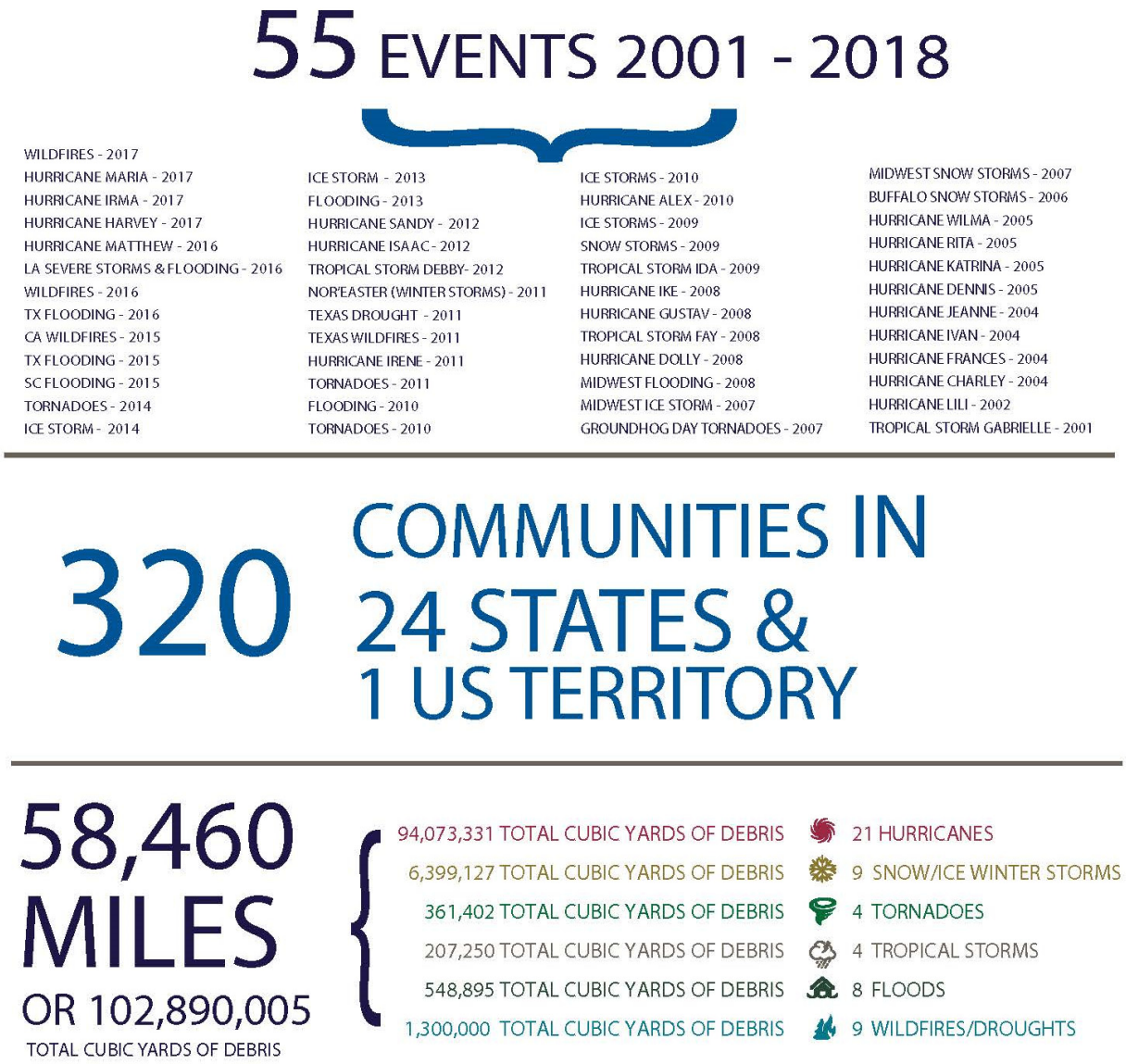
and manage a recovery effort electronically in addition to increasing productivity while decreasing fraud, human error, and cost to the City.

- As a global engineering firm with over $2.5 billion in annual revenues, we have the financial resources and cash flow to support a large, long-term recovery effort.

## A2. DEBRIS MANAGEMENT EXPERIENCE

Our team has vast experience providing disaster management, recovery, and consulting services to state and local government agencies. *In 2017 alone, we served 120 clients in response to Hurricanes Harvey, Irma, and Maria; multiple California wildfires; and tornadoes in Texas and Georgia.* Exhibit 2-1 provides an overview of our experience. *Applicable project profiles and references are featured in Section 4 of our proposal.*

**Exhibit 2-1: Experience Summary**

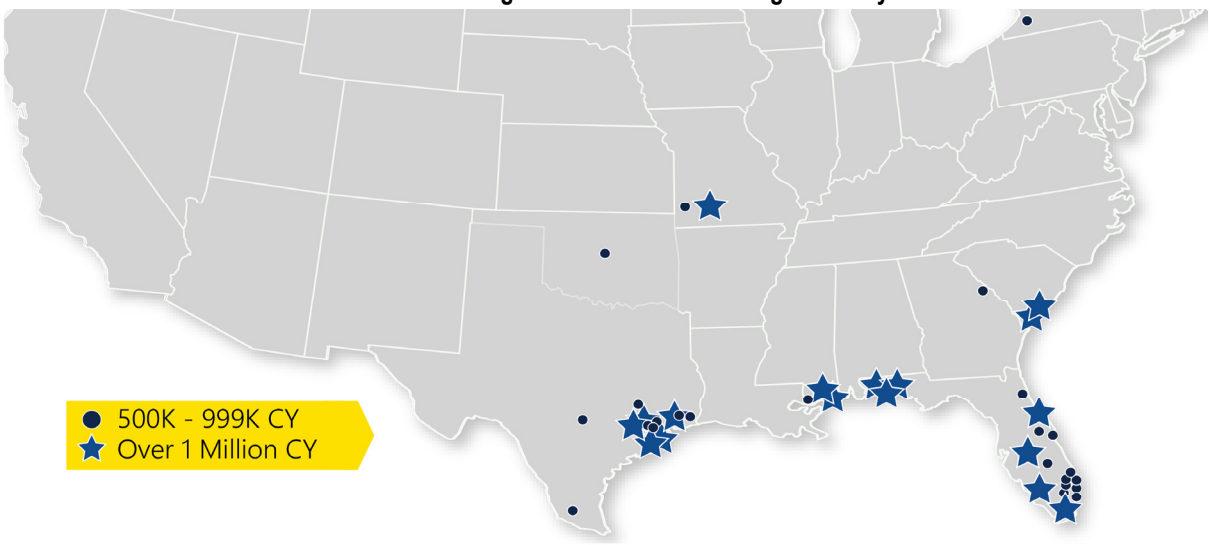


## Large-Scale Debris Monitoring Experience

Our team understands the significant resource commitment and effort that is necessary to manage and monitor large-scale debris removal operations for local governments. We have monitored and obtained FEMA, FHWA, and NRCS reimbursement on 20 debris removal projects in excess of 1 million CYs of debris. ***We are also very proud of our ability to scale our response and support clients with even the smallest of disasters or communities similar in size to the City. These clients have included the Cities of Port Orange, Naples, Dunedin, Doral, and Pinellas Park, FL. Profiles and references for these projects are featured in Section 4 of our proposal.***

Exhibit 2-2 summarizes our team's experience serving as the prime contractor on large-scale debris monitoring projects.

**Exhibit 2-2: Large-Scale Debris Monitoring Summary**





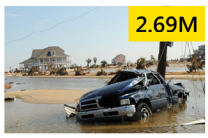
**Houston, TX**
*Hurricane Ike, 08*


**Escambia County & Pensacola, FL**
*Hurricane Ivan, '04*


**Collier County, FL**
*Hurricane Irma, '17*


**Miami-Dade County, FL**
*Hurricane Irma, '17*


**Gulfport. MS**
*Hurricane Katrina, '05*




**Bolivar Peninsula, TX**
*Hurricane Ike, '08*


**Miami-Dade County, FL**
*Hurricane Wilma, '05*


**Harrison County, MS**
*Hurricane Katrina, '05*


**Harris County, TX**
*Hurricane Ike, '08*


**Hilton Head Island, SC**
*Hurricane Matthew, '16*


**Houston, TX**
*Hurricane Harvey, '17*


**Galveston, TX**
*Hurricane Ike, '08*


**Polk County, FL**
*Hurricane Irma, '17*


**Santa Rosa County, FL**
*Hurricane Dennis, '05*


**Beaufort County, SC**
*Hurricane Matthew, '16*


**Escambia County, FL**
*Hurricane Dennis, '05*


**Jefferson County, TX**
*Hurricane Rita, '05*


**Springfield, MO**
*Snowstorms, '07*


**Harris County, TX**
*Hurricane Harvey, '17*


**Volusia County, FL**
*Hurricane Matthew, '16*

**Photo Source** | *FEMA.gov*

## A.3 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.

**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**

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 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 $6 billion in reimbursement funds from federal agencies such as FEMA, FHWA, and the NRCS.***

# A4. KNOWLEDGE AND EXPERIENCE WITH ALL ASPECTS OF DISASTER RECOVERY PROGRAM MANAGEMENT

As a result of our successful performance on past projects, our team has become a national leader in providing management and support documentation for the following:

- 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 temporary debris storage and reduction site (TDSRS)
- Final debris disposal at a landfill or other end use
- Conflict and damage resolution
- Truck certification
- Right-of-entry (ROE) administration

## Special Programs Management

Our team is experienced with all facets of the debris removal monitoring industry, including special disaster recovery program management services. Some examples of special programs our team has managed and administered include the following:

- 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

## Private Property/Right-of-Entry 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 2-3 is a representative list of our experience in assisting clients with PPDR activities and demolition program management.

Exhibit 2-3: 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Dougherty County, GA** | Tornado (2017) | | | | | | | | ■ | ■ | | ■ |
| **Lake County, CA** | Wildfires (2015) | ■ | ■ | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ |
| **Hays County, TX** | Flooding (2014) | ■ | ■ | ■ | ■ | ■ | | | ■ | ■ | ■ | ■ |
| **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) | | | | | ■ | | | ■ | ■ | ■ | ■ |

## 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 198,635 hazardous trees and hangers on behalf of 36 clients following Hurricane Matthew.*** Exhibit 2-4 provides featured clients where our team has monitored the collection and removal of leaning trees, hanging limbs, and stumps following a disaster debris-generating event.

**Exhibit 2-4: Previous Leaner/Hanger/Stump Removal Programs**

| Client | Event | Total Leaners/Hangers/ Stumps Removed |
|---|---|---|
| **Beaufort County, South Carolina** | 2016 Hurricane Matthew | 67,581 |
| **Town of Hilton Head, South Carolina** | 2016 Hurricane Matthew | 48,589 |
| **Horry County, South Carolina** | 2016 Hurricane Matthew | 33,661 |
| **Flagler County, Florida** | 2016 Hurricane Matthew | 15,151 |
| **City of Port Orange, Florida** | 2016 Hurricane Matthew | 6,098 |
| **City of Myrtle Beach, South Carolina** | 2016 Hurricane Matthew | 4,076 |
| **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.

## 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, during the course of the project if Tetra Tech notices any lack of due diligence or potential for environmental violations, 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 TDSRS 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™, is the result of these efforts. RecoveryTrac™ 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 3: 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 3: Technical Approach**.

## A5. PROFESSIONAL DEVELOPMENT PROGRAM

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 have attended 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 24-Hour HAZWOPER Certification
- OSHA 40-Hour HAZWOPER Certification
- G-202 Debris Management
- IS 100: Introduction to Incident Command System
- IS-200: Basic Incident Command
- IS-556: Damage Assessment for Public Works

- IS-559: Local Damage Assessment
- 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
- Mass Casualty Incident Manager Certification

Additionally, all collection and disposal monitors 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.

## A6. CONFLICT OF INTEREST

Tetra Tech confirm that neither the firm nor any employee thereof, has a conflict of interest, either direct or indirect, in connection with the services sought herein pursuant to federal and state law.

# B. EXPERIENCE AND QUALIFICATIONS OF KEY PERSONNEL

## B1. KEY PERSONNEL QUALIFICATIONS SUMMARY

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 FEMA, FHWA, U.S. Department of Housing and Urban Development (HUD), NRCS, and other federal agency reimbursement programs.

Our staff members have successfully managed the removal of and reimbursement for over ***103 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, Federal Highway Administration (FHWA), and Natural Resources Conservation Services (NRCS) reimbursement on ***over 20 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. Our team has also provided program management services to many communities with 51,000 residents or fewer. We understand the importance of proper staffing based on the magnitude of an event and the scale of the impacted area.

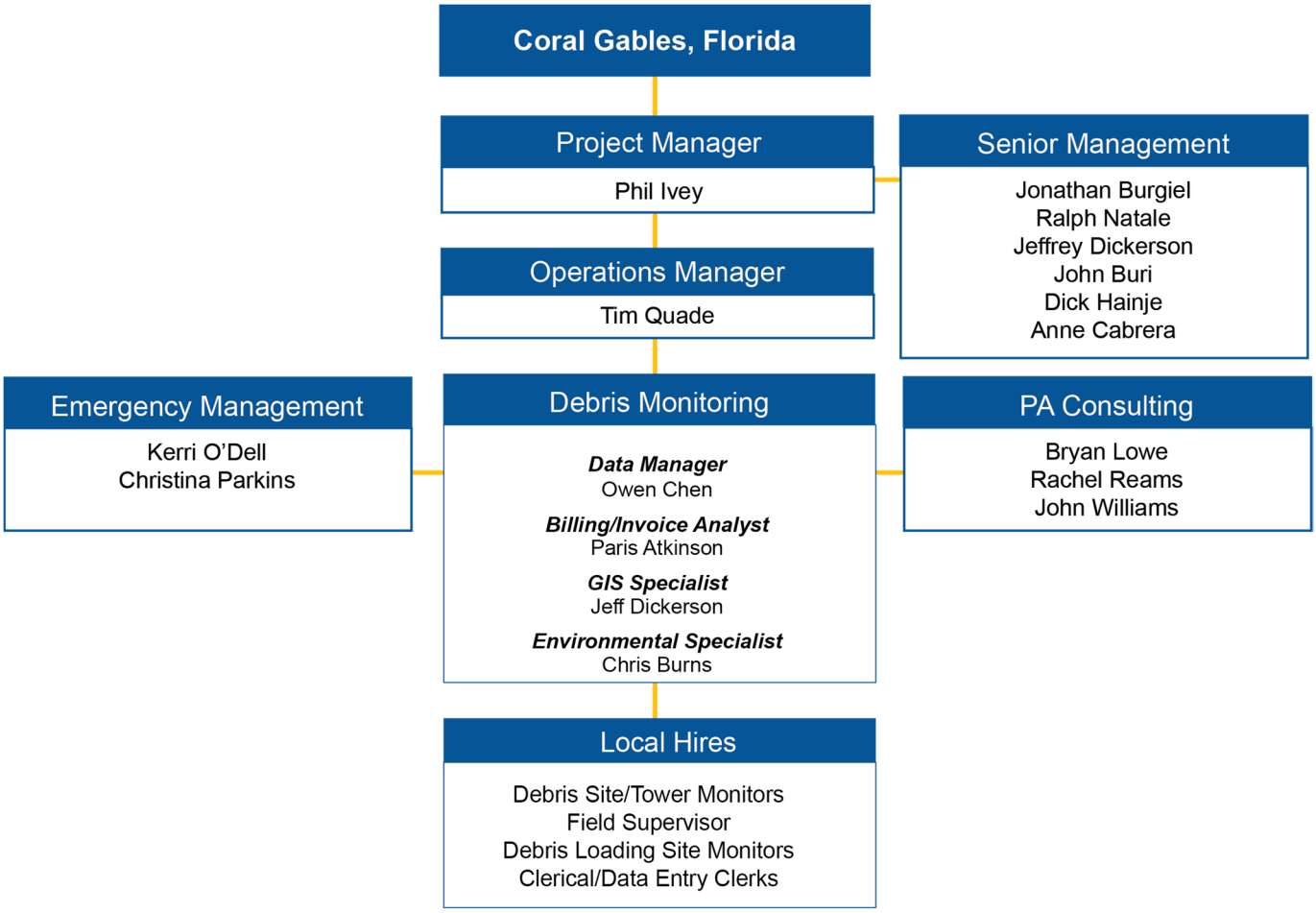
***Tetra Tech is committed to providing the City with a dedicated and consistent project management team that will expedite recovery efforts in the City by establishing a coordinated and organized approach to debris removal.*** Our dedicated team is available to the City 365 days per year.

**More detailed information about each team member's experience is included under *Item B.3 – Proposed Staff Experience Summary*. Résumés have also been included at the end of this section.**

## B2. ORGANIZATIONAL CHART

Exhibit 2-5 shows our proposed project team organizational structure.

**Exhibit 2-5: Project Team Organizational Chart**




## B3. PROPOSED STAFF EXPERIENCE SUMMARY

### 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 31 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 various communities following Hurricane Matthew, Richland County, South Carolina (Historic 1,000 Flooding Event), 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.

# Section 2: Experience and Qualifications

## Key Staff Résumés

TETRA TECH

- **Mr. Ralph Natale** has overseen response to some of the country's largest debris-generating disasters. He is an expert in FEMA Public Assistance (PA) Grant Program reimbursement policies and has administered nearly 70 projects in his 11-year career. This includes managing and documenting the removal of over 16 million CYs of debris and 895,000 hazardous trees totaling over $470 million dollars of reimbursed invoices. He has served as a debris specialist and grant consultant for state and local governments, 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. He currently serves as principal in charge for several of the firm's response efforts in California following the devastating fires and for 38 communities following Hurricane Harvey in Texas.
- **Ms. Anne Cabrera** has worked nationwide on numerous major post-disaster activations since Hurricane Wilma in 2005. 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 disaster related activities, state appeals, and close out processes. **Most recently, she assisted several South Florida communities with debris monitoring operations following Hurricane Irma.**
- **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™. 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. **Most recently, he oversaw the deployment of over 4,000 field units to over 100 clients following Hurricanes Harvey and Irma and the California wildfires.**
- **Mr. John Buri** is a versatile emergency management, disaster mitigation, response and recovery, and grant management professional with 14 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.

## 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.***

- **Mr. Phil Ivey,** *Project Manager* **–** Mr. Ivey has **12 years of experience** and has overseen recovery operations in response to some of the country's largest debris-generating disasters. Mr. Ivey is experienced with debris collection and disposal and developing project worksheets to accurately record the data to ensure proper reimbursement, payment reconciliation, and guidance on adhering to local, state, and federal regulations and policies governing debris collection and disposal.

  As project manager, Mr. Ivey 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.

- **Mr. Tim Quade,** *Operations Manager* **–** Mr. Quade serves as field operations manager and has **more than two years of experience** with truck certification, disposal operations, FEMA reimbursement requirements, scheduling and dispatching of monitors, quality assurance/quality control (QA/QC) of monitors, and general field management. Mr. Quade is also one of our designated staff trainers and has provided training to several hundred monitors during recent debris monitoring activations. Mr. Quade has an in-depth understanding of the implementation and operation of our ADMS technology and the execution of health and safety protocols.

  As operations manager, Mr. Quade 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.

- **Owen Chen,** *Data Manager* **–** Mr. Chen is an experienced quality control and data manager for Tetra Tech with **over 4 years of experience**. His areas of expertise are in geographic information systems, documentation management, quality assurance/quality control (QA/QC), database management, and reporting. He also has an in-depth understanding of FEMA eligibility, documentation requirements, and our ADMS.

  As data manager for the City, Mr. Chen 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.

- **Paris Atkinson,** *Billing and Invoice Analyst* **–** Ms. Atkinson is a senior data manager and billing/invoice analyst whose responsibilities include data management, management of monitoring documentation for the FEMA, invoice reconciliation, and the use of our ADMS. She has extensive experience on all aspects of program data management, including project closeout and post-closeout audit support. Ms. Atkinson possesses knowledge and understanding of federal grant programs, including the FHWA Emergency Relief (ER) Program and the FEMA PA Program.

  As billing and invoice analyst, 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.

- **Chris Burns,** *Environmental Specialist* **–** Mr. Burns has 15 years of experience in the environmental field. Mr. Burns has responded to over 400 oil spills, conducting responses to oil spills, complaints, fish kills, and a multitude of site assessments. His experience includes responses to small releases from aboveground home heating oil tanks to larger releases from underground storage tanks and pipelines that have affected surface water, groundwater, and soil. Mr. Burns is currently the Emergency Response Coordinator and Deputy Program Manager for the US EPA Region 5 START Contract. He is trained in the operation and maintenance

of field equipment for use in emergency response operations. He is also experienced in the collection of asbestos samples and is versed in the 2009 asbestos framework for collection asbestos samples, and currently manages five asbestos sites for Tetra Tech.

As environmental specialist, Mr. Burns has responsibility for environmental permitting, the recommendation and selection of temporary debris storage and reduction site (TDSRS), and related issues. He reports to the project manager and will work closely with solid waste staff to address and resolve environmentally sensitive issues.

- **Bryan Lowe,** *Public Assistance (PA) Supervising Consultant* **–** Mr. Lowe is a seasoned grant management and emergency management specialist, with over 18 years of field experience. He has a long history of working with the Florida Department of Emergency Management and has been involved in every major Florida disaster event since 2004. Mr. Lowe has provided emergency management and financial recovery in the State of Florida for the Bugaboo Fires, Super Bowl, Tropical Storm Fay, Operation Haiti Repatriation, and the Deepwater Horizon oil spill disaster.
- **Rachel Reams, MBA***, PA Coordinator* **–** Ms. Reams assist clients with damage assessments, force reconciliation, and project worksheet development throughout the post-disaster grant administrative period. Ms. Reams is familiar with data collection and dissemination, contracted and force account labor, equipment, and invoice reconciliation, application development, and project monitoring. Currently, Ms. Reams is providing PA consulting services to several clients in Florida that were impacted by Hurricane Irma.
- **John Williams, MBA***, PA Coordinator* **–** Mr. Williams assists clients throughout the post-disaster grant administration process. He is familiar with data collection and dissemination, invoice and reconciliation, cost accounting, application development, supporting requests for information (RFI), and project monitoring. His strong background in finance, management, and operations makes him particularly adept at tracking the recovery process.
- **Kerri O'Dell,** *Emergency Management Consultant* **–** Ms. O'Dell serves as high-level project manager for Tetra Tech and possesses over 13 years of disaster preparedness, emergency planning, and disaster response and recovery experience. She has assisted numerous local, state and private sector businesses with active shooter assessment; emergency operations planning; continuity of operations planning (COOP); 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. Most recently, she assisted several South Florida communities with debris monitoring operations following Hurricane Irma.
- **Christina Parkins,** *Emergency Management Consultant* **–** Ms. Parkins is an emergency management consultant with extensive homeland security, emergency management, emergency planning, and special event response, and grant management experience. Ms. Parkins has developed operational and response plans for daily operations and large-scale incidents, specifically incident action plans, COOP/continuity of government plans, and family assistance center plans. She has also developed tabletop, functional, and full-scale exercises for a number of agencies.

TETRA TECH

# 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:

- Multiple communities in South and North Carolina – Hurricane Matthew
- Richland County & Lexington County, South Carolina - South Carolina 1,000-year Flooding Event - Comprehensive Disaster Recovery Services
- Hays County/City of Wimberley, Texas – Severe Flooding Disaster Recovery Assistance
- 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 Project Manager (June 2017 – Present)

**Restore Louisiana | HUD CDBG-DR Housing Rehabilitation**

Served as Project Manager over the preparation of over 10,000 Tier 2 environmental reviews and over 5,000 lead risk assessment and clearance inspections. This $20 million project performed by Tetra Tech utilized state of

### YEARS OF EXPERIENCE

30+ years

### AREA OF EXPERTISE

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

### GRANT EXPERIENCE

- FEMA PA
- CDBG-DR
- HMGP

### DISASTERS

- 4286 SC Hurricane Matthew
- 4245 TX Flood
- 4241 SC Flood
- 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

### EDUCATION

University of Central Florida
Master of Business Administration, 1989

Tufts University
Bachelor of Arts, Economics, 1984

the art technology and cloud based technology to decrease the cost of performing a Tier 2 review by over 50% from prior state led residential rehab projects.

### Principal-in-Charge (October 2015–November 2015)

**Richland County South Carolina | Comprehensive Post-Disaster Flood Support Services**

Following the State of South Carolina's 1,000-year flooding event that took place from October 1–5, 2015, Mr. Burgiel led a team of Tetra Tech staff to provide comprehensive disaster recovery services to Richland County immediately following the historic flooding event. Services included but were not limited to FEMA PA reimbursement support, procurement package development for over 270 road and bridge repairs, well testing and disinfection program management, a post-disaster outstanding needs assessment, flood mitigation planning support, grant funding strategic plan development, and coordination and technical support activities among the County, State and FEMA agencies.

### Principal-in-Charge (May 2015–October 2015)

**Hays County/City of Wimberley Texas | Post-Disaster Flood Support Services**

Following the historic flooding event along the Blanco River where over 20 people perished, Mr. Burgiel provided technical support in the Hays County, Texas Emergency Operations Center (EOC) during and immediately following the flooding disaster. As part of these services, Mr. Burgiel supported the County and City of Wimberley in providing expert technical advice associated with providing the County/City appropriate measure for responding to the event and methods for best tracking the County's disaster-related costs to maximize the County's/City's FEMA reimbursement post-disaster. Mr. Burgiel was instrumental in standing up the County right-of-way debris removal program and subsequently obtaining approval for a private property debris removal (PPDR) program from FEMA to cover the extensive debris that remained along and in the Blanco River, which created a future health and safety hazard to the County and City.

### 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.

### 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 2004-2005)

**City of Boca Raton, Florida | Hurricane Frances Disaster Recovery and Debris Cleanup Management**
Following Hurricane Frances, Mr. Burgiel supervised the responsive deployment of support teams, assisted with staging operations, and managed scheduling, dispatching, and logistics operations for the field inspectors assigned to storm debris cleanup.

### 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 (August 2004-2005)

**Lake County, Florida | Hurricanes Charley and Frances Disaster Recovery and Debris Management**
Following Hurricanes Charley and Frances, Mr. Burgiel helped Lake County perform a range of storm debris cleanup monitoring and management activities. He supervised 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.

### 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.

### Project Management (September – October 2001)

**Sarasota County, Florida | Tropical Storm Gabrielle Disaster Debris Program Management**
As a result of Tropical Storm Gabrielle in 2001, Sarasota County required assistance with logistics, staging operations, and load inspections for storm debris cleanup performed by contract haulers. As project manager for the project, Mr. Burgiel assisted Sarasota County with scheduling, dispatching, and logistics operations for the field inspectors assigned for storm debris cleanup.

TETRA TECH

# Ralph Natale

## Senior Management Team, Director

## EXPERIENCE SUMMARY

Mr. Ralph Natale is the director of post-disaster programs for Tetra Tech, Inc. He leads the practice by developing programs, providing daily project support, and providing oversight and guidance to his team of project managers and projects. Mr. Natale is an expert in Federal Emergency Management Agency-Public Assistance (FEMA-PA) Grant Program reimbursement policies and has administered nearly 70 projects in his 13 year career.

Mr. Natale has served as a principal in charge, project manager, data manager, and operations manager in response to some of the country's largest debris-generating disasters, including Hurricanes Irma, Harvey, Matthew, Katrina, Ike and Sandy. This includes managing and documenting the removal of over 16 million cubic yards (CYs) of debris and 895,000 hazardous trees totaling over $470 million dollars of reimbursed invoices.

## FEATURED RELEVANT EXPERIENCE

### Subject Matter Expert (Debris Documentation, Program Management, Grant Management)

Mr. Natale has served as a debris documentation specialist and grant consultant for state and local governments during his extensive career in disaster debris industry. This includes serving as a current member of the State of Connecticut Emergency Operations Debris Task Force, where he was activated during the recovery operations following Hurricane Irene and Winter Storm Alfred.

Mr. Natale has also served as a senior consultant and subject matter expert on the following projects:

- Lake County, California | Valley and Butte Fire (September 2015–Present)
- City of Houston, Texas | Hurricane Ike, severe droughts, ,may 2015 floods (June 2009–Present)
- State of Connecticut | Interagency Debris Management Task Force (August 2010–Present)
- City of New Orleans, Louisiana | Hurricane Isaac (September–December 2012)
- Texas Department of Transportation | Federal Highway Administration-Emergency Relief Statewide Training (January–July 2010)
- Connecticut Department of Transportation | Winter Storm Alfred (October 2011–July 2012)
- Boulder County, Colorado | 2013 Floods (October 2013 –2015)

### YEARS OF EXPERIENCE

13 Years

### AREA OF EXPERTISE

- Program Development
- Documentation Management
- Private Property Debris Removal Programs
- Debris Removal Planning
- Debris Removal Monitoring
- Packet Management
- Geospatial Reporting

### GRANT EXPERIENCE

- FEMA PA
- NRCS EWP
- FHWA ER

### DISASTERS

- 4240 Valley and Butte Fire
- 4245 TX Severe Storms
- 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

## Principal in Charge/Senior Program Manager

As director of post-disaster programs for Tetra Tech, Mr. Natale has focused on developing and improving program management processes. These processes ensure the most efficient methods of managing debris removal programs to maximize federal reimbursement via the FEMA 325, and 327 guidelines. As a senior program manager, Mr. Natale ensures quality control and quality assurance of project managers' deliverables on all Tetra Tech projects. A representative list of projects he has worked on is included below.

**Northern California (NORCAL) Wildfire Response (November 2017-Present)**
Mr. Natale serves as principal in charge associated with the cleanup of over 3,000 homes. Mr. Natale oversees the overall project management team and assists with staffing and logistics for this four county response.

**Detwiler Fire (August 2017-Present) and Helena Fire (September 2017- Present) California Fire Response**
Following the catastrophic fires that impacted California in the fall of 2017, Mr. Natale has been overseeing disposal operations for both the Detwiler and Helena Fires. Under Mr. Natale's direction, the Tetra Tech team was responsible for the hazard assessment of over 200 parcels of burned area in Northern California. Tetra Tech also conducted OSHA personal sampling and air monitoring and sampling during all operations to ensure protectiveness to public health during cleanup operations. Tetra Tech assessed each parcel for radiation, VOCs, lead, asbestos, and debris estimates.

**CalRecycle | Erskine Fire (July 2016–October 2016)**
As principal in charge for the Erskine wildfire recovery project, Mr. Natale oversaw operations including staffing, safety, field logistics, task force dispatching, training, and other daily activities. The Erskine fire was the second-most destructive fire of the California wildfire season that year, burning nearly 50,000 acres, and destroying over 100 buildings. Debris removal was performed on 302 fire-damaged sites, and under Mr. Natale's oversight the firm provided management and support staff for the CalRecycle/Cal Office of Emergency Services (OES) incident command system for the duration of the program.

**California | Valley and Butte Fire (October 2015–2016)**
Mr. Natale helped create and implement programs for several projects after the Valley and Butte fires of 2015, which burned over 150,000 acers of forests and destroyed over 2,000 homes, with recovery costs of over $300 million. Each program developed was unique but necessary for the community as a whole to recover. Programs included geospatial live tracking of work completed and equipment deployed; mitigation of hazardous trees from rights of ways and private property that was fully funded by CalOES and FEMA; private property debris removal packet management and database support; and management of a unique mix of environmental scientists and debris specialists to provide documentation for remediation of asbestos and other contaminants left behind, including debris quantities. These clients included Lake County Public Works, CalRecycle (AJ Diani), CalRecycle (Sukut), and PG&E.

**State of New Jersey | Hurricane Sandy Disaster Recovery Operations (October 2012–January 2013)**
Mr. Natale supported debris monitoring efforts for seven separate municipalities and state agencies following Hurricane Sandy. These clients including but not limited to 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. Mt. Natale led our team in responding to nine municipalities spread over 100 miles, including but not limited to 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 CYs 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 CYs of vegetative debris and remove over 100,000 hazardous trees.

## Project Management

On large debris projects, Mr. Natale will be temporally relieved of his director 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.

**Town of Hilton Head Island, South Carolina | Hurricane Matthew (October 2016–June 2017)**
Mr. Natale provided project management and oversight for the popular tourist destination, Hilton Head Island, following extensive damage caused by Hurricane Matthew. Within hours of the disaster, Mr. Natale was on-site to assess the damage and meet with Town officials. Mr. Natale managed the mobilization of a local team of debris monitors and established our automated debris management system (ADMS) for the City to provide real-time updates on the debris removal operations. In total, our team monitored the removal of 2,187,080 cubic yards of debris.

**City of Houston, Texas | Memorial Day Floods (May–August 2015)**
Mr. Natale designed and incorporated an operational plan to manage debris removal efforts on over 6,000 road miles and 1,000,000 parcels in 60 days. 650,000 yards were collected in the 256 debris zones using City of Houston force account labor and equipment and contractor resources.

**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.

TETRA TECH

# Anne Cabrera

## Senior Management Team, Deputy Director

## EXPERIENCE SUMMARY

Ms. Cabrera has worked nationwide on numerous major post-disaster activations 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 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 disaster related activities, state appeals, and closeout processes.

In addition, Ms. Cabrera has developed valuable partnerships with various clients, helping them to plan for and prepare for potential disasters. This work has included providing training sessions and participating in exercises with communities across the Country, including helping many cities and counties create or update disaster debris management plans and develop ongoing staff training programs.

## FEATURED RELEVANT EXPERIENCE

### Regional Program Manager (September 2017–Present)

**Hurricane Irma**

Hurricane Irma affected the entire state of Florida and Ms. Cabrera has severed as the regional program manager for one of the hardest hit areas including Collier County where the storm made landfall. In addition Ms. Cabrera has overseen project operations for the Cities of Naples, Marco Island, Cape Coral and Charlotte County and is the Principal in Charge for an FDEP waterway debris removal project.

### Regional Program Manager (October 2016-March 2017)

**Hurricane Matthew**

After Hurricane Matthew impacted the east coast of the United States in October 2016, Ms. Cabrera served as the regional program manager for many of Tetra Tech's Florida clients overseeing all aspects of operations for Brevard and St. Johns Counties and the Cities of Cocoa Beach, Port Orange, Holly Hill, South Daytona, New Smyrna Beach, Oak Hill and Lake Helen.

### QA/QC Manager (January 2016–August 2016)

**Sukut Construction | CalRecycle Butte Fire Response**

The Butte Wildfire impacting Calaveras County, California was one of the most destructive in State history. The Department of Resources Recycling and Recovery (CalRecycle) was tasked to design and implement the

### YEARS OF EXPERIENCE

13 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

- 4337 Hurricane Irma
- 4332 Hurricane Harvey
- 4283 Hurricane Matthew
- 4241 SC Flooding
- 4240 CA Wildfires
- 4223 TX Severe Storms
- 4165 GA Winter Storm
- 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

structural debris removal plan for the Butte Fire incident. One of the prime contractors facilitating the removal of ash and debris from the fire and assisting in the environmental restoration of the area is Sukut Construction, who has sub-contracted to Tetra Tech for the data management of all the costs associated with the debris removal to be separated by each individual private parcel. Ms. Cabrera is overseeing the reconciliation of tens of millions of dollars of invoices and the preparation of documentation to be submitted to the State of California.

### Debris Program Manager (January 2016–February 2016)

**Collier County, Florida | 2016 Straight-Line Winds**

In January 2016, Collier County was forced to manage debris after a straight-line windstorm left a swath of damaged and downed trees across the County. After a long history of helping Collier County to plan for such disasters, including annual trainings and a 2015 update of their Disaster Debris Management Plan, Ms. Cabrera assisted with the rapid ramp-up to monitor disposal of debris from the impacted areas. Tetra Tech worked for the County for a three-week period and monitored and documented the contractor's removal of over 44,000 cubic yards of vegetative debris during this brief time-frame.

### Public Information Technical Assistance (September 2015–December 2015)

**Lake County, California | Valley Wildfire**

The Valley Fire began September 12, 2015, in Lake County and burned 76,067 acres in Lake, Napa, and Sonoma Counties prior to being fully contained. 1,958 structures were ultimately destroyed, and the intensity of the Valley Fire destroyed many trees. Ms. Cabrera helped write a public information plan to provide timely and accurate information to County residents. This was a multi-faceted approach to communicate information and included a County web page, mailers to County residents, identification badges for contractors, informational flyers, Town Hall style meetings, and a citizen information center.

### Debris Subject Matter Expert (July 2015–Ongoing)

**Los Angeles County, California | Operational Area MDMP**

Ms. Cabrera has been serving as a debris subject matter expert in support of Los Angeles County's establishment of an Operational Area (OA) Mass Debris Management Plan. The Los Angeles County OA involves a diverse stakeholder group of multiple County agencies and 88 municipalities within the County, along with other public entities and private-sector partners. The project has included multiple planning meetings, stakeholder outreach, outreach to private-sector partners, and a tabletop exercise. The resulting plan will provide a framework, including roles and responsibilities for coordination within the OA in a mass debris-generating event as well as a template for municipalities to develop their own individual debris management plans.

### 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 PWs for federal reimbursement.

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

**Boulder County, Colorado | 2013 Flooding–PA 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 assisting with the gathering of the documentation for and development of the Category A PWs and later assisting with management of private property debris removal and public right-of-way debris removal monitoring programs.

### 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 disposal accounts for the 31 separate applicant municipalities that may use the County solid waste disposal sites.

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. Six regional meetings with a total of 31 municipalities overall were facilitated to create buy-in in multi-jurisdictional coordination for use of debris management sites. A report on options for final disposal capacity including in county and out-of-county landfills and their capacity to accept debris as well as potential recycling options was provided in addition to a final report study and an all-region meeting to present the findings.

## 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.

## 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 closeout for Hurricane Ike. In the course of the initial review, damages not captured in the initial PWs were identified including storm induced erosion damages that did not become evident until many months after the initial disaster. 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 closeout 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. 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. Ms. Cabrera has remained a consultant to City of Hollywood staff working with their accounting and finance department to respond to FEMA requests for additional information and as audit support for both FEMA and Office of Inspector General (OIG) audits.

## Data Reconciliation Management (October 2005–February 2012)

**City of Fort Lauderdale, Florida | Hurricane Wilma Grant Management Recovery Services**

Ms. Cabrera supported data management activities associated with the debris collection effort in the City of Fort Lauderdale, FL. After the initial recovery efforts, Ms. Cabrera continued to work with the City of Fort Lauderdale for the next six years through multiple State and FEMA audits. Based on lessons learned, she helped the City of Fort Lauderdale to develop after action reports and a list of best practices should they be impacted by another disaster in the future. Ms. Cabrera worked closely with City staff, the assigned State PA Coordinator and the FEMA review team to help gather the necessary documentation and close out projects from the 2005 storm season.

TETRA TECH

# Jeffrey Dickerson
## GIS Specialist

## 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 military veteran with skills in leadership, training, and personnel development. As the Technical Applications Manager, Mr. Dickerson is responsible for the planning, development, deployment of technical applications supporting emergency response operations for the firm.

Mr. Dickerson has extensive experience in process improvement and application of advanced technology to boost efficiency post-disaster field and data operations. He recently presented at the National Hurricane Conference on the use and application of technology to improve disaster response cost efficiency.

Mr. Dickerson has led the development and support of Tetra Tech's automated debris management system (ADMS), RecoveryTrac™. As one of only three systems validated by the USACE, it is the preferred provider by the USACE debris contractors, providing ADMS services to 6 of 8 USACE districts globally. RecoveryTrac's flexibility and GIS capabilities provide best-in-class reporting and analysis tools. Additionally, RecoveryTrac's web-based data feeds enable direct integration into client GIS and emergency management systems.

## RELEVANT EXPERIENCE

### GIS/ADMS Applications Manager (October 2017–Present)

**Sonoma, Napa, Lake and Mendocino Counties, CA | Wildfire Disaster Debris Private Property Debris Removal (PPDR) Program Management**

As part of a FEMA-Army Corps of Engineers (ACE) contractor team, Mr. Dickerson supported the deployment and data management of the ACE compliant ADMS and GIS technologies to automate documentation of the private property hazard removal and fire debris removal mission. Mission assignment also included site assessment and environmental remediation sampling. To date, over 3,450 properties have been assessed, sampled and fire debris removed generating nearly 761,000 tons of debris. Advanced GIS mapping, document, and data analysis portals were used extensively to document FEMA, ACE, and California environmental requirements.

### Deputy Project Manager (May 2017–October 2017)

**State of Louisiana, Restore Louisiana (ReLa) Program**

Mr. Dickerson managed the HUD-mandated environmental reviews (Tier II Site Specific Reviews) in accordance with 24 CFR Part 58 and the current Restore Louisiana Program Environmental Review (Tier II) Procedures for over 10,000 flood damaged properties.

### YEARS OF EXPERIENCE

20 Years

### AREA OF EXPERTISE

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

### DISASTERS

- 4240 CA Wildfires
- 4223 TX Flooding
- 4166 SC Winter Storm
- 4165 GA Winter Storm
- 4145 CO Flooding
- 4115 SD Winter Storm
- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 4029 TX Wildfires
- 4024 Hurricane Irene
- 4106 CT Winter Storm
- 1791 Hurricane Ike
- 1609 Hurricane Wilma
- 1602 Hurricane Katrina

### 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

### GIS/ADMS Applications Manager (October 2016–May 2017)

**States of Florida, Georgia, South Carolina and North Carolina | Hurricane Matthew Disaster Debris Public and Private Property Debris Removal (PPDR) Program Management**

Mr. Dickerson managed the deployment of customized GIS-enabled ADMS technology. The system documented removal of over 8.5 million CYs of debris and 198,000 tree hazards while supporting 720 ADMS field employee and 47 debris management sites at a removal rate of nearly 165,000 CYs/day.

### Project Manager (August 2016–Present)

**Miami Dade County, FL | Zika Mosquito Inspection and Remediation Monitoring and Program Management**

Mr. Dickerson managed the development and deployment of customized GIS-enabled ADMS technology to document and manage a Door to Door Mosquito inspection and remediation program. RecoveryTrac technology was implemented by providing Contractor Crews with handheld smart phone devices loaded with the RecoveryTrac software to capture and report the inspection and remediation activity data in real time. The data collected was critical to the County in directing resources in response to changing health concern areas and mosquito counts.

### GIS/ADMS Applications Manager (October 2015–August 2016)

**Lake and Calaveras Counties, CA | Wildfire Disaster Debris Private Property Debris Removal (PPDR) Program Management**

Mr. Dickerson managed the development and deployment of customized GIS-enabled ADMS technology to automate a private and commercial property hazard removal and demolition program, including environmental remediation sampling. Over 4,000 hazardous tree were removed and 1,000 structures were, demolished generating nearly 100,000 cubic yards of mixed debris. Advanced GIS mapping, document, and data analysis portals were used extensively to document California environmental requirements.

### ADMS and Logistics Manager (May 2015–August 2015)

**State of Texas | Severe Flooding Debris and Hazard Removal Program Management**

Mr. Dickerson managed the logistics and deployment of staff equipment and supplies as well as ADMS technology to 10 county and local clients in a multi-jurisdiction activation, including over 135 handheld devices removing 325,000 cubic yards of flood and household debris. Advanced GIS web services and data information portals were used extensively in managing the hazardous material pickups, road pass clearance, and public information applications.

### GIS Field Application Manager (November 2014–May 2015)

**City of New Orleans, LA | Hurricanes Katrina Demolition Phase II Program Management**

Mr. Dickerson developed and deployed mobile field GIS technology to automate the private property demolition survey and documentation. Custom GIS base workflow automation provided custom form generation from collected field data. Phase II included the survey and demolition of over 375 structures.

### GIS/ADMS Application Manager (February 2014–June 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 seven 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 analysis portals were used extensively in managing the projects and public information applications.

### 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™ 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.

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

**City of Houston and Harris County, Texas | Hurricane Ike Debris Removal Monitoring**

Following Hurricane Ike, Mr. Dickerson provided IT and logistics support to the City of Houston and Harris County. His responsibilities included IT site support, system setup, end-user training, equipment rentals, and supply distribution.

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

**Miami-Dade County, Florida | Hurricanes Katrina and Wilma Disaster Recovery and Debris Management**

Mr. Dickerson was responsible for the setup and management of a 90-person data center. Mr. Dickerson provided database technical support to successfully track the documentation for over 5 million cubic yards of debris.

### Quality Control Manager (September 2004–October 2007)

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

Mr. Dickerson provided quality control and fraud prevention support during Escambia County's debris removal operations. Mr. Dickerson performed volumetric truck certification, DMS quality control monitoring, and roving collection monitor supervision.

TETRA TECH

# John Buri

## Senior Management Team, Post Disaster Programs

## EXPERIENCE SUMMARY

Mr. John Buri is a director of post-disaster programs for Tetra Tech, Inc., and a member of our senior management team. Mr. Buri has a thorough understanding and practical application of industry best practices and federal guidance governing such efforts including the Federal Emergency Management Agency (FEMA), Hazard Mitigation Assistance (HMA), FEMA Public Assistance (PA) Program, 2 CFR 200, HUD CDBG-DR and disaster funding strategies for local and state governments. Key highlights of Mr. Buri's career include:

- **16 years of experience:** Working with mitigation, emergency management planning, response, and recovery operations
- **$3 billion:** His work has represented over $3B in disaster related grants.
- **22 Disaster Declarations:** Performed in roles of project manager or principal-in-charge
- **$142 million:** Served as program manager for $142M in buyout /elevations
- **41 Total Disaster Declarations:** Worked on projects in either a project manager, principal in charge or support role.
- **17 States:** Worked in 17 states across 8 FEMA Regions
- **100 clients**: Mr. Buri has worked for over 100 state and local governments clients since 2004
- **39 national and state-level conference speaking engagements:** He is a nationally recognized speaker on disaster recovery and preparedness topics, presenting at the National Hurricane Conference, National Hazardous Materials Management Association Annual Conference, Solid Waste Association of North America Annual Conference (WasteCon), Maryland Emergency Management Association Conference, Government Finance Officers Association Conference, Texas Homeland Security Conference, North Carolina Emergency Management Conference, and the National Forum for Black Public Administrators Conference.

## FEATURED RELEVANT EXPERIENCE

### Multi-year Emergency Management & Disaster Recovery Services

**City of Houston, Texas; Program Manager**

- Managed emergency responses to major disasters including Hurricane Ike in 2008 (DR-1791), Memorial Day flood in 2015 (DR-4223), and Tax Day flood in 2016 (DR-4269)
- Following each disaster, coordinated with FEMA, Texas Division of Emergency Management (TDEM), USACE, Texas Commission on Environmental Quality (TCEQ), city departments, elected officials,

### YEARS OF EXPERIENCE

15 Years

### 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 404 HMGP
- FEMA HMA

### DISASTERS

- 4245 TX Flood
- 4241 SC Flood
- 4240 CA Wildfire
- 4223 TX Flood
- 4222 OK Flood
- 4193 Napa Earthquake
- 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

### EDUCATION

Texas State University
Master of Arts, Public Administration, 2002

The University of Texas
Bachelor of Arts, Government, 2000

congressional offices and volunteer groups to coordinate field activities, damage site inspections, eligibility reviews, and audits

- Managed planning team for 5 task orders under the DHS' Regional Catastrophic Planning Initiative Grant and Urban Area Security Initiative grant allocated to the City of Houston Office of Homeland Security
- Program manager for the City's flood resilience initiative in supporting the City's Flood Czar conducting damage analysis, mitigation project identification and identification of grant opportunities.

## Hazard Mitigation Grant Program Support

**Various Clients – US**

- Overall responsibility for the management and performance of task orders supporting $90+ in HMGP Grant applications across Texas, Georgia, Florida, South Carolina and North Carolina.
- Developed processes and implementation strategies for outreach, intake and verification for 100 elevations and 200 acquisition/demolitions

## Disaster Grant Management Consulting – 2013 Front Range Flood

**Boulder County, Colorado, Program Manager**

- Overall responsibility for the management and performance of our task order for $8M in consulting services associated with the administration and documentation to support disaster grants
- Managed the grant administration of $300M in FEMA PA, FEMA HMGP, FHWA-ER, NRCS-EWP and HUD CDGB-DR recovery grants following the front-range floods.
- Coordinated recovery efforts between the County, USACE, NRCS, FEMA, Colorado Department of Local Affairs (DOLA), Colorado Division of Homeland Security and Emergency Management (DHSEM), Colorado Department of Transportation, Town of Lyons and Jamestown, internal county departments and elected officials.
- Facilitated strategic planning meetings with community stakeholders to identify long term recovery initiatives

## Multi-year Emergency Management & Disaster Recovery Services

**Montgomery County, Texas**

- Managed emergency responses to multiple major disasters including Hurricane Ike in 2008 (DR-1791) and two floods in 2016 (DR-4269 and DR-4272)
- Directed various task orders following disasters including project formulation, technical assistance on the PA grant program, conducting substantial damage estimation of 250 flooded properties, data collection for PA grant program and grant application for FEMA FMA grant program.
- Served as the client point of contact, prepared cost and technical task order proposals, assigned resources, reviewed deliverables, and tracked costs and schedules to ensure compliance with statements of work and approved budgets

## Subject Matter Expert/Senior Management Oversight (October 2015-Ongoing)

**Richland County, South Carolina | Public Assistance Consulting**

Mr. Buri has been an integral part of Tetra Tech's Richland County disaster recovery team assisting the Project Manager and consultants with obtain data, policy interpretation and general grant consulting. Mr. Buri has focused his time assisting with navigating the on-going challenges associated with dam reconstruction, road damage restoration and long term recovery.

## Program Manager (May 2015 – 2016)

**Hays County, Texas | Full Services Disaster Grant Management Consulting and Debris Management | May 2015 (DR 4223) and October 2015 Floods (DR-4245)**

Mr. Buri is currently leading the Tetra Tech team supporting Hays County following two (2) major disaster declarations in 2015 including the May Memorial Day Flood and October All-Saints Day Flood that . This includes providing technical assistance to County leadership regarding FEMA PA, HMGP and CDBG-DR grant programs.

## Program Manager (July 2010-September 2012)

**Port of Galveston, Texas | Hurricane Ike Federal Grant Administration**

Mr. Buri provided senior management oversight in assisting the Port of Galveston on a number of reimbursement-related issues. With Mr. Buri's management and guidance, the Port of Galveston 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 Management Oversight (September 2008–2016)

**Galveston County, Texas | FEMA HMGP, Severe Repetitive Loss (SRL), and CDBG Application, Administration, and Implementation**

Following Hurricane Ike, Galveston County faced the daunting task of maintaining critical operations. Galveston County engaged our team to assist with its overall recovery process. This included consulting services for the FEMA PA program and evaluating the feasibility of submitting an application for the buyout of substantially damaged or destroyed structures and the elevation of less damaged structures under the FEMA HMGP. Within 48 hours, our team deployed a team of experts to Galveston County to manage all aspects of these processes. Beginning with public outreach and program setup, our staff began collecting applications from property owners and compiling an HMGP application for the buyout of up to 1,000 properties and the elevation of 12 others through a $102 million HMGP grant, which our team secured, implemented, and is in the process of closing out. In addition, Galveston County also engaged our team to assist with its extensive PA process and to act as a standby PA consultant for future disasters. Finally, on behalf of Galveston County, our team applied for a FEMA SRL grant to elevate many more flood-prone homes throughout Galveston County. The resulting $31 million SRL grant award will be used to elevate as many eligible homes as possible and is being implemented by our team to closeout.

TETRA TECH

# 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 stand-by 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.

While serving as regional administrator, Mr. Hainje was responsible for creating a long-term community recovery (LTCR) process for FEMA Region VII. This special program provides heavily impacted communities the opportunity to go through a FEMA-sponsored planning process after a catastrophic incident. The LTCR process was used in Greensburg, Kansas, to help the community plan for a new "green" future. The Greensburg, Kansas, recovery is a model for disaster recovery and the subject of televised documentaries/specials on major networks.

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

### YEARS OF EXPERIENCE

30 years

### 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

### EDUCATION

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

Killian College
Associate of Science, Fire Science, 1994

Delaware. In preparation for the 2006 hurricane season, Mr. Hainje led major hurricane exercises in FEMA Region IV and FEMA Region III.

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

## RELEVANT EXPERIENCE

### Subject Matter Expert (October 2017 – Present)

**City of Houston, Texas | Hurricane Harvey FEMA PA Consulting Services**

Hurricane Harvey struck Texas in late August 2017 causing widespread flooding that damaged homes, businesses, and municipal infrastructure. Mr. Hainje is serving as subject matter expert and is working directly with the City of Houston's Recovery Leadership Group in developing a strategy for accessing federal and state grant programs for infrastructure and housing programs. Mr. Hainje has performed site damage assessments and formulation of project worksheets for damaged infrastructure. He is also assisting with identifying 404/406 mitigation projects.

### Senior Technical Advisor (November 2017 – December 2017)

**Various Communities along Florida's Gulf Coast | Hurricane Irma Disaster Debris Monitoring Operations**

Following Hurricane Irma, Mr. Hainje served as senior technical advisor to various communities along Florida's Gulf Coast, including the Cities of Tampa and Clearwater, and Collier County. Mr. Hainje routinely met with City/County officials and provided subject matter expertise related to debris removal operations, and reimbursement guidelines.

### 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.

TETRA TECH

# Phil Ivey
## Project Manager

## EXPERIENCE SUMMARY

Mr. Phil Ivey has overseen recovery operations in response to some the of country's largest debris-generating disasters, including Hurricanes Sandy, Irene, Ike, Katrina, Wilma, Dennis, and Ivan; the 2013 Boulder County, Colorado floods; the 2006 ice storms in Buffalo, New York; and the Groundhog Day tornadoes that swept through Central Florida in February 2007. He has worked in communities stretching from the Gulf Coast region to upstate New York providing disaster recovery operations to ensure compliance with all Federal Emergency Management Agency (FEMA) and other reimbursement agency regulations. He provides FEMA-related guidance during times of activation based on his extensive experience managing disaster recovery efforts. This includes debris collection and disposal and developing project worksheets to accurately record the data to ensure proper reimbursement, payment reconciliation, and guidance on adhering to local, state, and federal regulations and policies governing debris collection and disposal.

## FEATURED RELEVANT EXPERIENCE

### Deputy Project Manager (May 2015–August 2015)

**City of Houston, Texas | Severe Storms and Flooding Disaster Debris Program Management**

Mr. Ivey was deployed to the City of Houston following severe storms and flooding that resulted in concentrated volumes of disaster debris in the City (300,000 CYs). Mr. Ivey was responsibilities included program execution and management of over 200 zones within the fourth largest city in the country. He was responsible for recruiting and training of 120 monitors, health and safety program implementation, reimbursement documentation, and overall oversight of the program. Mr. Ivey worked closely with grant managers, FEMA field specialists, and the State of Texas to document and track operations as well as deliver expedient and accurate reporting to key stakeholders.

### Deputy Project Manager (March 2014–July 2014)

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

Mr. Ivey served as deputy project manager for Boulder County, Colorado, following the September 2013 flooding. As deputy project manager, he oversaw the recovery of nearly 10,000 tons of debris. Also unique to this project was the fact that Tetra Tech was contracted by the County to take over monitoring operations from another firm mid-project. Mr. Ivey also assisted in identifying eligible debris in the streams for reimbursement and administrating the program management for the County's demolition project, including filling out all paperwork.

### YEARS OF EXPERIENCE

11 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

- Hurricane Irma
- 4245 Texas severe storms
- 4155 SD Winter Storm
- 4145 Colorado Floods
- 4086 Hurricane Sandy
- 4084 Hurricane Isaac
- 4024 Hurricane Irene
- 1791 Hurricane Ike
- 1780 Hurricane Dolly
- 1735 OK Winter Storms
- 1679 FL Tornadoes
- 1609 Hurricane Wilma
- 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

## Operations Manager (February 2013–January 2014)

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

Mr. Ivey served as operations manager for the New Jersey Department of Environmental Protection (NJDEP) following Hurricane Sandy, where he managed the NJDEP's vessel recovery operations throughout the state as well as water debris removal for the northern part of the state.

## Project Manager (October 2013–December 2013)

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

Mr. Ivey served as project manager during our team's response to the City of Rapid City, South Dakota, following the severe winter storm that crippled the entire western half of the state for nearly two weeks. Mr. Ivey managed the monitoring of the removal of over 100,000 cubic yards of debris and the mitigation of hazards caused by 8,020 hanging limbs or leaning trees.

## Operations Manager (November 2007-November 2013)

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

Mr. Ivey's responsibilities included documenting legal authority to demolish properties, which included surveying each structure, securing the legal ownership of nearly 2,000 properties, advising the legal owners of the impending demolition, and documenting the entire process from survey to demolition.

The unique demolition project required the identification and tracking of items with archeological significance to the surrounding area. Mr. Ivey's eye for detail for all aspects of the fast-paced demolition project ensured maximum reimbursement from FEMA for the City of New Orleans.

## Project Manager (August 2012–November 2012)

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

Following Hurricane Isaac, Mr. Ivey served as the project manager and implemented our automated debris management system (ADMS) for the debris removal project. Mr. Ivey was responsible for oversight of household hazardous waste and supervised the private property debris removal program. This project resulted in the monitoring and removal of approximately 225,000 cubic yards of debris for the Parish.

## Project Manager (August 2011–December 2011)

**Henrico County, Virginia | Hurricane Irene Disaster Debris Program Management**

Following Hurricane Irene, Mr. Ivey was responsible for supervising the debris and tower monitors, verifying truck certification, creating schedules for supervisors, and meeting with clients daily for updates on the progress of the debris management program.

## Quality Assurance (June 2011–July 2011)

**City of Tuscaloosa, Alabama | United States Army Corps of Engineers (USACE) Debris Removal Mission**

In 2011, Alabama was impacted by an unprecedented amount of tornadoes during the incident period of April 15, 2011 to May 31, 2011. The historic number of tornadoes and resulting damage resulted in FEMA tasking the USACE with debris removal for 61 local governments within Alabama. Mr. Ivey served on the USACE mission as a Quality Assurance Roving Monitor assigned to the City of Tuscaloosa. His responsibilities included providing quality assurance by inspecting debris loading activities, monitoring site safety, and verifying ineligible debris was not collected.

## Deputy Project Manager (September 2008–September 2011)

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

Mr. Ivey was instrumental in helping the firm to quickly establish debris removal protocols, assign and direct debris haulers to zones, and keep city residents informed of the progress of the debris effort. The debris removal

operation was a monumental effort involving approximately 1,000 personnel and the daily removal of 250,000 cubic yards of debris from the city.

### Project Manager (April 2011–June 2011)

**City of Raleigh, North Carolina | Tornado Disaster Program Management**

Following the tornadoes in 2011, Mr. Ivey trained City of Raleigh staff members on debris removal, leaners and hangers, and truck certification. Mr. Ivey also tracked the work completed for FEMA eligibility and updated the client daily on training progress.

### Project Manager (December 2007–May 2008, May 2010–July 2010)

**City of Norman, Oklahoma | Winter Storm Disaster Debris Program Management and Tornado Disaster Debris Program Management**

Following severe winter storms in December 2007, Mr. Ivey assisted with debris contractor procurement, overall program management, and overseeing the debris removal monitoring for the collection and disposal of approximately 750,000 cubic yards of debris. He was responsible for training nearly 120 monitors and supervisory personnel as well as holding daily safety and operational meetings with them. Mr. Ivey was able to add FEMA reimbursable projects for the city, which included the removal of hazardous trees, branches, and stumps from the right-of-way and the removal of hazardous trees, stumps, and debris from over 40 city parks.

Following the tornadoes in 2010, Mr. Ivey provided training on debris removal, leaners and hangers, and tower and truck certification. He also monitored hazardous waste removal and right-of-way debris removal from parks in the City of Norman.

### Project Manager (March 2010–May 2010)

**Comanche Nation, Oklahoma | Winter Storm Disaster Debris Program Management**

Mr. Ivey trained Comanche Nation tribal members on debris removal, leaners and hangers, and tower and truck certification. Mr. Ivey also reported daily to the chief of the tribe on the progress of the project.

### Project Manager (November 2009–December 2009)

**Arkansas Game and Fish Commission | Ice Storm Disaster Debris Program Management**

Mr. Ivey was responsible for the removal of hazardous leaners and hangers over two mountains (totaling 63 miles). Mr. Ivey mapped every tree over this 63-mile span and informed the Arkansas Game and Fish Commission about future replanting.

### Project Manager (June–October 2009)

**Towns of Spencer and Sterling, Massachusetts | Winter Storm Disaster Debris Program Management**

Following the snowstorms in 2009, Mr. Ivey monitored right-of-way debris removal and trained staff members on debris removal, leaners and hangers, and tower and truck certification.

### Project Manager (July–November 2008)

**Hidalgo County, Texas | Hurricane Dolly Debris and Grant Management Services**

Mr. Ivey oversaw all project-related activities for Hidalgo County and its 16 cities and maintained a high level of communication between the various county, city, and FEMA officials. Through those relationships and diligent oversight, Mr. Ivey was able to add the removal of hazardous trees, branches, and stumps from many of the Hidalgo County parks. Mr. Ivey was also able to help get most of the vegetative debris recycled rather than burned or taken to a local landfill.

### Data Manager and Collection and Disposal Supervisor (September 2005–September 2008)

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

Following Hurricane Ivan, Mr. Ivey oversaw disaster recovery efforts for the City of Pensacola, including the proper collection and disposal of over 1.3 million cubic yards of debris. He was responsible for the database

management of load tickets, approval of debris contractor invoices, and assisting the City of Pensacola with preparing project worksheets for FEMA reimbursement.

### Project Manager (June 2008–September 2008)

**City of Cedar Rapids, Iowa | Sinclair Property Flood Demolition Monitoring Management**
Following the flooding in 2008, Mr. Ivey was responsible for monitoring the daily operations of removing hazardous material from the Sinclair Plant.

### Collection and Disposal Operations Manager (September 2004–October 2007)

**Escambia County, Florida | Hurricane Ivan Comprehensive Disaster Program Management**
Mr. Ivey was responsible for truck certification, hanger/leaner identification, tracking and monitoring debris removal, data entry, contractor invoice reconciliation, and appeals support. He was also responsible for training field debris monitoring crews.

### Project Manager (February 2007–April 2007)

**Volusia County, Florida | Groundhog Day Tornado Disaster Recovery and Storm Debris Removal**
Mr. Ivey was responsible for overseeing the teams monitoring the collection and disposal of approximately 135,000 cubic yards of debris. Mr. Ivey also coordinated the data management process to ensure maximum reimbursement from FEMA.

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

**Genesee County, New York | Winter Storm Disaster Debris Program Management**
Mr. Ivey provided logistics support, truck certifications, training for collection and disposal monitoring crews, and data entry and management services. He worked closely with Genesee County to identify critical debris removal areas and mark hazardous trees and hanging limbs for removal.

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

**Town of North Tonawanda, New York | Winter Storm Disaster Debris Program Management**
Mr. Ivey was a member of the first response team and was deployed to the western portion of upstate New York following a devastating early season snowstorm that buried the Town of North Tonawanda under nearly two feet of snow. Mr. Ivey was responsible for 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 operations ran efficiently and effectively.

### Project Manager (March 2006–May 2006)

**Collier County, Florida | Hurricane Wilma Disaster Debris Program Management**
Mr. Ivey and other key members of the project team provided Collier County with daily progress reports, including maps showing beginning global positioning system (GPS) coordinates with pre-photos, daily progress, ending GPS coordinates, and post-event photos. The daily reports included documentation supporting daily debris removal quantities and documentation of the proper disposal of that debris. These reports were discussed at a weekly meeting with representatives from the Natural Resources Conservation Service (NRCS) and Collier County. Mr. Ivey also instructed team members on how to accurately measure work completed in order to ensure maximum reimbursement.

TETRA TECH

# Tim Quade
## Operations Manager

## EXPERIENCE SUMMARY

Mr. Quade serves as a field operations manager and is experienced with truck certification, disposal operations, FEMA reimbursement requirements, scheduling and dispatching of monitors, quality assurance/quality control (QA/QC) of monitors, and general field management. Mr. Quade is also one of our designated staff trainers and has provided training to several hundred monitors during recent debris monitoring activations.

Mr. Quade also has an in-depth understanding of the implementation and operation of our automated debris management system (ADMS) technology, and the execution of health and safety protocols. He is experienced with FEMA eligibility and documentation requirements and oversees field operations to make sure that all documentation captured is FEMA-compliant.

### YEARS OF EXPERIENCE

2.5 years

### AREA OF EXPERTISE

- Field Operations and Logistics
- Monitor Training
- QA/QC
- Scheduling and Dispatch
- Truck Certification

### DISASTERS

- 4297 GA Severe Storms and Tornadoes
- 4286 SC Hurricane Matthew
- 4240 CA Valley Fires

### TRAINING/CERTIFICATIONS

- IS-00632.a Introduction to Debris Operations

### EDUCATION

Wartburg College

Bachelors of Arts; Communications, Public Relations

## RELEVANT EXPERIENCE

### Operations Manager (September 2017-Present)

**Helena Fire - California Fire Response**

Mr. Quade serves as operations manager responsible for overseeing the monitoring of over 200 parcels of burned area in Northern California. Tetra Tech also conducted OSHA personal sampling and air monitoring and sampling during all operations to ensure protectiveness to public health during cleanup operations. Tetra Tech assessed each parcel for radiation, VOCs, lead, asbestos, and debris estimates.

### Operations Manager (October 2016 – 2017)

**Beaufort County, South Carolina | Hurricane Matthew**

Following Hurricane Matthew's devastation along the South Carolina Coast, Mr. Quade served as operations manager for Beaufort County. Mr. Quade was responsible for truck certification and oversaw disposal site operations for multiple debris management site (DMS) locations within the County. In total, our team monitored the removal of over 2 million cubic yards of debris.

### Operations Manager (January 2017)

**Dougherty County, Georgia | Severe Storms and Tornadoes**

Mr. Quade served as operations manager on Dougherty County's debris monitoring project following the severe storms and tornadoes that affected the area on January 2017. Within hours, our team was onsite to begin training staff for immediate deployment. Mr. Quade provided training to monitoring staff and was responsible for overseeing truck certifications, field, and disposal operations, establishing staffing schedules, and executing Tetra Tech's Health and Safety plans.

### Deputy Project Manager (September 2015 - Ongoing)

**Lake County, California | Wildfires**

The Valley Fire began on September 2015, resulting in dead and dying trees that have the potential to fall. Currently, Mr. Quade is working closely with Lake County officials to monitor and document the removal of the hazardous trees. This includes managing a private property debris removal (PPDR) program to monitor the removal of hazardous trees on private property that threaten County roads.

TETRA TECH

# Owen Chaoran Chen
## Data Manager

## EXPERIENCE SUMMARY

Mr. Chen is an experienced quality control and data manager for Tetra Tech, Inc. His areas of expertise include geographic information systems, documentation management, quality assurance/quality control (QA/QC), database management, and reporting. He also has an in-depth understanding of federal emergency management agency (FEMA) eligibility, documentation requirements, and our automated debris management system (ADMS).

## FEATURED RELEVANT EXPERIENCE

### Data Manager (October 2016–2017)

**Beaufort County, South Carolina | Hurricane Matthew Debris Removal Program**

Mr. Chen serves as data manager for Beaufort County, South Carolina as a result of Hurricane Matthew's devastating impact on the County. Mr. Chen supports the implementation of ADMS technology and provides technical support to the field team. He manages and provides dynamic real-time online mapping service with ArcGIS Online that is connected with the ADMS database. Mr. Chen supports QA/QC checks of right-of-way load collection and all hazardous tree and hanger removal. He manages the accuracy and organization for all project documents.

### Data Manager (January 2016–September 2016)

**Calaveras County, California | Catastrophic Fires**

The catastrophic fires that impacted Calaveras County left severe destruction and damage. Sukut Construction was one of the contractors selected by Calrecycle to remove fire related debris and hazards from private property in the fire impacted areas of Calaveras County. Tetra Tech was contracted by Sukut Construction to provide data management and administrative functions to support debris removal efforts. Tetra Tech digitized source documentation and developed a custom Access database to provide reporting on the status of properties and debris removal operations. Mr. Chen was deployed as data manager, where he oversaw the custom Access database used for the program.

### Data Manager (November 2015–January 2016)

**Lake County, California | Catastrophic Fires| Disaster Debris Program Management**

Following catastrophic fires that impacted Lake County in September 2015, many dead or dying trees that threatened to fall along the County right-of-way (ROW) were in need of mitigation. Tetra Tech was hired to complete a hazardous tree mitigation program, which included both ROW trees and private property. Mr. Chen was deployed as a data manager, where he supported documentation management, reporting, and tree surveying efforts.

### YEARS OF EXPERIENCE

4 Years

### AREA OF EXPERTISE

- QC GPS Data Collection/Disposal Monitoring
- Managing ROE Status Layers
- ROW/Parks Program Live Layers on ArcGIS Online Systems

### DISASTERS

- 4286 Hurricane Matthew
- 4240 Valley & Butte Fire
- 4166 SC Winter Storm
- 4145 CO Severe Storms and Flooding
  4086 Hurricane Sandy

### EDUCATION

University of Pennsylvania
State University
Bachelor of Science, Geography
Minor in GIS

### Data Manager (May 2015–August 2015)

**Hays County, Texas | Severe Flooding Disaster Debris Program Management**

Mr. Chen served as data manager for Hays County, Texas following the severe flooding that affected the County. Mr. Chen deployed ADMS technology and provided technical support. He provided FEMA compliance management, including QA/QC of ROW load collection and management of the documentation for hazardous tree and hanger removal. Mr. Chen provided dynamic real-time online mapping service through ESRI.

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

**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 supported the implementation of our ADMS technology through all phases of operations and was responsible for troubleshooting with our field team. Mr. Chen's responsibilities also included completing custom reports for Boulder County, providing FEMA compliance management including quality assurance (QA)/quality control (QC) of ROW load collection, and managing the accuracy and organization for all project documents. Through GIS mapping services, Mr. Chen provided requested maps of project progression, which required customization for the County. Finally, Mr. Chen also provided financial recovery support in assisting with complete of FEMA-PA Project Worksheets.

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

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

Mr. Chen served as the data manager for the County of Dorchester, South Carolina following Winter Storm Pax. He was responsible for deploying 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 ROW load collection, and managing the documentation for all hazardous tree and hanger removal resulting in the development of several resourceful maps for the County and project team members.

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

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

Mr. Chen was essential to the New Jersey Department of Environmental Protection (NJDEP) waterways debris removal program as a data manager. Mr. Chen implemented 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.

TETRA TECH

# Paris Atkinson
## Billing/Invoice Analyst

## EXPERIENCE SUMMARY

Ms. Paris Atkinson is a senior 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). She has extensive experience on all aspects of program data management up to and including project closeout and post-closeout audit support. Ms. Atkinson possesses knowledge and understanding of federal grant programs, including the Federal Highway Administration (FHWA) Emergency Relief (ER) Program and FEMA Public Assistance (PA) Program.

## FEATURED RELEVANT EXPERIENCE

### Billing/Invoice Analyst (May 2015 - 2016)

**City of Houston, Texas | Severe Storms and Flooding Disaster Debris Program Management**

Ms. Atkinson served as billing/invoice analyst for the City of Houston, Texas following severe storms and flooding that resulted in 300,000 cubic yards of disaster debris in the City. Ms. Atkinson worked alongside the data manager of the FEMA funded destruction relief program for the City, and also assisted with the daily input of collection logs and data documentation.

### Senior Data Manager (January 2016–February 2016)

**Collier County, Florida | Severe Storm and Straight Line Wind Debris Program Management**

Collier County, FL was impacted in January by a severe storm with measured winds as high as 83 mph. The storm caused significant arboreal damage to the County, so much so that the County chose to activate their disaster debris removal contractors and Tetra Tech. Ms. Atkinson provided program management and debris monitoring services to the County, which included ADMS technology implementation, quality assurance (QA)/quality control (QC) of data, multiple reporting functions, management of debris pile reported data and citizen concerns, contractor reconciliation and invoicing, and final project closeout.

### Project Manager (December 2015–Ongoing)

**State of Connecticut | Financial Recovery Services, FEMA Public Assistance**

The State of Connecticut has retained Tetra Tech to perform a secondary review of FEMA PA and FHWA-ER related funding that was obligated as a result of Winter Storm Alfred (FEMA-DR-4046). Due to a recent decision on the FEMA eligibility of reduction, final hauling, and final disposal costs, each town/city that applied for and received FEMA PA funding as well as FHWA ER funding must be reviewed to determine if appropriate funding has been obligated. Ms. Atkinson is responsible for reviewing the FEMA PA and FHWA grant documentation; ensuring reduction, final hauling, and final disposal

### YEARS OF EXPERIENCE

11 Years

### AREA OF EXPERTISE

- FEMA Reimbursement and Audit Support
- Reimbursement Policies and Procedures
- RecoveryTrac™ ADMS
- Data Management
- Debris Monitoring Compliance
- Vessel Removal
- Leaner and Hanger Removal
- Invoice Reconciliation

### GRANT EXPERIENCE

- FEMA PA
- FHWA ER

### DISASTERS

- Collier County FL Severe Storms
- 4240 CA Valley Fire
- 4225 TX Flooding
- 4223 TX Flooding
- 4166 SC Winter Storm
- 4165 GA Winter Storm
- 4145 CO Flooding
- 4087 Hurricane Sandy
- 4080 Hurricane Isaac
- 4046 CT Winter Storm
- 4029 TX Wildfires
- 3268 NY Snowstorm
- 1609 Hurricane Wilma

### EDUCATION

University of Florida
Bachelor of Science, Psychology, 2005

costs have been reimbursed; and identifying any additional charges not captured by FEMA.

### Senior Data Manager (October 2015–2017)

**Lake County, California | Valley Fire Disaster Debris Program Management**

Lake County, California was one of the counties severely impacted by the Valley Fire, which burned over 76,000 acres across Lake, Napa, and Sonoma Counties prior to being fully contained. Tetra Tech was retained by the County to provide program management and debris monitoring services. In addition to a right-of-way debris and hazardous tree removal program, the County also initiated a selective private property debris removal (PPDR) program. One of the unique aspects of the County is the enormous trees along the right-of-ways. Thousands of fire hazard trees were identified throughout the County that, though located on private property, could post a threat to County maintained roads. As a result, the County initiated a selected PPDR program to address standing dead trees on private property that could impact County roads. Ms. Atkinson served as a senior data manager and was responsible for FEMA compliance management, including QA/QC of data and managing the documentation.

### Senior Data Manager (May 2015–2017)

**Hays County; Caldwell County; City of Houston, Texas | Severe Storms, Tornadoes, Straight-Line Winds, and Flooding Program Management**

The jurisdictions of Hays County, Caldwell County, and the City of Houston were among the many Texas communities impacted by the torrential rainfall in May of 2015. Tetra Tech was activated by the aforementioned communities to provide program management and disaster debris monitoring services. Ms. Atkinson served as the senior data manager for the Texas projects. She supported the projects by 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 provided ADMS and database support for all staff members. Hays County has an ongoing PPDR program for which Ms. Atkinson continues to provide data management support.

### Debris Subject Matter Expert (March 2014– September 2014)

**Montgomery County, Pennsylvania | Multi-Jurisdictional DDMP**

Ms. Atkinson served as a debris subject matter expert and supported Montgomery County in establishing and implementing a multi-jurisdictional debris management planning program. Ms. Atkinson and the project team developed a debris management strategy based on the assessment of the County's existing resources, landfill and disposal capacity, and debris management site options. Ms. Atkinson also assisted in the development of multiple debris forecast models to estimate the resulting debris volumes following a disaster as well as the County's capacity to address debris using internal equipment and resources.

### 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.

### 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.

TETRA TECH

# Christopher Burns
## Environmental Specialist

## EXPERIENCE SUMMARY

Mr. Burns has over 15 years of experience in the environmental field. While working for the Pennsylvania Department of Environmental Protection (PADEP), Mr. Burns served on the Palmerton Zinc Superfund Site Trustee Group (Natural Resource Damage Assessment Case) and the Aquatic Sub-committee Group. Mr. Burns was responsible for acting as the designated trustee from the PA DEP. While serving in this role, Mr. Burns was responsible for assisting with numerous assessments and document review. Mr. Burns assisted with the creation of the Pennsylvania Indx of Biological Integrity to be used throughout the state of Pa. While with Tetra Tech, assisted with the Enbridge Line 6b release NRDA work. During this role, Mr. Burns assisted with the creation of numerous assessments, reviewed data from these assessments, participated in NRDA meetings, and developed the SCAT reconciliation process for the Enbridge release. Mr. Burns has also overseen and participated in numerous tank removals and cleanups.

Mr. Burns has responded to over 400 oil spills, conducting responses to oil spills, complaints, fish kills, and a multitude of site assessments. His experience includes responses to small releases from above ground home heating oil tanks to larger releases from underground storage tanks and pipelines that have affected surface water, groundwater, and soil. Mr. Burns' responsibilities during these activities have included management of personnel and equipment as well as support during a wide variety of emergency responses such as the Kalamazoo Enbridge Line 6B Pipeline Release, Allied Terminal Ammonium Nitrate Release, Buckeye Pipeline Release, Ivy Industrial Park Case, Church Road TCE Case, and Ashland Uni -Mart Vapor release.

Mr. Burns is currently the Emergency Response Coordinator and Deputy Program Manager for the US EPA Region 5 START Contract. He is trained in the operation and maintenance of field equipment for use in emergency response operations. Specific equipment used includes radiation detection meters, multi-media sampling equipment, and air monitoring equipment such as FIDs, PIDs, Drager colorimetric tubes and pumps, HAPSITE Portable GCMS and Headspace Sampler, and Suma Canisters. Mr. Burns is also experienced in the collection of asbestos samples and is verse in the 2009 asbestos framework for collection asbestos samples, he currently manages 5 asbestos sites for Tetra Tech.

## RELEVANT EXPERIENCE

### Northern California (NONRCAL) Wildfire Response (November 2017-Present)

Environmental lead responsible for environmental portion of work associated with the cleanup of over 3000 homes. Responsible for hazard assessments on each parcel, background soil sampling and confirmation soil sampling, air

### YEARS OF EXPERIENCE

15 years

### AREA OF EXPERTISE

- Fire Assessment
- Emergency Response
- Asbestos
- Technical Report Preparation and Review
- Project Management
- Scientific Research
- Fisheries/Ichthyology

### TRAINING/CERTIFICATIONS

- ICS Level 100, 200, 300, 400, 301 and NIMS 700 and 800
- 40-Hour OSHA 29 CFR 1910.120 HAZWOPER
- OSHA 8-Hour Refresher Training
- EPA Chemistry for Environmental Professionals
- EPA Air Monitoring for Hazardous Materials 165.4, 2007 and 2005 EPA RCRA Compliance and Enforcement Workshop
- EPA Sampling for Hazardous Materials 165.9
- EPA Introduction to Groundwater Investigations 165.7

### EDUCATION

Penn State University, Bachelor of Science in Fisheries and Wildlife Science

sampling and monitoring, and OSHA personal air sampling. Mr. Burns is also responsible for overall coordination, staffing, and logistics for this four county response, overseeing over 75 staff in the field collecting data.

### Detwiler Fire (August 2017-Present) and Helena Fire (September 2017-Present) California Fire Response

Environmental Lead responsible for designing approach, coordinating staff, directing health and safety operations, and responsible for overall completion of environmental portion of the project. During these responses Tetra Tech was responsible for assessing (hazard assessment) over 200 parcels of burned area in Northern California. Tetra Tech also conducted OSHA personal sampling and air monitoring and sampling during all operations to ensure protectiveness to public health during cleanup operations. Tetra Tech assessed each parcel for radiation, VOCs, lead, asbestos, and debris estimates.

### Clayton Valley Fire California Fire Response (October 2016-January 2017)

Environmental Lead responsible for designing approach, coordinating staff, directing health and safety operations, and responsible for overall completion of environmental portion of the project. During this response Tetra Tech was responsible for assessing (hazard assessment) over 200 parcels of burned area in Northern California. Tetra Tech also conducted OSHA personal sampling and air monitoring and sampling during all operations to ensure protectiveness to public health during cleanup operations. Tetra Tech assessed each parcel for radiation, VOCs, lead, asbestos, and debris estimates. All documentation was collected with collector and I-form technology and uploaded to a central data base to generate deliverable as work was completed daily.

### Lake Isabella California Fire Response (August 2016-November 2016)

Environmental Lead responsible for designing approach, coordinating staff, directing health and safety operations, and responsible for overall completion of environmental portion of the project. During this response Tetra Tech was responsible for assessing (hazard assessment) over 300 parcels of burned area in Southern California. Tetra Tech assessed each parcel for radiation, VOCs, lead, asbestos, and debris estimates. All documentation was collected with collector and I-form technology and uploaded to a central data base to generate deliverable as work was completed daily.

### Harbin California Fire Response (October 2015)

Environmental Lead responsible for designing approach, coordinating staff, directing health and safety operations, and responsible for overall completion of environmental portion of the project. During this response Tetra Tech was responsible for assessing over 250 parcels of burned area in Northern California. Tetra Tech assessed each parcel for radiation, VOCs, lead, asbestos, and debris estimates. All documentation was collected with collector and I-form technology and uploaded to a central data base to generate deliverable as work was completed daily.

### NPL-4 Radiation Site (Ottawa IL) (November 2014-present)

Field Team Lead responsible for overall work completed on site. Task included subcontractor oversight, project staff supervision, and overall completeness of a 35,000 tons of contaminated soil. Soil was contaminated with Radium-226 from fill operations. Task included segregation and excavation of contaminated material above the remedial action goal that was site specific. Mr. Burns was responsible for initial assessment of the site where trenched were employed to delineate the extent of contamination. Remediation of the site consisted of removal of impacted soil, segregation, water treatment, air sampling and monitoring, soil sampling and monitoring, and restoration operations.

### Flood Response June 2006

Assisted in the response to a major flood that occurred over the northeast region of Pennsylvania. Assisted in basement release investigations, oversaw the removal of contaminated flood water from basements and underground tanks, home heating oil tank removals, and inspected over 40 underground and aboveground storage tank facilities for possible release / compliance issues due to flood conditions.

TETRA TECH

# Bryan Lowe
## Public Assistance Supervising Consultant

## EXPERIENCE SUMMARY

Mr. Brian Lowe is a seasoned emergency management specialist, with over 18 years of field experience. Mr. Lowe has a long history of working with the Florida Department of Emergency Management over his career. He has been involved in every major Florida event since 2004, including Hurricanes Matthew, Charley, Frances, Ivan, Jeanne, Dennis, Katrina, Wilma, Debby. Additionally, Mr. Lowe has also provided emergency management and financial recovery in the State of Florida for the Bugaboo Fires, Super Bowl, Tropical Storm Fay, Operation Haiti Repatriation, and the Deepwater Horizon oil spill disaster.

## FEATURED EXPERIENCE

### State Public Assistance Officer (December 2014 – July 2017)

**Executive Office of the Governor/Division of Emergency Management | Tallahassee, Florida**

As Operations Management Consultant Manager, Mr. Lowe is in charge of coordinating all components of administering the Public Assistance Program for the State of Florida. As the State Public Assistance Officer he has managed federal disaster declarations in the hundreds of millions of dollars. Most recently for Hurricane Matthew, which cost over $680 million in federal and state dollars. The position is responsible for managing two management positions and 21 subordinates. Additional duties include conducting initial assessments of damage, executing funding agreements, developing projects to provide funding, making payments, submitting quarterly reports and closing out the grants once complete. As SPAO he has managed all operations associated with the 2014 Spring Floods, Hurricane Hermine and Hurricane Matthew.

### Senior Management Analyst II (December 2012 – November 2014)

**Executive Office of the Governor/Division of Emergency Management | Tallahassee, Florida**

Mr. Lowe managed the Office of Private Sector Coordination with the primary focus of integrating the Private Sector into all phases of Emergency Management. In this role, he had federal and state funded projects total annual budget of $247,000 per fiscal year. As the Private Sector Coordinator he designed and hosted a Public-Private Sector Summit. The Summit was filled with breakout sessions and focus groups designed to educate the public and private sector on existing programs and partners as well as to provide a forum to receive feedback. Mr. Lowe created several working groups to bring in the right partners in to determine the way forward on a number of important issues to include private sector re-entry and one to address issues and concerns that affect the private sector. Mr. Lowe finalized the Standard Operation Guide for Emergency Support Function 18 and provided training to

## YEARS OF EXPERIENCE

18 years

## TRAINING/EXPERTISE

- Project Worksheet Development
- Multi-Hazard Planning for Schools
- Leadership in Emergency Management
- ICS – 100,200,300,400,700, and 800
- Integrated Public Alert and Warning System IS-00027.a
- Operations Section Chief L958
- Logistics Section Chief L-967 (2012)
- Public-Private Partnerships IS-660
- TIME - Transportation Interface for Modeling Evacuation
- CERT T-T-T
- COML – Communications Unit Leader
- Rapid Impact Assessment G-250.7
- Search and Rescue Training
- All Hazard Integrated Emergency Mgt Course
- Radiological Emergency Planning
- Distinguished Service Award
- EMAP Assessor
- Debris Management G-202
- All Hazard Incident Management Team Training
- FPEM – Florida Professional Emergency Manager
- Hurricane Evacuation Shelter Evaluation
- ICS/Emergency Operations G-191
- Human Services Training G-670
- NEMIS - IS Public Assistance Coordinator
- Public Assistance OPS 1 & 2

## EDUCATION

University of West Florida
Pensacola, FL 32514

Bachelor Science in Environmental Policy and Planning, Minor in Geography (1999)

the ESF 18 team members. Mr. Lowe is on the Division's Security Committee and helped develop our standard operating guide for safety and security. The Virtual Business EOC was completion though the first phase. This project will provide a portal for the state, county, and private sector to collaborate and share information in a secure environment during disasters and day to day. These are just a few of the projects Mr. Lowe had worked on in order to partner with the private sector.

### Assistant Supervisor/Governmental Operations Consultant, Region 2 Coordinator (March 2003 – December 2012)

**Executive Office of the Governor/Division of Emergency Management | Tallahassee, Florida**

Mr. Lowe served as the Assistant Supervisor for the Regional Coordination Team. In this capacity he provided support for all aspects of the team and coordinated all team issues in the absence of our supervisor. As a Regional Coordinator Mr. Lowe was expected to provide guidance to county and city emergency management directors in order to ensure compliance with contracts awarded by the Florida Division of Emergency Management. Regular duties included conducting capability assessments of county emergency management programs and their ability to carry out essential tasks prior to, during, and following an emergency or disaster; to provide technical assistance and training through regular scheduled regional meetings and events; to perform emergency operations duties as directed including state liaison functions in county emergency operation centers; to conduct onsite damage assessments, human needs assessments and provide pre and post emergency coordination of resources; to coordinate recovery planning and operations; to participate in reviews of county's comprehensive emergency management plans (CEMP) and continuity of operation plans (COOP); to participate in Regional Domestic Security Task Force activities as related to Domestic Security. Mr. Lowe coordinated and participated in onsite inspections for section 302 and 312 Tier III facilities and attended SERC meetings for Region 2. He developed, evaluated and participated in numerous exercises and trainings dealing with all hazards. Mr. Lowe conducted regional and county exercises according to the Homeland Security Exercise Evaluation Program, and provided training to respective counties in the Incident Command System, EOC/ICS interface, Damage Assessment, Citizen Emergency Response Team, and Rapid Impact Assessment courses. Mr. Lowe has been involved in every major event since 2004, to include Charley, Frances, Ivan, Jeanne, Dennis, Katrina, Wilma, Debby, Bugaboo Fires, Super Bowl, Tropical Storm Fay, Operation Haiti Repatriation, and Deepwater Horizon.

### Engineer II in Public Assistance (November 1999 to March 2003)

**Department of Community Affairs/Division of Emergency Management | Tallahassee, Florida**

In this role, Mr. Lowe's routine duties consisted of writing Project Worksheets, interim inspections, final inspections, time extensions, technical assistance, monitoring of applicants, and coordination of damage assessment during disasters. After 2 years Mr. Lowe was designated the Deputy Public Assistance Officer for the state during all events. He was responsible for damage assessment team coordination, and management in a number of Presidential declared events such as Irene, Helene, South Florida Floods, Allison, Gabrielle, Wildfires, and numerous other non-declared events.

TETRA TECH

# Rachel C. Reams, MBA
## Public Assistance Coordinator

## EXPERIENCE SUMMARY

Ms. Rachel Reams assists clients with damage assessment, force account reconciliation, and project worksheet (PW) development throughout the post-disaster grant administrative period. Ms. Reams is familiar with data collection and dissemination, labor, equipment, and invoice reconciliation, contract compliance review, application development, project monitoring, and HMGP close out requirements.

## RELEVANT EXPERIENCE

### Senior Financial Specialist (October 2017-Present)
**City of South Daytona, FL | Hurricane Irma**
Following the category 3 Hurricane Irma that made landfall and affected the Florida coastline in September, 2017, the City of South Daytona, FL activated Tetra Tech to provide post-disaster PA services after the declaration. Ms. Reams is providing PA services to support the City's claims for force account labor, materials, equipment, and permanent repairs consumed as a result of the disaster.

### Senior Financial Specialist (October 2017-Present)
**City of Holly Hill, FL | Hurricane Irma**
Following the category 3 Hurricane Irma that made landfall and affected the Florida coastline in September, 2017, the City of Holly Hill, FL activated Tetra Tech to provide post-disaster PA services after the declaration. Ms. Reams is providing PA services to support the City's claims for force account labor, materials, equipment, and permanent repairs consumed as a result of the disaster.

### Senior Financial Specialist (October 2017-Present)
**City of Miami, FL | Hurricane Irma**
Following the category 3 Hurricane Irma that made landfall and affected the Florida coastline in September, 2017, the City of Miami, FL activated Tetra Tech to provide post-disaster PA services after the declaration. Ms. Reams is providing PA services to support the City's debris removal claims for force account labor, materials, and equipment.

### Senior Financial Specialist (October 2017-Present)
**Orange City, FL | Hurricane Irma**
Following the category 3 Hurricane Irma that made landfall and affected the Florida coastline in September, 2017, Orange City, FL activated Tetra Tech to provide post-disaster PA services after the declaration. Ms. Reams is providing PA services to support the City's claims for force account labor, materials, equipment, and permanent repairs consumed as a result of the disaster.

### Technical Advisor (August 2017- Present)
**State of Connecticut | HMGP Close Out**
Ms. Reams is assisting the State of Connecticut with closing out multiple

### YEARS OF EXPERIENCE
1.5 years

### AREA OF EXPERTISE
- Force Account
- Invoice Reconciliation
- Permanent Repairs
- HMGP Close Out

### GRANT EXPERIENCE
- FEMA PA
- HMGP

### DISASTERS
- 4283
- 4337

### TRAINING/CERTIFICATIONS
- IS-00100.b
- IS-00120.a
- IS-00212.b
- IS-00230.d
- IS-00235.c
- IS-00240.b
- IS-00241.b
- IS-00242.b
- IS-00393.b
- IS-00403
- IS-00632.a
- IS-00634
- IS-01002
- IS-01103.a

### EDUCATION
**Rollins College, Crummer Graduate School of Business,** Master of Business Administration, Concentration in Marketing and Business Management, 2016

**Rollins College,** Bachelor of Arts with Honors, History, 2014

HMGP projects awarded over four (4) separate disasters. These close outs vary from generators to residential home elevations out of the BFE.

### Financial Specialist (November 2016-Dec. 2017)

**Volusia County, FL | Hurricane Matthew**

Following the category 3 and 4 Hurricane Matthew that made landfall and affected the Florida coastline in October, 2016, Volusia County, FL activated Tetra Tech to provide post-disaster PA services after the declaration. Ms. Reams is providing PA services to support the County's claims for force account labor, materials, and equipment consumed as a result of the disaster.

### Financial Specialist (January 2017-Aug. 2017)

**Beaufort County, SC | Hurricane Matthew**

Ms. Reams is assisting with PA services to support the County's claims for force account labor, materials, and equipment consumed as a result of the disaster.

### Financial Specialist (January 2017-Feb. 2017)

**Ascension County, LA | Flood**

Ms. Reams is assisting with PA services to support the County's claims for force account labor, materials, and equipment consumed as a result of the disaster.

### Financial Specialist (February 2017- July 2017)

**City of South Daytona, FL | Hurricane Matthew**

Following the category 3 and 4 Hurricane Matthew that made landfall and affected the Florida coastline in October, 2016, the City of South Daytona, FL activated Tetra Tech to provide post-disaster PA services after the declaration. Ms. Reams is providing PA services to support the City's claims for force account labor, materials, equipment, and permanent repairs consumed as a result of the disaster.

### Financial Specialist (March 2017- May 2017)

**Fayetteville, NC | HMGP**

Ms. Reams assisted with homeowner communications for the HMGP grant application process.

TETRA TECH

# John D. Williams, MBA
## Public Assistance Coordinator

## EXPERIENCE SUMMARY

Mr. John D. Williams assists clients throughout the post-disaster grant administration process. He supports damage assessment, force account reconciliation, and project worksheet (PW) development, throughout the grant administrative period. Mr. Williams is familiar with data collection and dissemination, invoice and reconciliation, cost accounting, application development, supporting requests for information (RFI), and project monitoring. Mr. Williams' strong background in finance, management, and operations makes him particularly adept at tracking the recovery process.

## RELEVANT EXPERIENCE

### Financial Recovery Specialist (December 2017 - Present)
**City of Pinellas Park, Florida | FEMA – Public Assistance Consulting**
Following Hurricane Irma in September 2017, the City of Pinellas Park activated Tetra Tech to provide post-disaster PA services following the declaration. Mr. Williams is providing PA services to support the City's claims for force account labor, materials, and equipment consumed as a result of the disaster.

### Financial Recovery Specialist (November 2017 - Present)
**City of Dunedin, Florida | FEMA – Public Assistance Consulting**
Following Hurricane Irma in September 2017, the City of Dunedin activated Tetra Tech to provide post-disaster PA services following the declaration. Mr. Williams is providing PA services to support the City's claims for force account labor, materials, and equipment consumed as a result of the disaster.

### Financial Recovery Specialist (November 2017 - Present)
**City of Port Orange, Florida | FEMA – Public Assistance Consulting**
Following Hurricane Irma in September 2017, the City of Port Orange activated Tetra Tech to provide post-disaster PA services following the declaration. Mr. Williams is providing PA services to support the City's claims for force account labor, materials, and equipment consumed as a result of the disaster.

### Financial Recovery Specialist (September 2017 - November 2017)
**City of Miami, Florida | FEMA – Public Assistance Consulting**
Following Hurricane Irma in September 2017, the City of Miami activated Tetra Tech to provide post-disaster PA services following the declaration. Mr. Williams provided PA services to support the City's claims for force account labor, materials, and equipment consumed as a result of the disaster.

### Financial Recovery Specialist (July 2016–November 2017)
**City of Houston, Texas | FEMA – Public Assistance Consulting**
Following severe storms and flooding in April and May 2016, the City of Houston activated Tetra Tech to provide post-disaster PA services following the declaration. Mr. Williams is providing PA services to support the City's

### YEARS OF EXPERIENCE

2.5 years

### EDUCATION

Rollins College, Crummer Graduate School of Business
Master of Business Administration, Concentrations in Management and Operations, 2016

University of Central Florida
Bachelor of Arts, Political Science, 2012

### AREA OF EXPERTISE

- Force Account
- Invoice Reconciliation
- Cost Accounting

### GRANT EXPERIENCE

- FEMA PA

### DISASTERS

- DR-4269, TX
- DR-4272, TX

### TRAINING/CERTIFICATIONS

- FEMA IS 634
- FEMA IS 100.b
- FEMA IS 200.b
- FEMA IS 700.a
- FEMA IS 800.b
- FEMA ICS 300
- FEMA ICS 400

### EDUCATION

2.5 years

claims for force account debris and emergency protective measures during the incident period.

### Financial Recovery Specialist (July 2016–Present)

**Austin County, Texas | FEMA – Public Assistance Consulting**

Following severe storms and flooding in April and May 2016, the Austin County activated Tetra Tech to provide post-disaster PA services following the declaration. Mr. Williams is providing PA services to support the County's claims for force account labor, materials, and equipment consumed as a result of the disaster.

### Financial Recovery Specialist (July 2016–Present)

**Montgomery County, Texas | FEMA – Substantial Damage Estimation**

Following severe storms and flooding in April and May 2016, Montgomery County activated Tetra Tech to provide post-disaster Substantial Damage Assessment staff augmentation services following the declaration. Mr. Williams deployed to the County to provide coordination of the substantial damage assessment field efforts.

### Financial Recovery Specialist (July 2016–Present)

**Waller County, Texas | FEMA – Public Assistance Consulting**

Following severe storms and flooding in April and May 2016, the Waller County activated Tetra Tech to provide post-disaster PA services following the declaration. Mr. Williams is providing PA services to support the County's claims for force account labor, materials, and equipment consumed as a result of the disaster.

TETRA TECH

# Kerri O'Dell
## Emergency Management Consultant

## EXPERIENCE SUMMARY

Ms. O'Dell serves as high-level project manager for Tetra Tech and possesses over a decade 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 active shooter assessment; emergency operations planning; continuity of operations planning (COOP); 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. **Most recently, she assisted several South Florida communities with debris monitoring operations following Hurricane Irma.**

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 of the firm's debris monitoring and emergency management planning projects. She has also been responsible for the development of numerous disaster debris management plans (DMPs) that have been approved for the Federal Emergency Management Agency (FEMA) Public Assistance (PA) Pilot Program.

## FEATURED PROJECT MANAGEMENT EXPERIENCE

### Active Shooter Assessments

Ms. O'Dell manages the Federal Aviation Administration (FAA) active shooter project to develop an enterprise-wide gap assessment of its current efforts related to preparedness, response and recovery efforts in an active shooter incident. The assessment of the FAA's nation preparedness efforts and capabilities related to an active shooter incidents include identification of gaps in program areas of capability, planning, continuity of operations, and training and exercises. Ms. O'Dell is working with the team to provide overarching recommendations that will be used in the implementation plan that ensures a robust national practice model to standardize efforts among the different regions. The recommendations will provide scalable guidance to minimize the likelihood and consequences of these events as well as integrate external stakeholders that have responsibility, authority and/or capabilities that support the prevention of, response to and recover from active shooter incidents.

### Security and Emergency Preparedness Program Sustainment

**Metropolitan Atlanta Rapid Transit Authority (MARTA)**

Ms. O'Dell serves as the project manager for the MARTA security and emergency preparedness program sustainment project. Ms. O'Dell directs

## YEARS OF EXPERIENCE

13 Years

## AREA OF EXPERTISE

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

## TRAINING

- IS-00700: NIMS and Introduction
- IS-00546: Continuity of Operations Awareness Course
- HSEEP
- 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

activities for all tasks under the contract including tabletop, functional and full-scale exercises; the development of continuity of operations, emergency operations and security and emergency preparedness plan; station action plans: treat and vulnerability assessments; and more. Ms. O'Dell oversees the development of exercises that consisted in more than 200 attendees including MARTA personnel and regional stakeholders that support MARTA. Ms. O'Dell works with the exercise and planning team to ensure quality products in the allotted timeframe.

## Emergency Operations Plan Assessment

**San Joaquin County, California**

Ms. O'Dell is currently serving as the project manager for the San Joaquin County Emergency Operations Plan (EOP) Assessment. Ms. O'Dell will oversee the conduct of a comprehensive assessment of the County's current EOP with particular focus on compliance with federal, state, and local laws. This assessment will provide a detailed analysis of the plan's scope, assumptions, policies, procedures, and operational concepts to include identified strengths and areas for potential improvement. Ms. O'Dell will work collaboratively with and garner input from San Joaquin County's Environmental Health, General Services, Human Services Agency, Sheriff's Department, County Administrator, Purchasing, and Health Care Services departments.

## Disaster Debris Trainings and Exercises

**Chester County, Pennsylvania**

Ms. O'Dell currently serves as the project manager for Chester County, PA disaster debris training and exercise project. Ms. O'Dell oversaw the training of key staff on disaster debris management as well as the fundamentals of their debris management plan. Ms. O'Dell oversaw the design and implementation of a customized exercise series which consisted of the County and municipalities within the County. In addition, she oversaw the development of a RFP that the County can utilize when procuring disaster debris contractors.

## Emergency Management Planning, Exercises and Senior Leadership Seminars

**Metro Atlanta UASI, Georgia**

Ms. O'Dell was the project manager on the development of the Tactical Operations Annex to the Regional Evacuation Coordination Plan. The annex focused on developing evacuation procedures for the Metro Atlanta Region. The annex includes emergency evacuation operations, communications interoperability, traffic management, and special needs components for the Metro Atlanta UASI. Ms. O'Dell ensured that all timelines were met and this project also included training and outreach seminars for each jurisdiction before the functional exercise. Ms. O'Dell served as a senior controller for the evacuation functional exercise to validate strengths and identify areas for improvement. Ms. O'Dell also co-facilitated a senior leadership seminar for the region's senior elected officials and their staffs.

## Recovery Planning Services

**Brunswick County, North Carolina**

Ms. O'Dell served as the project manager for the Brunswick County recovery plan project, where she was responsible for the day-to-day activates of the project. She recently co-facilitated 16 recovery function working group sessions. During the sessions, baseline information was gathered and will be used in developing the plan. Ms. O'Dell was responsible for the ability to complete the project in six months and submit all deliverable on time.

## Hazard Mitigation Planning

**Gwinnett County, Georgia**

Ms. O'Dell served as the client manager for the development of Gwinnett County's multi-jurisdictional hazard mitigation plan. Ms. O'Dell assisted with the data collection, analysis and plan development activities necessary to fulfill the local planning requirements. Included in the planning process is the hazard identification and risk assessment. Ms. O'Dell will assist in the assessment that will address hazards, whether natural or man-made, often not included in the hazard mitigation planning process (e.g., disease or terrorism) to develop an enhanced plan in accordance with FEMA standards.

TETRA TECH

# Christina Parkins
## Emergency Management Consultant

## EXPERIENCE SUMMARY

Ms. Christina Parkins is an emergency management consultant with extensive homeland security, emergency management, emergency planning, and special event response, and grant management experience. Ms. Parkins has developed operational and response plans for daily operations and large-scale incidents, specifically incident action plans, continuity of operations (COOP)/continuity of government plans, and family assistance center plans. In addition to her planning experience, she has developed tabletop, functional, and full-scale exercises for first responder agencies, including exercises focused on special operations teams (special weapons and tactics, hazardous materials, urban search and rescue, and explosive ordinance disposal teams). Ms. Parkins also has experience with grant management of Department of Homeland Security, Department of Justice, and Federal Transit Administration grants and various state agency grants.

### YEARS OF EXPERIENCE

12 Years

### AREA OF EXPERTISE

- Training and Exercises
- Preparedness Planning
- Response Planning
- COOP & COG Planning
- EOC Operations
- Transit Operations
- Grant Management

### GRANT EXPERIENCE

- Urban Areas Security Initiative
- Transit Security Grant Program
- Federal Full Funding Grant Agreement
- State Full Funding Grant Agreement
- Assistance to Firefighters Grant

### TRAINING/CERTIFICATIONS

- FEMA Professional Continuity Practitioner
- Planning Section Chief
- Incident Command System (ICS) 100, 200, 300, 400, 700, 800
- Federal Emergency Management Agency (FEMA) Exercise Design

### EDUCATION

University of Kentucky
Master of Arts, National Security, 2004

Gardner-Webb University
Bachelor of Science, International Business, 2003

## FEATURED RELEVANT EXPERIENCE

### Project Manager (November 2015–Present)

**Amtrak | Continuity and Facility Emergency Planning**

Ms. Parkins serves as the project manager overseeing Amtrak's Continuity and Facility Emergency Planning project. In year one, she developed Facility Emergency Plans and COOP plans for Tier I Amtrak facilities across the US. During the second year of the project, she will participate in the development and oversight of Facility Emergency Plans and COOP Plans for six Tier I and 27 Tier II facilities. Future years of the project will focus on developing continuity plans for 47 additional Tier II facilities, updating plans for Tier I facilities, and integrating a training and exercise component.

### Exercise Lead (August 2014–Present)

**Preparedness Planning, Training, and Exercises | Metropolitan Atlanta Rapid Transit Authority (MARTA)**

Ms. Parkins serves as the exercise lead and provides planning support for this project. She has participated in tabletop, functional, and full-scale exercises and served as the task lead for the 2015 training and exercise planning workshop and the 2015 terrorism-focused tabletop and functional exercises, and served as the lead planner for the 2016 tabletop exercise. She developed MARTA's the Multi-Year Training and Exercise Plan for 2015–2017. She has also supported other planning initiatives for the client, including their organizational restructuring plan for the Emergency Preparedness Unit and workshops for the Executive Management Team.

### Project Manager (July 2015–October 2016)

**Transit Research Board Airport Cooperative Research Program | Report 171–Establishing a Coordinated Local Family Assistance Program for Airports**

Ms. Parkins provided project management and oversight for the project. She developed the monthly and quarterly reporting for the client and oversaw internal financial reporting for the project. She authored one of the chapters

included in the guidebook, while also serving as the lead developer for the training and exercise portions of the project. The guidebook will be published and available to the public the second quarter of 2017.

### Training Development (January 2016–March 2016)

**Harris County Transit | Police Department**

Ms. Parkins has developed training for the Harris County Transit Police Department that will be utilized to provide introduction to terrorism, responding to emergencies and introduction to the Incident Command System (ICS) response. The training is currently was finalized and rolled out for use in April 2016.

### Planner (September 2015–October 2015)

**Port of Stockton | Plans Review and Updated**

Ms. Parkins provided planning support for the project. She reviewed the Port's current security plans and helped to develop templates to integrate the plans into more succinct documents that could be used by Port Officials. She supported the development of training and exercises to support plan implementation.

### Planner (April 2015–August 2015)

**Sharing Economies | Houston Urban Areas Security Initiative**

Ms. Parkins provided planning support for the project. She conducted the initial research on over fifty sharing economy platforms available on the internet, conducted one on one interviews with a selected number of platforms and created short video demonstrations of the sites for the client. She presented this information during multiple meetings and supported the development of the project report during each phase of the project. Ms. Parkins presented on this project at the 2016 Texas Emergency Management Conference in April 2016 and at the 2016 Maryland Emergency Management Conference in June 2016.

### Planner (January 2015–April 2015)

**Emergency Operations Planning | Alameda County Social Services Agency**

Ms. Parkins provided planning support for this project. She has developed job action checklists to be used by departmental personnel when operating in the Department Operations Center. She also assisted with the development of an emergency operations plan that integrates multiple agency plans into one document.

### Planner (October 2014–March 2015)

**Multi-Year Sustainment Program | Metro Atlanta Urban Area Security Initiative, Georgia**

Ms. Parkins provided planning support for the project. She served as an evaluator for the 2014 full-scale terrorism exercise, and assisted with the update of the Metro Atlanta Urban Areas Security Initiative (UASI) Threat and Hazard Identification and Risk Assessment (THIRA) and Homeland Security strategy. She worked on the 2015 update of the regional Tactical Interoperable Communications Plan (TICP).

### Program Administrator (2005–2013)

**Charlotte Urban Areas Security Initiative (UASI) | Charlotte Fire Department**

Ms. Parkins served as the program administrator for the Charlotte, North Carolina UASI Region. She coordinated Homeland Security related planning, training, and exercise activities for the first responder agencies of the region while also managing grant budgets and Federal requirements. Ms. Parkins served on the Incident Management Team for local special events of attendance over 50,000 persons and missing person searches. She was also a member of the team that organized the 2007–2010 National UASI Conferences in Miami, Charlotte, and New Orleans, serving as an educational track lead, registration coordinator, and administration section chief. She also served on the team for the 2011 Metropolitan Fire Chiefs Conference.

# PROJECT UNDERSTANDING, PROPOSED APPROACH AND METHODOLOGY

## 1. PROJECT UNDERSTANDING

Having been impacted by Hurricane Irma just this past year, the City of Coral Gables (City) is no stranger to the damaging impact that a tropical storm or hurricane can have on its residents, tourism industry, business, and economy. Given its location near the east coast of Florida, the City must maintain a constant level of preparedness as the possibility of being impacted by a severe weather event is ever present. As such, it is the City's intent to retain the services of an experienced contractor to monitor debris removal activities following a debris-generating event to expedite recovery efforts and maximize available funding.

Tetra Tech has been honored to proudly serve as Miami-Dade's disaster debris monitoring firm for over a decade. Our experience with Miami-Dade County and the surrounding cities has given us the unique knowledge of disaster operations in the area and the City's primary areas of concerns. Our team has also gained unparalleled experience working on many of the largest Federal Emergency Management Agency (FEMA) Public Assistance (PA) eligible projects, including responses to Hurricanes Katrina, Wilma, Ike, Sandy, Harvey and Ike. Our team has assisted more local governments with debris monitoring efforts following catastrophic natural disasters than any other firm in the nation. ***Collectively, we have overseen and managed the recovery of over 103 million cubic yards (CYs) of debris on behalf of over 300 public sector clients, resulting in excess of $6 billion in reimbursable costs to our clients.***

In addition, our understanding of the Florida Department of Transportation, FEMA, Federal Highway Administration (FHWA), U.S. Department of Housing and Urban Development (HUD), Natural Resources Conservation Service (NRCS), and other reimbursement agencies' requirements for eligibility, documentation, and reimbursement will help the City to receive the maximum reimbursement allowed following a disaster event.

Tetra Tech has carefully reviewed the scope of work requested in the request for proposal (RFP) and can assure the City that we have the extensive experience, understanding, and knowledge of the City to successfully perform all aspects of the scope of work. We are aware of the magnitude and importance of organizing and directing the necessary resources to define and carry out the tasks associated with the scope of work, and we are committed to continuing to provide a consistent and coordinated team to perform these services upon activation. Our project team will dedicate themselves to the City's needs throughout the year, not just during times of activation.

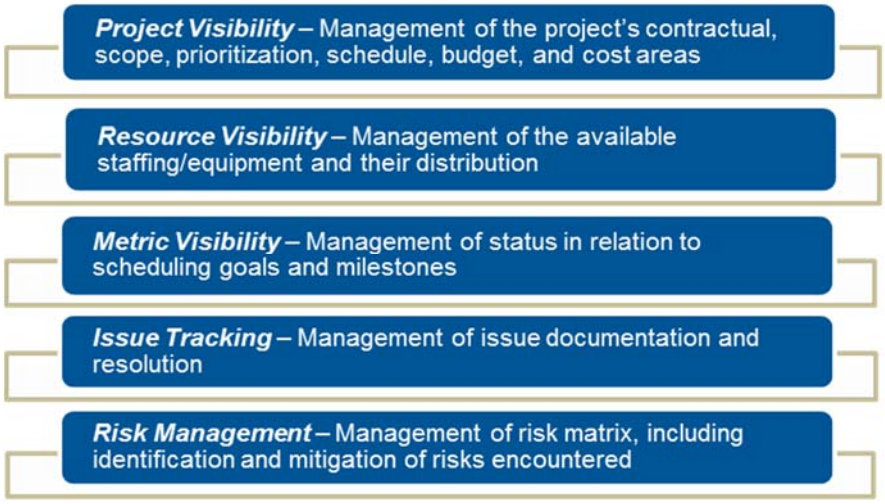
The project approach and work plan provided below will provide the City with a clear description of our approach to the City's proposed project.

### Project Management Methodology

Our methodology of project management governs both the planning and execution of all project work. The strategy, structure, and staffing requirements for the project organization are based on client expectations and the desired outcome. Tetra Tech's project management methodology enables our team to achieve success despite

the unpredictable nature of disasters. Our methodology addresses the project management areas shown in the exhibit below.

Exhibit 3-1: Project Management Areas




These management areas are administered using the established project management procedures and protocols we have developed and refined over the years and numerous disaster activations. Our interactions with our clients are based on best practices that balance the need for direction of operational priority, issue resolution, and relevant information with considerations for the time availability of the client.

## Procedures and Protocols

Each phase of Tetra Tech project management has documented procedures that govern the execution to provide ***scalable, consistent, high quality results***. We use a systematic approach with frequent in-process quality checks to execute our project processes. Our general project approach includes tasks in each of the phases: initiation, mobilization, execution, and closeout.

- **Initiation (Pre-Event)**
  - **Annual coordination** – Conduct annual trainings and meetings to plan and test execution protocols and identify potential risks/mitigation opportunities.
  - **Contract review** – Review contracts for understanding of contractual requirements and possible cost savings.
  - **Communication systems checks** – Verify that communication systems function as designed and reporting needs are understood.
- **Mobilization (Immediately Prior to and Following Event)**
  - **Scope, tasking, and budget** – Determine services required, performance metrics, schedule, and budget constraints.
  - **Deployment and resource requirements** – Develop work plan and safety plans. Update risk matrix for work plan specifics.
  - **Staging of equipment and resources** – Coordinate movement of required support equipment/supplies and setup of communication and information systems.
- **Execution (Post-Event)**
  - **On-boarding and training staff** – Conduct suitability for work checks and provide targeted training program based on work and safety plans.

  - **Monitoring** – Supervise field operations, quality assurance/quality control (QA/QC) in-process checks, prioritization of resource management, and project reporting.
  - **Communication** – Conduct status meetings and communicate project metrics and other pertinent information.
  - **Issue tracking/resolution** – Conduct issue identification, staff communication, and resolution tracking.
- **Closeout (Post-Event)**
  - **Documentation deliverable** – Produce and deliver required documentation to support auditing.
  - **Demobilization** – Manage reduction in staff, post-use maintenance, and movement of equipment and supplies.
  - **Audit support** – Provide continued availability of information systems to support closeout information requests.

### Client Interaction

Interaction with the client is based on the principles of the National Incident Management System (NIMS). Coordinated project communications coupled with accurate information enables effective decision making. Our implementation of this provides our clients with the benefits of these NIMS principles:

- **Common Operating Picture**
  - Tetra Tech's real-time data sharing information portal allows the client, debris removal contractor, and the monitoring firm to have the same accurate information, which markedly improves their ability to execute efficiently. The result is a much more efficient completion of project objectives.
- **Interoperability**
  - The information portability across disparate systems is the true power of Tetra Tech's client interaction and communication system. It allows integration with existing systems to provide better understanding and coordination among organizations.
- **Reliability, Scalability, and Portability**
  - Documented procedures and protocols enable scalability without loss in fidelity and quality of work product. When in-process quality controls and team cross-training are added, the ability to tolerate faults without affecting outcome is substantially increased.
- **Resiliency and Redundancy**
  - Experience operating in disasters enables Tetra Tech to design systems and processes to be able to withstand loss of infrastructure and key personnel yet maintain client expectations for information. This is accomplished not only in technology design, but in effective procedural protocols and our risk mitigation component.

Tetra Tech's project managers use methods specifically aimed at increasing the success of the team by engaging in ***collaborative problem solving and issue resolution***. By approaching others with professional mutual respect, they form relationships that allow close coordination between the client and other contractors, ultimately improving communication, coordination, and efficiency of the project.

## A. Disaster Debris Monitoring Services

## Operational Schedule/Implementation 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 3-2: Disaster Debris-Generating Event Operational Plan

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

| Time | Task | Deliverables/Milestones |
|---|---|---|
| | | • Initiate opening of TDSRS locations<br>• Follow up with FDEP on debris permits (if required)<br>• Work with the City to establish public information protocols to respond to concerns and comments |
| **H +48** | **Emergency push/ damage assessment** | • Continue emergency push<br>• Continue preliminary damage assessment<br>• Develop debris cost estimate required for presidential disaster declaration<br>• Develop operational plan for disaster-specific issues<br>• Refine health and safety plan for disaster-specific issues |
| **H +72** | **Disaster debris vehicle certification/ site preparation** | • Begin hauling truck certification<br>• Install ADMS tower monitor infrastructure<br>• Train monitors on policies, ADMS, and safety<br>• Open public drop-off sites as requested |
| **H +96** | **Begin debris collection monitoring** | • Assign monitors to trucks<br>• Assign supervisors to monitors<br>• Hold morning and afternoon meeting with City staff and debris hauler<br>• Implement QA/QC procedures |
| **Recovery** | | |
| **Week 1+** | **Right-of-Way (ROW) debris collection monitoring** | • Continue ROW collection<br>• Address household hazardous waste (HHW) issues (if critical)<br>• Issue daily reports/GIS maps<br>• Hold daily meetings with the City, hauler, and/or State/FEMA as required<br>• Staff citizens debris management hotline (if requested)<br>• Define supplemental programs required (private roads, HHW) and prepare eligibility request |
| **Week 1+** | **Data management and invoice reconciliation** | • Provide ADMS reports and real-time monitoring access<br>• Establish client GeoPortal to provide insight into project progress<br>• Review truck metrics provided by RecoveryTrac™<br>• Initiate weekly reconciliation<br>• Initial payment recommendations with retainage |
| **Week 1+** | **Reimbursement Support/Grant Administration (FEMA, NRCS)** | • Prepare damage/cost estimates<br>• Compile supporting documentation (debris permits, debris contracts, etc.)<br>• Liaise with FEMA Region 4, Florida Division of Emergency Management (FDEM), U.S. Army Corps of Engineers (USACE), etc. |
| **Week 2+** | **Special projects (if required)** | • Waterway debris removal<br>• Private property debris removal (PPDR)<br>• Public drop-off sites<br>• HHW<br>• Mud/silt/sand removal (from storm drains, ditches, etc.)<br>• Identify areas of operational concern and make disaster-specific recommendations to FEMA to improve efficiency |
| **Week 3+** | **Financial Recovery Assistance Staff Engaged (if requested)** | • Facilitate kickoff meetings with primary stakeholders<br>• Draft a Public Assistance (PA) work plan<br>• Conclude/review preliminary damage assessments |

| Time | Task | Deliverables/Milestones |
|---|---|---|
| | | • Gather documentation for project worksheet (PW) development<br>• Identify opportunities for mitigation<br>• Conduct site visits |
| **Project completion** | **Document turnover/closeout** | • Final reconciliation<br>• Retainage release<br>• Release hard copy files<br>• Provide electronic database<br>• Assist with PW development<br>• Assist the City with long-term reimbursement<br>• Audit assistance<br>• Appeal support if necessary |

## RecoveryTrac™ Automated Debris Management System – Tetra Tech's Alternative to Paper Ticketing

In today's technology-driven society, paper-based systems are quickly becoming obsolete. Recognizing the migration to electronic-based systems, our team has spent years on research and development in an effort to streamline the debris collection documentation process, with a focus on minimizing the cost to our clients whilst improving the visibility of debris project operations. RecoveryTrac™ is the result of these efforts. RecoveryTrac™ is a scalable and fully featured disaster management application designed specifically to address the operational challenges faced during a disaster recovery project. ***Our proprietary ADMS technology, RecoveryTrac™ is one of only three systems validated by the U.S. Army Corps of Engineers (USACE).*** The system provides real-time collection of data, and offers multiple solutions to data management, reporting, invoice reconciliation, and project controls that cannot be achieved with a paper-based program. ***Tetra Tech has also implemented RecoveryTrac™ ADMS technology on the last 150 FEMA PA eligible projects.*** On these projects, our clients and FEMA found this state-of-the-art technology to increase efficiency and improve the management of debris removal efforts.

RecoveryTrac

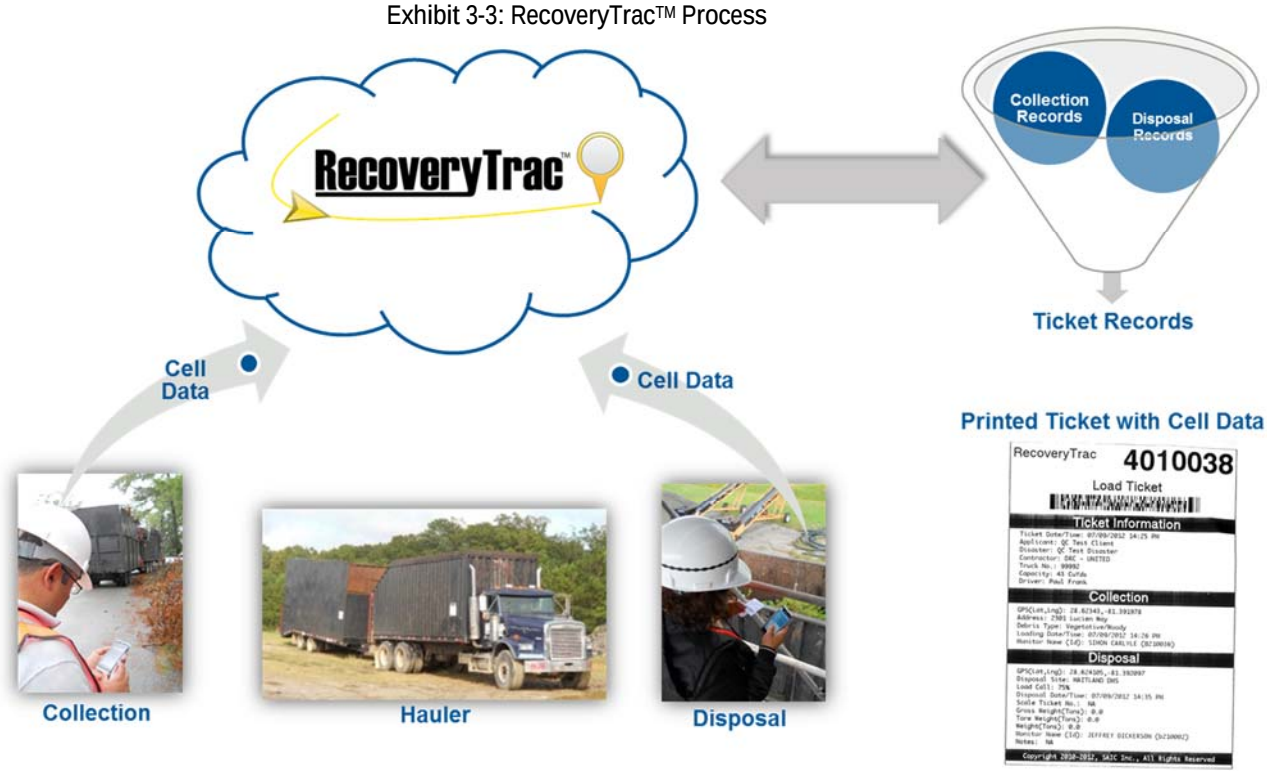
- **Owned and operated by Tetra Tech**
- **Over 1,200 mobile units on-hand** and ready for state-wide multi-district mobilizations
- Meets USACE specifications for electronic debris monitoring handhelds
- Real-time situation awareness of field resources and efficient direction to support City priorities
- Real-time GIS web services for EOC information and visualization systems
- Capable of collecting data regardless of cellular service
- Automated photograph and GPS capture
- Provides reports and pass map tracking in real-time
- Minimizes chance of fraud through real-time monitoring
- Minimizes data entry and human error
- Expedites invoice reconciliation
- Intuitive and user-friendly

## The RecoveryTrac™ Process

The process begins with debris hauler truck certification using the handheld units. A truck certification form is printed with a unique electronic bar code and provided to the driver as well as our debris site/tower monitor(s). Handheld units are provisioned and assigned to both field and debris site/tower monitors. Field monitors begin a ticket by scanning the truck certification bar code to open a control ticket and then begin to record waypoints (debris pile pick-up locations) on the handheld as the truck is loaded. When the truck is full, the field monitor selects the debris type, and scans the control ticket to assign the load a unique number. The truck then proceeds to the disposal site. The collection data is uploaded to a server via cellular connection and using a process called 'Look Ahead' - the collection ticket information is made available to the disposal monitor's handheld before the truck arrives. The control ticket is provided to the driver and taken to the debris management site where it is scanned by a debris site/tower monitor. The debris site/tower monitor confirms the truck and debris type and enters the load call. Finally the disposal load ticket is printed and data is uploaded to the system where it can be utilized in real-time reporting systems.

Even when there is no cellular connection, the handhelds continue to operate in connected mode; however, the data is stored on the device until a data connection is restored. The device periodically searches for this connection, and when services are restored the device automatically uploads the stored ticket data. ***Even under the harshest conditions where cellular service is not available, RecoveryTrac™ was built to comply with U.S. Army Corps of Engineers (USACE) specs using Near Field Communication (NFC) and internal memory to protect and transfer data.*** Exhibit 3-3 shows the RecoveryTrac™ process under normal operating conditions.

Exhibit 3-3: RecoveryTrac™ Process



### Key Benefits of RecoveryTrac™

**Ability to Respond.** Combined with the on-hand inventory of over 6,000 handhelds and the ability to rapidly procure additional equipment through preferred vendor relationships, the City can rely on our mobilization strategy for zero-day activations in disasters covering large areas with little or no-notice. ***The on-hand inventory can be on-site and ready to use within 24 hours of a notice to proceed,*** and additional needs can be met quickly (in most cases, 72 hours or less).

***Recently, our team simultaneously deployed approximately 5,000 ADMS units in the field following Hurricanes Harvey, Irma, Maria and the California Wildfires. The use of RecoveryTrac™ reduces data entry costs and provides real-time project tracking reports to our clients.***

**Simple and Intuitive.** A key foundation of our mobilization strategy is the ability to quickly hire and train local residents and begin debris removal operations. The mobile application is simple to understand and intuitive, allowing most users to begin using the device once the standard monitor training is completed.

**Cost Effective.** RecoveryTrac™ combines the advantage of automation and the desire of our customers to control costs by utilizing widely available commercial equipment and increasing the simplicity of operations.

**Reliable and Stable.** Based on the Android operating system, RecoveryTrac™ is secure and reliable. This minimizes the interruptions in field operations due to technical difficulties and reduces the number of support personnel required to maintain the system.

**Technical Support.** RecoveryTrac™ is designed to be self-repairing when possible; most support needs are resolved by field supervisors who are able to reach field monitors within 15–30 minutes in most cases. In addition, we have dedicated technicians at disposal sites and provide a field service center to maintain and repair equipment.

**Real-Time Reporting.** The key to successful management of a debris project is the timely availability of relevant information needed to make sound decisions and respond to anomalies before they become issues. Our powerful reporting engine allows the user to monitor contractor performance, track damages, track street-by-street debris removal progress, and identify and resolve potential problems as they happen. The geospatial reporting systems within RecoveryTrac™ provide real-time information that raises the bar for post-disaster project management.

***In summary, our combined program management approach and RecoveryTrac™ solution will provide day-one, boots-on-the ground services for the City immediately after a disaster.***

## Time and Materials

The emergency 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 time and materials charges
- Helping staff maintain maps or databases to track road clearance progress and other essential tasks, as requested
- Maintaining documentation for reimbursement of emergency push work

## Vehicle Certification

Tetra Tech has a proven vehicle certification procedure that complies with FEMA guidelines and results in maximum reimbursement for our clients. Tetra Tech's ADMS technology, RecoveryTrac™, 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™ database to allow immediate quality assurance (QA)/quality control (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 3-4: Truck Audit Report

RecoveryTrac Truck Certification Audit Report — Trucks Certified On: *All

AUGUSTA - WINTER STORM PAX - ROW COLLECTION - Truck Certification Summary

| | Tot Trucks Certified | Tot Certified Capacity | Avg Certified Capacity |
|---|---|---|---|
| **Contractor: ASHBRITT** | **167** | **6961** | **41.68** |

**Contractor: ASHBRITT**

N/A 700373 61 02/27/2014 11:02 AM ACTIVE 26B2WR (MO) SELF-LOADING TRUCK

Primary Box (L x W x H): 216x102x102 = 2247264.0 Cu Inches ( + )
Type: Box (L x W x H): 70x102x64 = 456960.0 Cu Inches ( + )
Type: Box (L x W x H): 48x102x28 = 137088.0 Cu Inches ( + )
Total Volume: 2841312.0 Cu Inches (/46,656) = 60.90 CuYds

**Driver-Placard View** | **Side View** | **Back-Interior View** | **Front View**

Our disaster debris vehicle certification procedure includes the following:

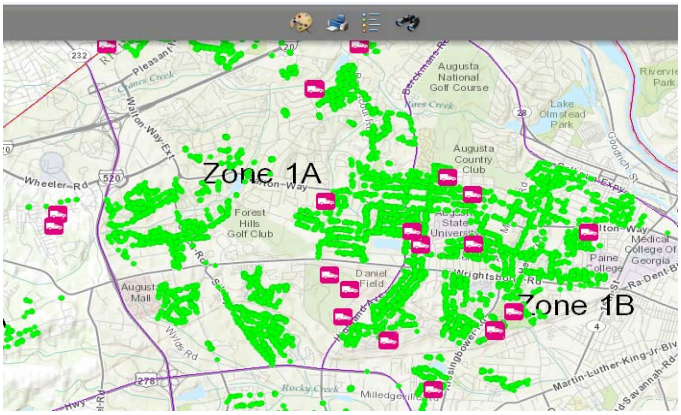
- Generation of unique truck numbers for contractor crews and equipment
- Automated truck certification form, which includes the latest FEMA guidelines on truck certification documentation and volume calculations, and a bar code for automated ticket scanning
- Special vehicle notations on the truck certification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

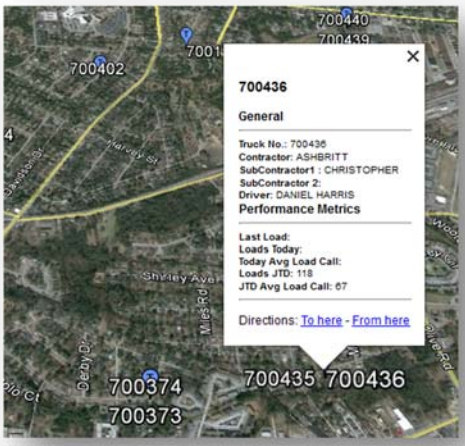
Exhibit 3-5: Waypoint Collection/Hazardous Tree Maps




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 3-6 and 3-7.

Exhibit 3-6: Monitoring Locations


Exhibit 3-7: Truck Locations




## 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 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.

## TDSRS Monitoring

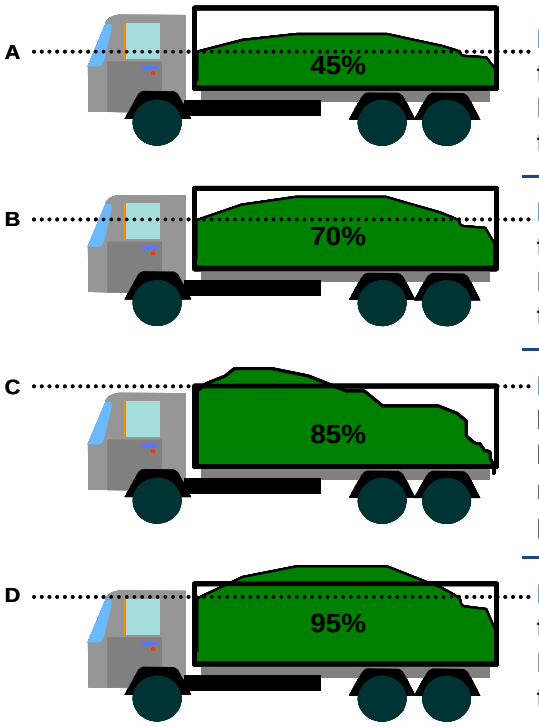
Response to debris-generating events requires locating TDSRS, emergency permitting of TDSRS (including debris burning and State regulatory permits), baseline soil testing before the TDSRS are opened and as part of remediation process, and recycling and diversion initiatives once the reduced vegetative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

As TDSRS 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 TDSRS 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 TDSRS disposal monitors includes the following:

- **Load ticket.** The load ticket is used to document debris removal complying with all requirements of FEMA.
- **Disposal monitor log.** The disposal monitor log is used as backup documentation and requirements of FEMA.
- **Scale manifest tickets.** If the debris hauling contract is weight-based, tickets generated by the existing scales at the City's TDSRS 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 TDSRS 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 3-8: 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.

**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.

**Example D** – 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 95 percent.

## Residential Drop-off Sites

To provide documentation to FEMA that supports reimbursement of debris brought by the City's residents to residential drop-off sites and proves the debris is not commercial, the City will have to monitor each site and screen citizens who enter. Tetra Tech is prepared to support the City by assisting with this task if needed.

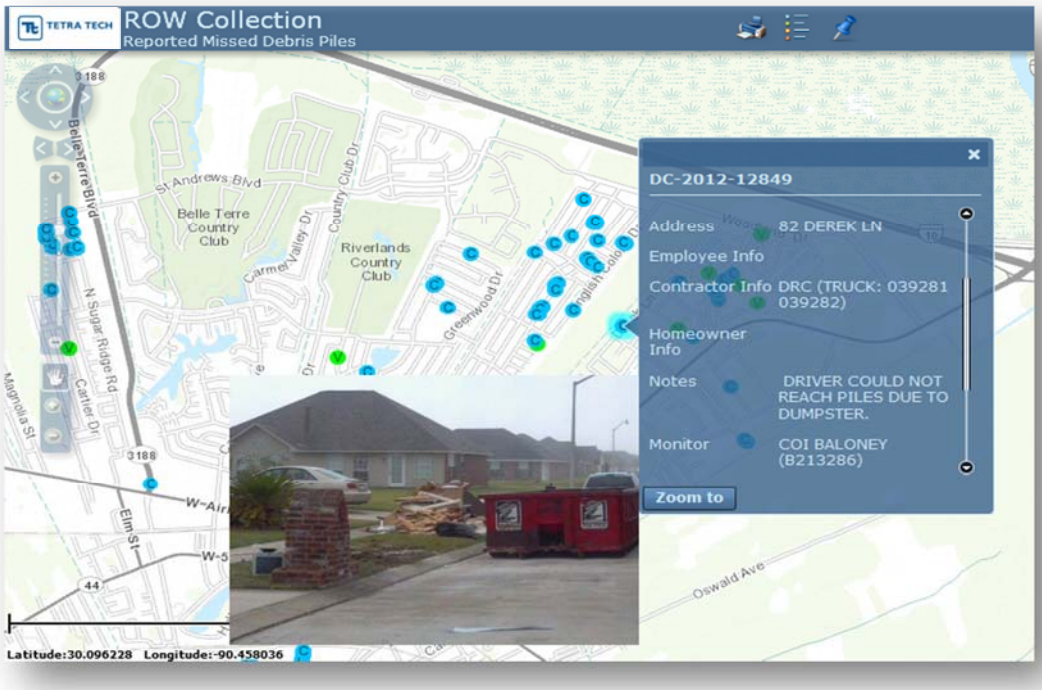
## Quality Assurance/Quality Control Program

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 back-end 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 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 rather and correct issues as they appear.

***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.***

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 3-9: 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 TDSRS 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 which 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™ system also has project controls built in which alert the data manager to anomalies which 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 TDSRS 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 by FEMA 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.

Exhibit 3-10: Real-Time Ticket Report

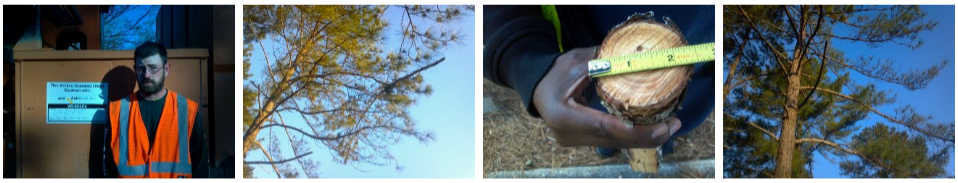
RecoveryTrac Unit Rate AuditReport (Crew: 700430) Date: 03/11/2014

Client: AUGUSTA Project: AUGUSTA - WINTER STORM PAX - ROW COLLECTION

Total Ticket Count: 12

| Ticket No. | Monitor | Date | GPS-Lat | GPS-Lng | Address | Service Code | Unit Count | Meas | Zone | Photo Count |
|---|---|---|---|---|---|---|---|---|---|---|
| 120590044 | DAWN WALKER (B214108) | 03/11/2014 8:17 AM | 33.434518 | -82.023773 | 2405 ACAPULCO DR | 1A | 1.00 | 2.50 | 2d(GIS: 2D) | 4 |

Crew Photo | Pre-Work Photo | Measurement Photo | Post-Work Photo



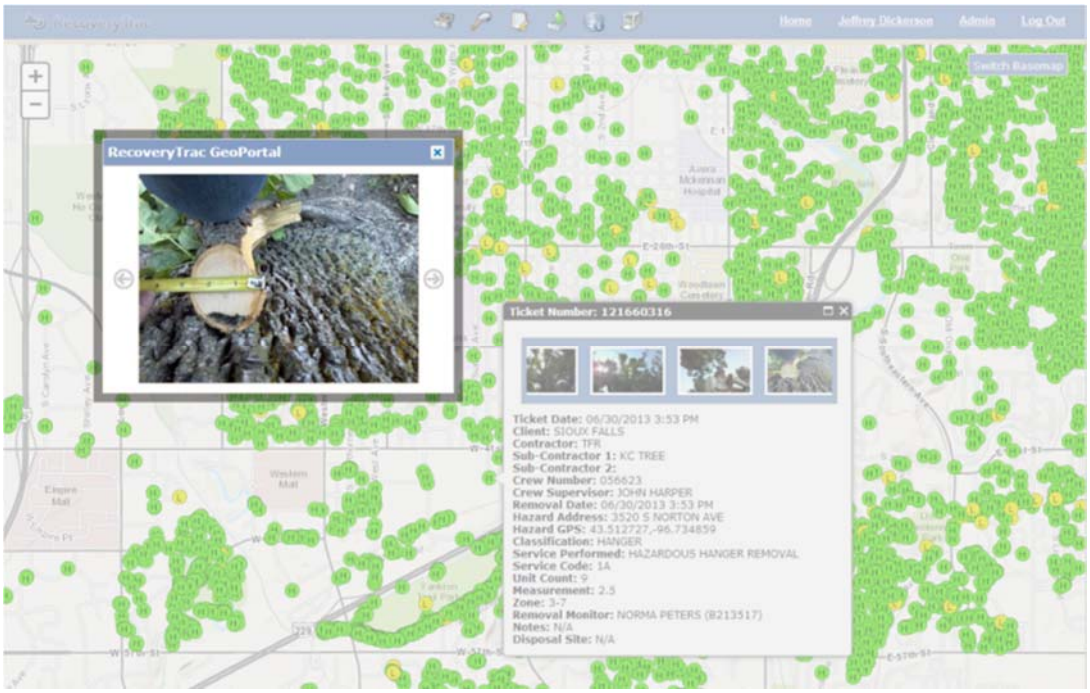
| Ticket No. | Monitor | Date | GPS-Lat | GPS-Lng | Address | Service Code | Unit Count | Meas | Zone | Photo Count |
|---|---|---|---|---|---|---|---|---|---|---|
| 120590045 | DAWN WALKER (B214108) | 03/11/2014 8:27 AM | 33.434532 | -82.023628 | 2405 ACAPULCO DR | 1A | 1.00 | 3.38 | 2d(GIS: 2D) | 4 |

Crew Photo | Pre-Work Photo | Measurement Photo | Post-Work Photo

## 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 3-11: Unit Rate Ticket Map




## Monitor Training Program

To properly instruct newly hired employees, Tetra Tech has developed a training program that includes modules specific to the City. These modules are complete with the information required to facilitate accurate field monitoring and ADMS implementation. Qualifying tools included in the training modules assist with the retention of the material and assist Tetra Tech in screening and selecting the most qualified personnel for the monitoring task. Training module topics include truck certification, load site monitor responsibilities, disposal monitor responsibilities, hazardous trees monitor responsibilities, and field supervisor responsibilities. Project Managers, data managers, and operations managers follow standard operating procedures and protocols established in our concept of operations plan.

## Health and Safety

Tetra Tech's employees are the foundation of our business, and protecting them at all work sites is our highest priority. The company subscribes to the philosophy that all occupational incidents can be prevented and that no incident is treated as an acceptable event when we execute our work. To achieve this, the company's health and safety processes are a vital and integral part of our work.

Health and safety addressed in our operations and management systems is supported by strong leadership. Tetra Tech's leaders understand their responsibility and accountability to plan for safety and to ensure that safety measures are implemented. Preventing incidents also relies on a management system that regularly evaluates performance and identifies necessary adjustments to target continual improvement. The principal objectives of

our program are codified in our written health and safety policy, which is endorsed and regularly monitored by the highest levels of our management team.

Industry metrics for our 2016 health and safety performance are provided below:

- US Experience Modification Rate (EMR) of 0.71
- 2016 Enterprise-Wide Total Recordable Injury Rate (TRIR) 0.54
- 2016 Enterprise-Wide Lost Workday Incident Rate (LWDIR) 0.12

Tetra Tech is committed to workplace safety. As such, a project-specific health and safety plan will be developed for the scope of work. Field staff assigned to the project will be trained on the health and safety plan. Additionally, Tetra Tech project managers have completed the Occupational Safety and Health Administration Disaster Site Worker course and have their 10-hour Construction Safety Certification. During a debris recovery operation, Tetra Tech project managers and supervisors routinely examine the safety of field and debris staging site operations and have the authority to shut down unsafe operations. Debris staging site monitors are equipped with the appropriate personal protective equipment, which may include hard hats, appropriate footwear, reflective vests, hearing protection, and eye protection. Additionally, 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.

## B. Emergency Management Planning and Training

In addition to response and recovery services, our team is one of the nation’s premier emergency preparedness firms, with a staff of industry experts located throughout the United States. Our team members are recognized leaders in preparedness, having performed hundreds of planning, training, and exercise projects for local, state, and federal agencies, quasi-governmental organizations, institutions of higher education, private-sector businesses, and non-profit organizations. Many of our team members have previously served as state and local emergency managers and are acutely aware of how important planning and training are to maintaining an optimal level of readiness. Since 2001, our team has conducted over 300 emergency preparedness projects while ensuring compliance with current local, state, federal, and industry standards. Listed below are the preparedness programs Tetra Tech can offer.

- **Continuity of Operation’s, Continuity of Government and Business Continuity Planning.** Tetra Tech understands residents expect their government to protect the safety and security of the community. A continuity plan effectively facilitates the performance of mission essential functions during an emergency and supports effort to provide critical services in a timely manner. Tetra Tech has developed continuity of operations, continuity of government, and business continuity plans for state agencies, local jurisdictions, and private sector businesses across the country that align with the standards in the Department of Homeland Security’s Federal Continuity Directive and Continuity Guidance Circulars. Continuity planning provides the interim process and alternate methods for continuing critical government services during disruptive incidents.
- **Cybersecurity Planning.** Cybersecurity and related services are a focus area for Tetra Tech. Tetra Tech provides cybersecurity services for a number of U.S. Federal clients, including contracts that require cleared personnel at the Secret and Top Secret level. Tetra Tech has deep understanding of the application of U.S. Federal information assurance and cybersecurity standards, including Defense Information Systems Agency (DISA) Security Technical Implementation Guides (STIGs), National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53 Recommended Security Controls for Federal Information Systems and Organizations, and NIST SP 800-37 Guide for Applying the Risk Management Framework to Federal Information Systems. Our blended team of cybersecurity experts and emergency management planners can provide support to develop plans, policies and procedures that address vulnerabilities and provide solutions to detect, prevent and mitigate impacts.
- **Disaster Debris Management Planning** Tetra Tech uses a field-tested approach to develop DDMPs. Our staff develops and implements DDMPs alongside our local government clients prior to and following a

disaster. Our experience has demonstrated that pairing client personnel with Tetra Tech emergency management experts provides significant benefits, such as facilitating an understanding and acceptance of work products and deliverables and providing exposure to key concepts described in the plan. Increased understanding of disaster debris management planning strengthens a client's ability to maintain and implement their plan.

- **Emergency Operations Planning/Comprehensive Emergency Management Planning.** Understanding and managing the risks of operating in an area that is vulnerable to natural and human-caused hazards is a complex challenge. Tetra Tech develops resilient and robust all-hazard emergency operations plans and comprehensive emergency management plans that will help guide response effectively and efficiently to emergencies. The plans comply with applicable local, state, and federal guidelines, and industry standards applicable to emergency planning.
- **Incident-Specific and Function-Specific Planning.** In addition to an all-hazards emergency operations plan, communities often need more detailed operational level plans for specific types of incidents and emergency functions. These types of plans provide more detailed instructions for operational and tactical level procedures and often include checklists, flow charts, and job aids. Tetra Tech has the expertise to develop a range of incident and function specific plans including:
  - Active Assailant
  - Chemical, Biological, Radiological, Nuclear, and Explosives
  - Communication
  - Earthquake
  - Evacuation
  - Finance and Administration
  - Family Reunification and Assistance
  - Flood and Riverine
  - Hazardous Materials
  - Hurricane Operations
  - Infectious Disease
  - Information Technology Disaster Recovery
  - Mass Care and Sheltering
  - Mass Casualty and Fatality
  - Public Information
  - Severe Weather
  - Recovery
  - Terrorism
  - Tornado
  - Volunteer and Donation Management
  - Wildland Fire
- **Hazard Mitigation Planning.** As a leader in mitigation, disaster readiness, and emergency response and recovery planning for state and local governments, Tetra Tech supports clients in all phases of hazard mitigation planning, including organizing and coordinating vital resources, performing risk and vulnerability assessments, developing mitigation plans and strategies, implementing those plans and strategies, and monitoring their progress. A well-developed hazard mitigation action plan (HMAP) provides a framework for streamlining the disaster recovery process and prioritizing mitigation interventions. It makes communities less vulnerable to the effects of an event and ensures a more secure, sustainable future. Tetra Tech can assists with assessing local and regional hazards and risks, establishing mitigation goals and objectives, and identifying projects that enable the jurisdiction to prepare for and reduce the impacts of a natural or human-caused disaster by developing a comprehensive mitigation strategy.
- **Public Health Preparedness.** While state and local public health agencies have made strides in developing capacity to prepare for and respond to public health incidents, the 2009 novel H1N1 influenza event and the recent Ebola event demonstrated our nation's continued vulnerability to widespread public health emergencies. Recognizing this, the Centers for Disease Control and Prevention (CDC) developed 15 public health preparedness capabilities that define standards for public health preparedness and response. The 15 public health preparedness capabilities. Tetra Tech can assess provide assistance to address broad public health preparedness and response measures, including bio-surveillance, community resiliency, countermeasures and mitigation, incident management, information management, and surge management. Our staff of public health subject matter experts, emergency preparedness, and response professionals can help build or enhance the ability to achieve each of the public health preparedness capabilities.

- **Threat, Vulnerability, and Risk Assessment.** Conducting an assessment of potential threats, risks, and vulnerabilities is one of the first steps in developing a viable emergency preparedness plan. The community needs to have a deep understanding of their risks in order to properly prepare for an incident. Tetra Tech uses several approaches to developing a broad range of assessments from basic community risk profile to a more in-depth Threat and Hazard Identification and Risk Assessment (THIRA) depending on the needs of the community. Tetra Tech can provide assistance with the following:
  - Desktop analysis of risks and vulnerabilities based on data collection, demographics, and survey analysis
  - Hazard and threat analysis using HAZUS-MH building stock and other modeling techniques
  - Community economic assessment using use census data and ESRI Business Analyst
  - Scenario study using outputs from hazard and threat analyses
  - Risk comparison by overlaying the risk assessment and the scenario study
- **Training and Exercises.** Tetra Tech can provide comprehensive training and exercises for our debris monitoring clients. Our training and exercises include realistic scenarios based on our experience responding to many of our nation's most challenging disasters. We provide detailed case studies of local government responses to disasters and the challenges they had to overcome. Tetra Tech develops and conducts in accordance with the Homeland Security Exercise and Evaluation Program (HSEEP) and exercise facilitators are HSEEP-trained. Exercises include an after action report and improvement plan to document lessons learned and establish corrective actions.

## C. Public Assistance/Grant Management Consulting Services

As one of the nation's premier providers of hazard mitigation, emergency preparedness, and response and recovery services, Tetra Tech is dedicated to helping our clients plan for, respond to, and recover from natural and human-caused disasters. Tetra Tech maintains a multidisciplinary staff with experience in disaster response and recovery, grant administration, and emergency management. Many are first responders, former state and local emergency management directors, and consultants who have been at the forefront nationally in developing strategies and plans in support of the U.S. Department of Homeland Security's (DHS) National Recovery Goals. ***Tetra Tech offers a complete, end-to-end solution that empowers our clients to protect their most precious assets in times of chaos.***

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 Public Assistance (PA) Program, including multiple, large PA programs for the States of Vermont, South Dakota, and Connecticut. Our team also has significant experience with FHWA Emergency Relief (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 50 declared presidential disasters, representing the recovery of more than $4 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.***

Having a national firm with broad capabilities allows the City to bring in the right skills and background for the required scope of work and funding source. From engineers with technical capabilities (i.e., transit, road/bridge, water/wastewater, cost estimating) to former federal and state emergency management officials included on our project team, our team has direct experience with the following grant programs:

- FEMA Hazard Mitigation Grant Program (HMGP)

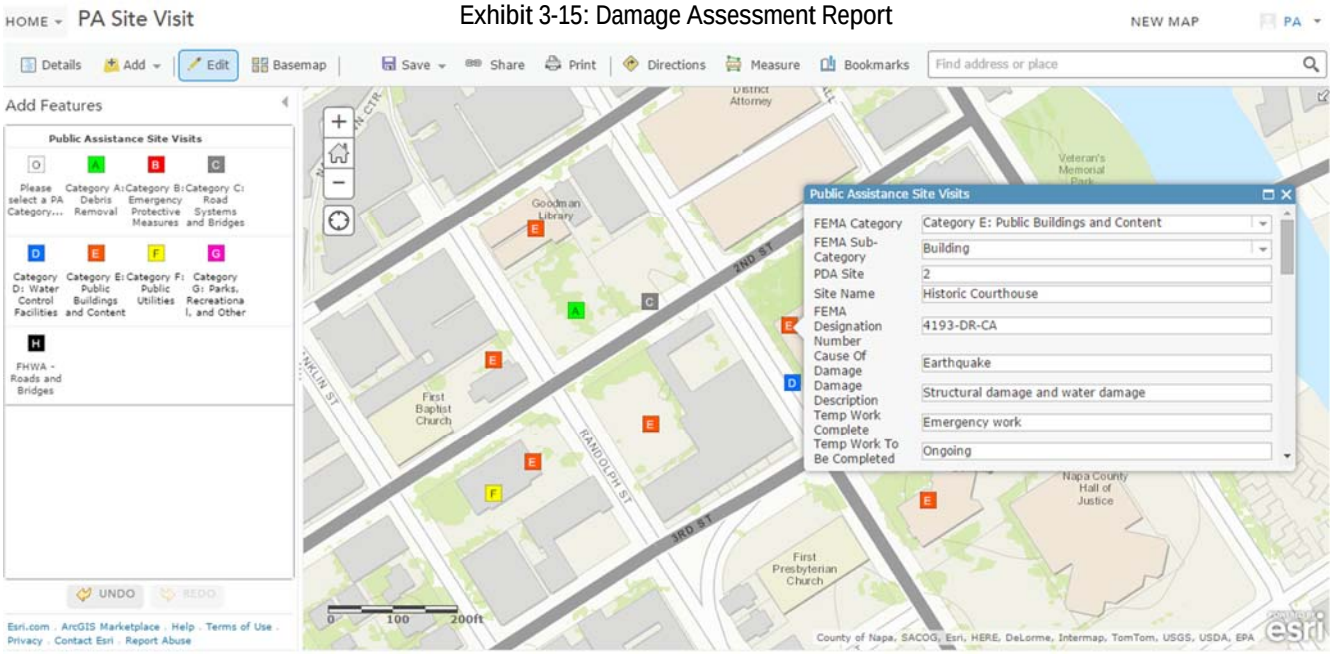
- FEMA Flood Mitigation Assistance Program[1] (FMA)
- FEMA PA Program
- Pre-Disaster Mitigation (PDM)
- Federal Highway Administration-Emergency Relief (FHWA-ER) Program
- FHWA Transportation Investment Generating Economic Recovery Grant
- Natural Resources Conservation Service (NRCS) Emergency Watershed Protection
- U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) Program

Tetra Tech has comprehensive experience working with the CDBG and CDBG-DR programs and has a successful record of helping communities across the region bolster recovery efforts and long-term resilience. Tetra Tech has applied our expertise in the CDBG-DR program to help numerous communities navigate complex program requirements, including the development of action plans, consolidated plans, grant management, application procedures, and compliance review among other services.

## Damage Assessment

Following a disaster, the City will need to evaluate city-wide damages and identify priorities. Preliminary damage assessments are a critical component to the City receiving a disaster declaration following a major debris-generating event. If tasked, Tetra Tech is prepared to supplement City staff and assist in conducting electronic damage assessments. Tetra Tech's ADMS technology, RecoveryTrac™, 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 3-15 for a sample image of Tetra Tech's web-based damage assessment report.

Exhibit 3-15: Damage Assessment Report




[1]*Formerly three separate grant programs: FEMA Severe Repetitive Loss Program, FEMA Repetitive Flood Claims Program, and the FEMA Pre-Disaster Mitigation Program.*

# 2. DATABASE REPORTING SYSTEM

We know that daily progress reports of progress are used to provide updates to our client's leadership and the public. RecoveryTrac™ ADMS can provide the one-stop information in a clear format that can provide the consistent and accurate multi-district operations status picture. RecoveryTrac™ data feeds provide real-time information as activities unfold in the field. There is no spreadsheet to import and no conversion—just a single GIS web data service to pull required information. Examples of data include:

- 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 the client(s) operations based on exhaustive in-process quality checks that occur continually. The figure below details how we use RecoveryTrac™ ADMS to meet quality standards of the client using the direct monitoring and immediate feedback technique.

The management of a debris operation over a wide operational area is challenging. Ensuring removal of eligible debris, meeting public expectations, along with the proper documentation of removal is critical to success of any project. Tetra Tech has invested heavily in providing state-of-the-art tools along with a detailed training program for project operations staff to meet these challenges. With the integration of the automated field data collection systems with advanced geospatial applications, we provide several industry-leading capabilities that include:

- Geographic boundary checks for eligibility
- Pass completion tracking by road and custom debris management zones
- Real-time truck and monitor locations for effective utilization of contractor assets
- Real-time metrics and operational statistics to monitor performance and fraud detection
- Documentation of contractor-related damage, missed debris piles, and other operations issues

These tools provide our clients with a common operating picture. Similar to an emergency operations center, this enables a debris removal operations center that has a clear picture of field operations, allowing responsive reporting and proactive management of the process.

The demand for current information continues to grow, especially following a natural disaster when the focus is cleanup and restoration of normal services. Tetra Tech has used our extensive experience to ensure our clients can answer the requests for progress and status information. With the automated field data collection combined with the accuracy of the geospatial visualization and summarization, data is available on demand and is usually up to date within a few minutes. These reporting tools provide the operations staff with unparalleled access to the debris removal progress. Data is accurately summarized at the project, debris management zone, or individual level in an easy-to-understand, easy-to-access delivery method.

## 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 3-12: Incident Report

**Incident Database**

RecoveryTrac Incident Summary Report

Project Incident Summary: AUGUSTA - WINTER STORM PAX -

| Incident Type | Total | Active | Closed | Pct Compl | Avg Day Out | Hi Pri | Emp |
|---|---|---|---|---|---|---|---|
| DAMAGE TO PROPERTY | 80 | 80 | 0 | 0 | 166 | 1 | 7 |
| **Totals** | **80** | **80** | **0** | **0.0** | **166.0** | **1** | **7** |

Map Incident Reports

Project Incident Details: AUGUSTA - WINTER STORM PAX - R

DAMAGE TO PROPERTY (Count: 80)

PRIVATE PROPERTY-MAILBOX (Count: 9)

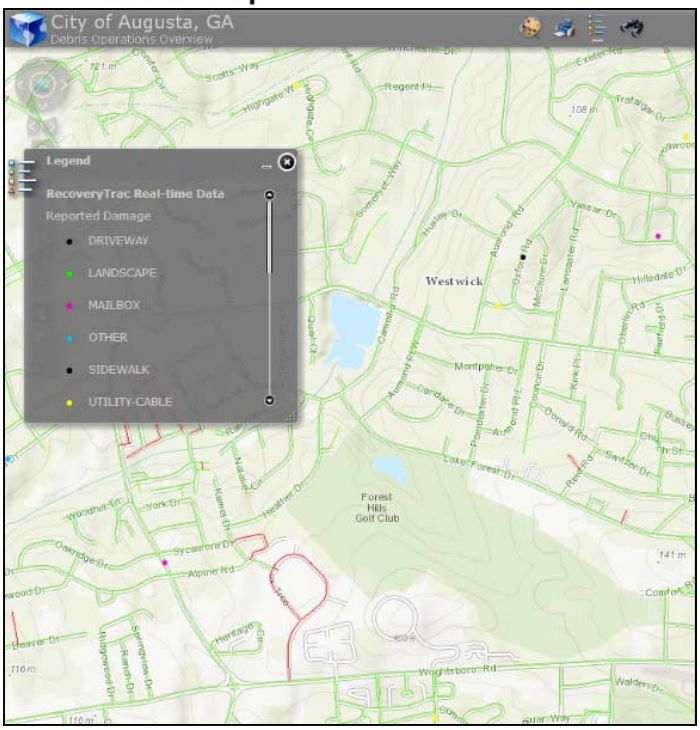
| Incident No. | Status | Priority | Date | Emp Invl | Cont Invl | Own Invl | Location |
|---|---|---|---|---|---|---|---|
| DP-2014-04835 | Active | Normal | 03/25/2014 8:57 AM | NO | YES | YES | 2820 WALTE |

Contractor Info: BYNOON (TRUCK: 700166), Homeowner Info: JASON PILGRIM (7065648372), DRIVER KNOCKED OVER MAILB

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| DP-2014-04515 | Active | Normal | 03/21/2014 5:23 PM | NO | NO | NO | 3311 WOOD |

HIT. MAILBOX WHEN BACKING.

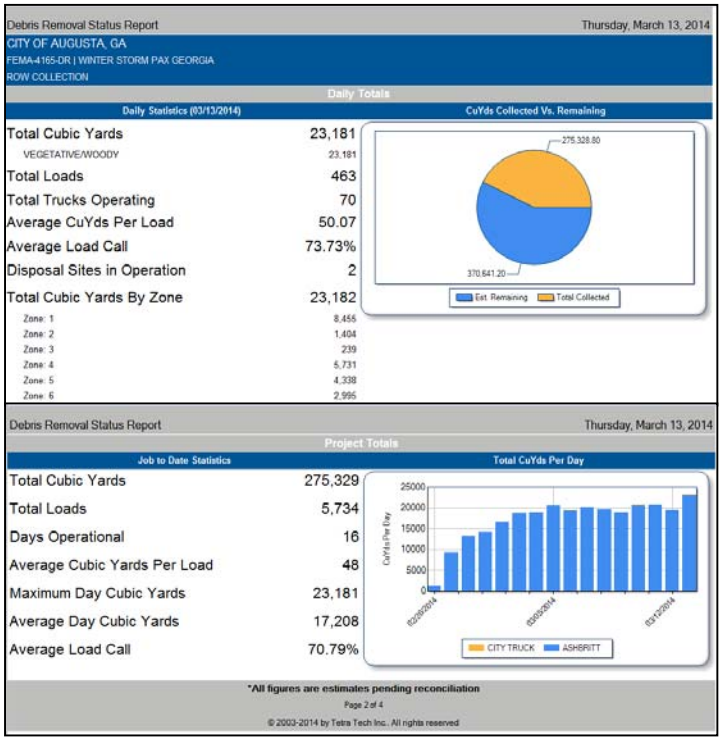
**Incident Map**



## Daily Reporting Metrics

Tetra Tech has a suite of reports that are automated from RecoveryTrac™ 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 cubic yards/tons collected by material and program, cumulative cubic yard/tons collected, number of debris monitors in the field, cumulative cubic yards/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 have a history of providing tailored reports to any metrics not captured in the generic reports.

Exhibit 3-13: Sample Custom Reports Developed




## Contractor Reconciliation

RecoveryTrac™ significantly reduces the amount of time needed for a contractor to generate an invoice and for the subsequent invoice reconciliation with Tetra Tech.

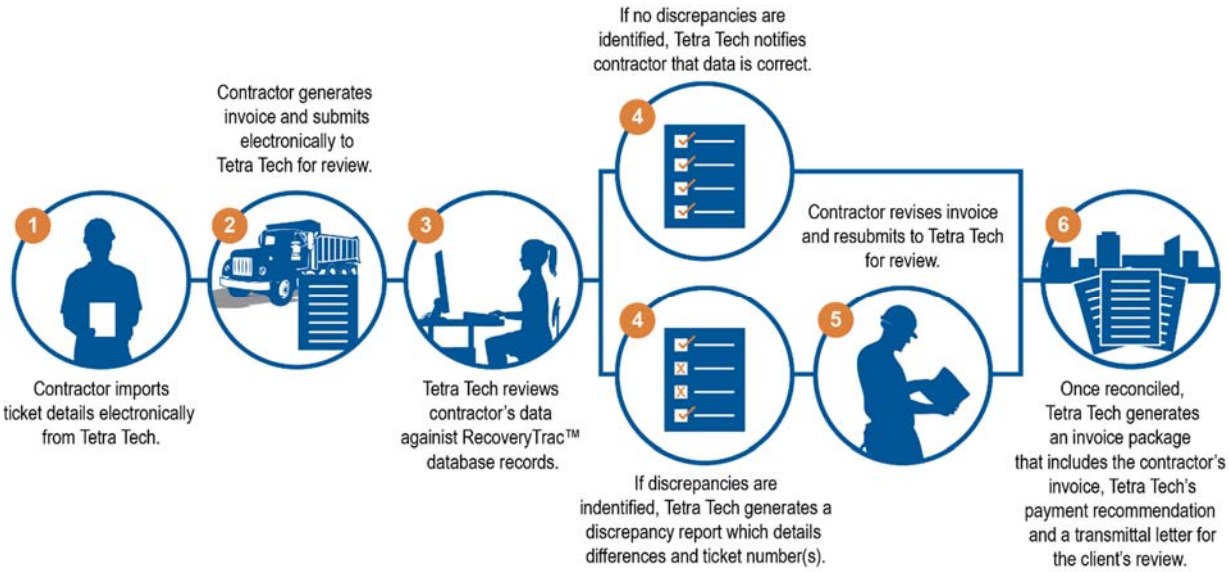
To expedite contractor invoice reconciliation efforts, Tetra Tech requires copies of contracts for all primary debris contractors. After reviewing the necessary contract(s), Tetra Tech sets up the RecoveryTrac™ database to generate transactions applicable to contract terms for tickets issued to each debris contractor.

Next, Tetra Tech meets with each primary debris contractor to review the debris contractor project reports that will be generated automatically via RecoveryTrac™. The debris contractor project reports will provide the debris contractors with sufficient data to reconcile with their subcontractors as well as generate invoices for payment by the client. The debris contractor is given a report login, which enables them to access the data remotely. They may run the report for a specific date or a range of dates.

Tetra Tech conducts several real-time QA/QC checks throughout the day, and a final daily comprehensive data analysis is performed at the close of operations. A final QA/QC check is completed when the debris contractor sends the invoice dataset to Tetra Tech for reconciliation. Incongruences in the debris contractor's data are flagged for review and must be resolved prior to the issuance of a final invoice.

The step-by-step process for contractor invoice reconciliation in a RecoveryTrac™ project is outlined below:

Exhibit 3-14: Contractor Invoice Reconciliation Process




## 3. CURRENT AND PROJECTED WORKLOAD

Tetra Tech takes great pride in the reliability and high quality of our services. Clients count on us to respond in their time of need, and we deliver. Tetra Tech has never failed to respond to our clients' deployment and mobilization needs, regardless of location or the type of disaster. To successfully manage multiple contracts, Tetra Tech reviews its projected workload and assesses the firm's staffing requirements on a continuous basis to make sure we can provide responsive services to all our clients.

***Tetra Tech understands it is critical that the City partners with a trusted contractor who will respond immediately and provide high-quality services throughout the engagement.*** Tetra Tech staff members have experience in large-scale rapid deployments. Following Hurricanes Harvey and Irma, **Tetra Tech simultaneously deployed approximately 4,000 staff on behalf of 105 clients.**

**QUICK FACT**

***Following Hurricane Irma, Tetra Tech simultaneously deployed over 2,400 staff in response to 67 clients in the State of Florida.***

Although we maintain multiple clients in Florida, our experience successfully managing numerous response and recovery operations in the State is proof that we have the staff, resources, and expertise to execute a safe and quick response and restore the City's normal operations as quickly as possible. Our staff of industry experts has applied the necessary project controls to efficiently document and complete field work and has provided follow-up support, including appeal development and closeout audit support months and, in some cases, years following the completion of field work.

As requested in the City's request for proposal, Exhibit 3-16 summarizes the firm's current and projected workload for debris monitoring projects, including key personnel assigned.

Exhibit 3-16: Workload Summary

| Client Name | Current and/or Projected Workload | Estimated Dollar Amount | Key Personnel Assigned |
|---|---|---|---|
| **Hurricane Irma** | | | |
| **Polk County, FL** | Current | $5,947,987.00 | Simon Carlyle |
| **Osceola County, FL** | Current | $1,515,822.00 | Simon Carlyle |
| **Lake County, FL** | Current | $2,220,045.00 | Simon Carlyle |
| **Collier County, FL** | Current | $10,206,342.00 | Anne Cabrera |
| **Cape Coral, City of, FL** | Current | $640,750.00 | Anne Cabrera |
| **Charlotte County, FL** | Current | $60,000.00 | Anne Cabrera |
| **FDEP** | Current | $3,500,000.00 | Ralph Natale |
| **Miami Dade County, FL - Solid Waste** | Current | $3,500,000.00 | Jonathan Burgiel |
| **Miami Dade County, FL - Parks** | Current | $6,045,000.00 | Jonathan Burgiel |
| **Miami, City of, FL** | Current | $6,824,580.00 | Jonathan Burgiel |
| **Hurricane Harvey** | | | |
| **City of Houston, TX** | Current | $10,000,000.00 | Ralph Natale |
| **Fort Bend County, TX** | Current | $1,237,408.40 | Ralph Natale |
| **Orange County, TX** | Current | $1,020,225.00 | Simon Carlyle |
| **California Wildfires** | | | |
| **CalRecycle (Thomas Fire)** | Current | $12,000,000.00 | Ralph Natale |
| **USACE - Sonoma County** | Current | $10,000,000.00 | Ralph Natale |
| **USACE - Lake, Napa, Mendocino County** | Current | $6,000,000.00 | Ralph Natale |

# 4. COMPLIANCE WITH PUBLIC POLICIES

## Compliance with Equal Opportunity and Non-Discrimination Laws

Tetra Tech is committed to providing employees and employee candidates the right to equal employment opportunity and a discrimination-free work environment, where employment practices are based on an individual's capabilities and qualifications without regard to race, gender, age, color, religion, national origin, sexual orientation, disability, veteran or marital status or any other protected characteristics as established by applicable law. This policy of equal employment opportunity applies to all personnel policies and procedures, including recruitment and hiring, promotions, transfers, and terminations, as well as compensation, benefits and other terms, conditions and privileges of employment.

Additionally, Tetra Tech takes affirmative action to recruit, hire and promote qualified minorities, women, disabled persons and covered veterans pursuant to Executive Order 11246 and other statutes that proscribe government

contractors from discriminating against any employee or applicant for employment because of race, color, religion, sex or national origin. Affirmative action efforts, objectives and strategies are documented in the company's Affirmative Action Plans (AAPs).Tetra Tech develops annual AAPs to identify any areas of underutilization of women and minorities in the workforce; and to establish good faith efforts to address any such areas of underutilization.

## Subcontracting Affirmative Steps

As firm policy, Tetra Tech conscientiously looks for opportunities to work with small, women-, minority-owned and disadvantaged business enterprises where specific and individual capabilities complement our own for the benefit of the successful completion of a project. In fact, in 2016 Tetra Tech was presented with the **Mentor of the Year Award by the U.S. Agency for International Development's Office of Small and Disadvantaged Business Utilization.** The Mentor of the Year Award annually recognizes a large prime contractor for effective development assistance given to a small business. Tetra Tech received the award at the USAID Annual Small Business Conference held on May 4, 2016, in Washington, DC.

We have established working relationships with a number of small, women-, and minority-owned firms, and have worked with many agencies having equal employment opportunity requirements. In addition, we maintain a comprehensive file of the qualifications and experience of these firms to aide us in selecting appropriate subcontractors for specific project tasks. Should the need for a particular specialty arise during a project, Tetra Tech diligently promotes an equitable opportunity to subcontractors whose capabilities complement our own.

# PAST PERFORMANCE AND REFERENCES

## 1. REFERENCES

Similar to the services being requested by the City of Coral Gables (City), 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 FEMA and FHWA guidelines and reimbursement procedures.

The following projects are a representative sample of our experience and accomplishments in performing similar services. As requested in the City's RFP, we have selected projects that are similar in scope and magnitude to the City.

### Disaster Debris Program Management – Hurricane Matthew
**City of Port Orange, FL**

Hurricane Matthew devastated the coastal community of Port Orange in October 2016 when it made landfall as a Category 2 hurricane. With 90% of residents left without power, there were numerous reports of downed powerlines and uprooted trees blocking local roadways, causing chaos throughout the county. Residents along the Halifax River experienced a storm surge of at least 3 feet, causing flooding damage for many local residents and destroying waterfront business and marinas along the coast.

Our team has been supporting Volusia County's communities for many years and was available to assist the City prior to the storm making landfall as well as in the immediate aftermath. Within hours, Tetra Tech mobilized a team to assess the damage and begin the process of onboarding local debris monitors.

When pre-identified temporary debris management sites were deemed inefficient for the project operations, Tetra Tech staffed helped the City to identify and coordinate with the Florida Department of Environmental Protection (FDEP) to permit alternate sites.

**Reference/Project Information**

**Client Name:** City of Port Orange, FL
**Contact:** Alexandra Torrent, Administrator
407 Virginia Avenue, Port Orange, FL 32127
**Phone:** (386) 506-5573
**Email:** atorrent@port-orange.org
**Contract Term:** October 2016 – January 2017
**Dollar Value**: $872,394
**Agency Size:** 57,203 residents; 28.7 square miles
**Volume of Debris:** 428,471 cubic yards

In total, our team monitored over 428,000 cubic yards of debris and over 6,000 removals of hazardous hanging limbs and leaning trees. Tetra Tech used RecoveryTrac™ to document all loads and separate public and private road data after helping the City obtain FEMA approval for debris removal from private communities that were seriously impacted by the storm. Our geoportal provided City staff with visibility into project operations and gave them the information to communicate with City residents regarding the progress of debris removal and timelines for completion.

## Disaster Debris Program Management – Hurricanes Wilma and Irma
**City of Naples, FL**

Immediately following Hurricane Wilma's landfall, our team was on-site mobilizing an emergency response team to provide comprehensive disaster recovery services. We provided comprehensive collection and disposal monitoring activities. Approximately 40 collection monitors were deployed daily to monitor collection activities. The portions of the city that received collection services were mapped on a daily basis so that the City of Naples had a near real-time understanding of the progress that was being made. Our team was also responsible for monitoring activities for hazardous stump removal, tree removal, and private property right-of-entry (ROE) administration.

Perhaps the mos t important function that we provided was that of data management. Our staff entered and analyzed load tickets resulting from the debris monitoring process. Our team was also responsible for debris contractor invoice reconciliation and approval as well as assisting City and FEMA staff with the preparation of project worksheets for approximately $9 million in FEMA funding.

**Reference/Project Information**

**Client Name:** City of Naples, FL
**Contact:** Ben Copeland, Public Works Analyst
380 Riverside Circle, Naples, FL 34102
**Phone:** (239) 213-7475
**Email:** bcopeland@naplesgov.com
**Contract Term:** Hurricane Wilma: 2006; Hurricane Irma: September 2017 – Present
**Dollar Value**: $650,000 (Hurricane Irma)
**Agency Size:** 20,600 residents; 16.4 square miles
**Volume of Debris:**
Wilma: 162,869 CYs and Irma: 200,238 CYs

Nearly 12 years after Hurricane Wilma, the City again was in the eye of the storm when Hurricane Irma made a second US landfall near the Naples coast. Tetra Tech mobilized to the area within hours of the wind dying down and spent several days in the emergency operations center working with municipal and county staff and the debris removal contractor planning for the debris removal mission.

Tetra Tech staff monitored over 200,000 cubic yards of debris removed from the City of Naples and nearly 1,000 hazardous hanging limbs, leaning trees, and stumps. Tetra Tech set up a geoportal for the City of Naples to view real-time debris removal ifnormation and help in their weekly reporting to elected officials. Tetra Tech is currently helping city staff to survey canals and prepare damage survey rreports for potential funding of a waterway debris removal program.

## Disaster Debris Monitoring – Hurricane Irma
**City of Doral, FL**

Tetra Tech has had a long term contract with the City of Doral (Doral) and worked on an annual basis to prepare for a potential disaster debris operation. Immediately following Hurricane Irma, Tetra Tech was given a notice to proceed by Doral to provide Florida Emergency Management Agency (FEMA) required disaster debris monitoring services.

Within hours of the storm's passing, our team had deployed a full support team to assist with staging operations, project staffing and scheduling. Specific tasks of the project team included:

- Certification of trucks for Doral's debris hauler
- Monitoring right-of-way (ROW) debris removal efforts
- Providing tower monitors at temporary debris disposal sites

**Reference/Project Information**

**Client Name:** City of Doral, FL
**Contact:** Carlos Arroyo, Assistant Public Works Director/Chief of Construction
8401 NW 53rd Terrace, Doral, FL 33166
**Phone:** (305) 593-6740 x. 6009
**Email:** carlos.arroyo@cityofdoral.com
**Contract Term:** September 2017 - Present
**Dollar Value**: $380,280
**Agency Size:** 45,704 residents; 13.6 square miles
**Volume of Debris:** 23,954 CYs

- Surveying and monitoring Doral's stump and leaner/hanger removal program
- Management of debris removal efforts in Doral's parks
- Data management, QA/QC, and contractor invoice reconciliation and approval

After operations ceased, Tetra Tech participated in an event for Doral Managers to look at lessons learned. Tetra Tech will continue working with Doral to help them refine plans and be even better prepared for a future event.

### Disaster Debris Monitoring – Hurricane Irma
**City of Dunedin, FL**

In the days prior to Hurricane Irma'a impact on the State of Florida, Tetra Tech and City of Dunedin (Dunedin) staff began coordination what would be an immediate response to the city's debris removal mission. Tetra Tech, having workied with Dunedin officials for nearly a decade, was in the unique position of being able to quickly identify Dunedin's immediate needs and work with the city's debris haulers to execute an efficient debris removal program.

In addition, Tetra Tech worked closely with Dunedin and Pinellas County officials to coordinate shared debris staging locations. Ultimately, the City engaged Tetra Tech in several different programs, including debris removal from parks and public golf courses, the use of multiple debris staging locations and the use of force account labor to remove debris.

In addition to monitoring all debris related activities, Dunedin has also retained the Financial Recovery Services Division of Tetra Tech.


**Reference/Project Information**

**Client Name:** City of Dunedin, FL
**Contact:** William Pickrum, Public Works
1070 Virginia Street, Dunedin, FL 34698
**Phone:** (727) 657-6408
**Email:** wpickrum@dunedinfl.net
**Contract Term:** September 2017-January 2018
**Dollar Value**: $407,099
**Agency Size:** 35,321 residents; 28.2 square miles
**Volume of Debris:** 33,364 CYs

### Disaster Debris Monitoring – Hurricane Irma
**City of Pinellas Park, FL**

Located in the middle of the Tampa Bay Area, the City of Pinellas Park (Pinellas Park) activated Tetra Tech to monitor the removal of residential debris that was wide spread throughout the city following Hurricane Irma.

Tetra Tech was able to work with Pinellas Park to overcome several operational challenges, including limited temporary disposal space, unusual right-of-way configurations, and contractor delays.

Tetra Tech also worked closely with City officials to track force account debris removal and associated time and expenses.

**Reference/Project Information**

**Client Name:** City of Pinellas Park, FL
**Contact:** Kyle Arrison, Stormwater Supervisor
6051 78th Avenue, Pinellas Park, FL 33781
**Phone:** (727) 369-5621
**Email:** Karrison@pinellas-park.com
**Contract Term:** September 2017 – January 2018
**Dollar Value**: $1,171,800
**Agency Size:** 49,079 residents; 16.2 square miles
**Volume of Debris:** 29,060 CYs

## 2. DISCONTINUATION OF SERVICES

Tetra Tech has never had any contracts terminated for cause by a governmental agency related to disaster recovery services.

## 3. CHALLENGED DOCUMENTATION/REIMBURSEMENT AMOUNTS

Our staff has an outstanding track record of getting our clients reimbursed, with more than 300 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 recently worked with the Port of Galveston, Texas, to close out Hurricane Ike-related projects. Our team was able to identify and capture over $80 million in previously unidentified or deobligated funding. The following is an example of successfully supporting the appeals effort of our clients with FEMA:

- **Port of Galveston, Texas (2010 – 2016).** 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.

## PROPOSAL PRICING FORM – RFP 2018-001 DISASTER DEBRIS MONITORING SERVICES

**Instructions:** Proposer shall provide a **Unit Price** and **Extended Amount** for each of the services listed below. This Price Proposal Form shall be typed or printed in ink. In the event of errors in the Extended Amount, the unit prices shall govern in determining the quoted prices. Unit Prices shall include, but not be limited to, full compensation for labor, any and all equipment used, travel and related expenses and any and all other costs to the Proposer. The City will not pay and/or reimburse any additional costs including, but not limited to, travel, mileage, lodging, meals, and other travel and subsistence expenses. No overtime rates shall be paid by the City; unit prices shall include applicable overtime.

Unit Prices shall remain fixed and firm for the initial three (3) year term of the contract. Prior to each renewal term of the resulting agreement, unit prices may be negotiated by the City with the Successful Proposer.

| Item | Description/Positions | Estimated Hours* | Unit of Measure | Unit Price | Extended Amount *(Unit Price x Estimated Hours)* |
|---|---|---|---|---|---|
| **1** | Project Manager | 80 | Hourly | $ 78.00 | $ 6,240.00 |
| **2** | Operations Manager | 336 | Hourly | $ 62.00 | $ 20,832.00 |
| **3** | Field Supervisors | 1344 | Hourly | $ 44.00 | $ 59,136.00 |
| **4** | Debris Loading Site Monitors | 7056 | Hourly | $ 36.00 | $ 254,016.00 |
| **5** | Debris Site/Tower Monitors | 2352 | Hourly | $ 36.00 | $ 84,672.00 |
| **6** | Clerical / Data Entry Supervisor (Data Manager) | 160 | Hourly | $ 55.00 | $ 8,800.00 |
| **7** | Clerical Staff / Data Entry Clerks | 480 | Hourly | $ 0.00 | $ 0.00 |
| **8** | Billing and Invoice Analyst | 40 | Hourly | $ 45.00 | $ 1,800.00 |
| **9** | Environmental Specialist | 16 | Hourly | $ 65.00 | $ 1,040.00 |
| **10** | GIS Analyst | 16 | Hourly | $ 50.00 | $ 800.00 |
| **11** | Administrative Assistant | 40 | Hourly | $ 36.00 | $ 1,440.00 |
| **12** | Public Assistance Coordinator | 80 | Hourly | $ 92.00 | $ 7,360.00 |
| | | | | **TOTAL: (Items 1 to 12)** (Sum of Extended Amounts) | **$** 446,136.00 |

***These hours are not intended to represent the actual contract amount, but are an estimated representation of a typical work month and will be used for the sole purpose of evaluating proposals. This is a "requirements" based contract and no minimum amount of hours/work is guaranteed or implied.**

**Other Optional Positions.** Proposer may include other positions, with hourly rates and attach a job description for each position.

| Item | Description / Position | Unit of Measure | Unit Price |
|---|---|---|---|
| 1 | See attached sheet | Hourly | $ |
| 2 | | Hourly | $ |
| 3 | | Hourly | $ |
| 4 | | Hourly | $ |
| 5 | | Hourly | $ |

# ADDITIONAL POSITIONS

## Positions and Hourly Rates for Emergency Management Planning and Training

Exhibit 5-1 provides a listing of positions that may be required to complete the emergency management and planning tasks. The fees for these services can be provided to the City on a fixed fee or time and materials basis.

Exhibit 5-1: Emergency Management Positions with Hourly Rates

| Labor Category | Hourly Labor Rate |
|---|---|
| Subject Matter Expert | $240.00 |
| Executive Consultant/Planner/Analyst | $225.00 |
| Principal Consultant/Planner/Analyst | $210.00 |
| Principal in Charge | $190.00 |
| Project/Program Manager | $175.00 |
| Supervising Consultant | $158.00 |
| Senior Consultant | $150.00 |
| Consultant III | $135.00 |
| Consultant II | $125.00 |
| Consultant I | $110.00 |
| Program Analyst | $95.00 |
| Consulting Aide | $90.00 |
| Planning Aide | $80.00 |
| Analytical Aide | $75.00 |
| Research Assistant II | $66.00 |
| Administrative Specialist III | $60.00 |
| Research Assistant | $51.00 |
| Administrative Specialist II | $48.00 |
| Administrative Specialist I | $44.00 |

## Positions and Hourly Rates for Public Assistance/Grant Management Consulting Services

Exhibit 5-2 provides a listing of positions that may be required to complete the grant management services listed in the proposal. The fees for these services can be provided to the City on a time and materials basis.

Exhibit 5-2: Financial Recovery Consulting Positions with Hourly Rates

| Labor Category | Hourly Labor Rate |
|---|---|
| Senior FEMA Appeals Legal Specialist | $350.00 |
| Subject Matter Expert | $225.00 |
| Principal Consultant | $190.00 |
| Senior Program Manager | $175.00 |
| Program Manager | $165.00 |
| Supervising Consultant | $145.00 |
| Senior Consultant | $125.00 |
| Consultant | $115.00 |
| Junior Consultant | $100.00 |
| Consulting Aide/Cost Estimator | $85.00 |
| Analytical Aide/Surveyor | $75.00 |
| Research Assistant | $51.00 |
| Grant Program & Admin Support | $35.00 |