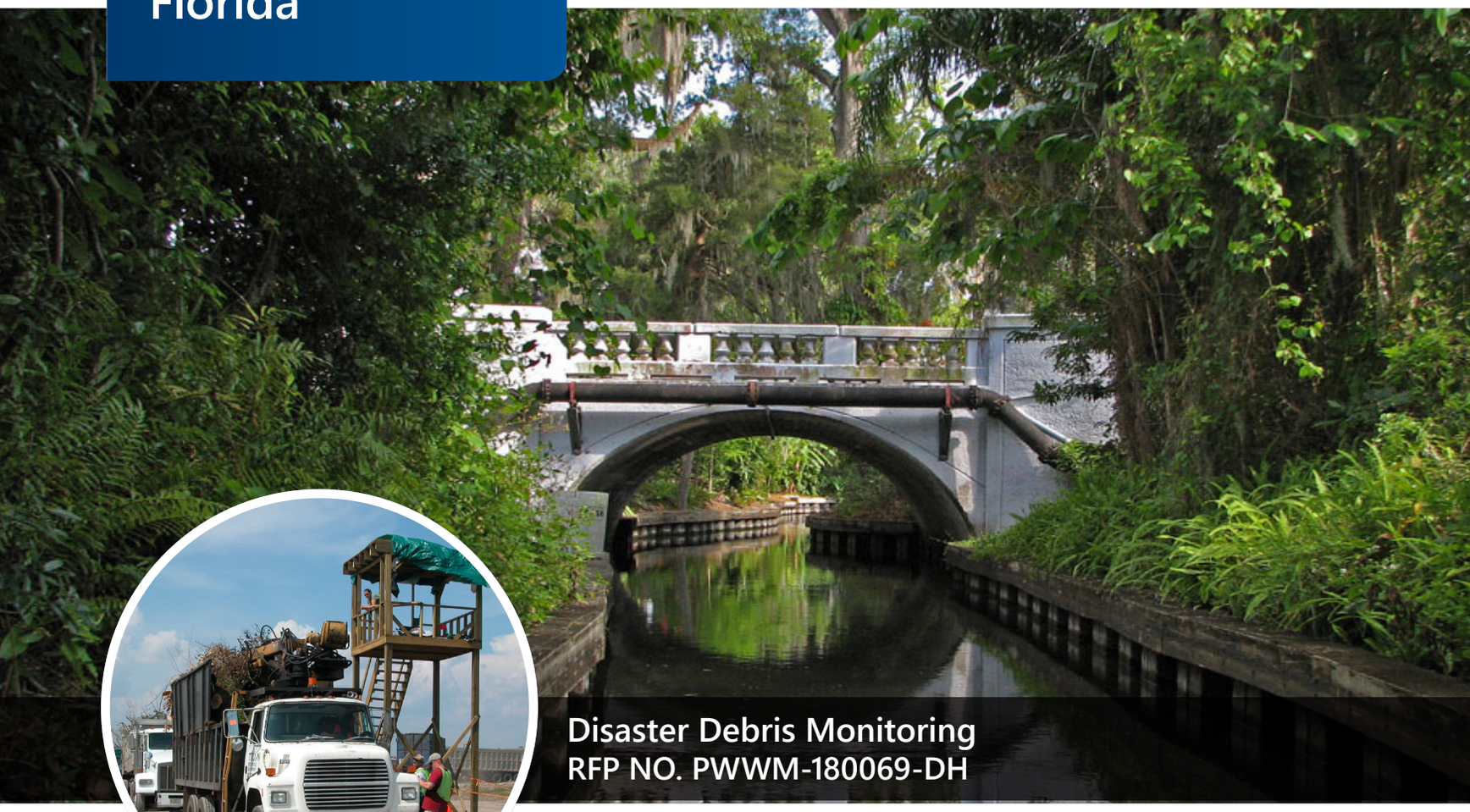
Legislative ID# 180094G

TETRA TECH

City of Gainesville, Florida



Disaster Debris Monitoring
RFP NO. PWWM-180069-DH

Proposal | Copy | May 2018

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TETRA TECH

May 8, 2018

Ms. Diane Holder
Senior Buyer
City of Gainesville Purchasing
200 East University Avenue, Room 339
Gainesville, FL 32601

Subject: RFP No. PWWM-180069-DH – Disaster Debris Monitoring

Dear Ms. Holder and Members of the Evaluation Committee,

The City of Gainesville (City) is home to nearly 130,000 residents and to one of the nation's largest universities. Like all communities in Florida, Gainesville may be affected by severe tropical weather events. Disaster-generated debris can have a negative impact on the City's residents, property, and the local economy. As a result, the City is seeking the services of a contractor who can provide disaster debris monitoring and management, emergency planning services, and long-term recovery grant management. Tetra Tech, Inc. (Tetra Tech) is pleased to submit the enclosed proposal to provide these services to the 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 management team.** For example, **following Hurricane Irma, Tetra Tech simultaneously deployed over 2,400 staff in the State of Florida, while still responding to Hurricanes Harvey and Maria in other parts of the country**. 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.**

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

- **Scalable Response.** Our team of experts has monitored and obtained Federal Emergency Management Agency (FEMA) and Federal Highway Administration (FHWA) reimbursement on 23 debris removal projects in excess of 1 million CYs, 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 150,000 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.

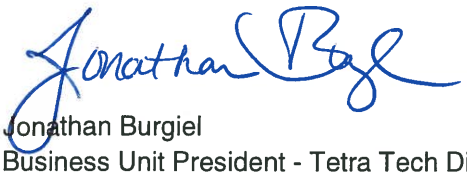
Additionally, Tetra Tech acknowledges receipt of Addendums 1 through 5.

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

Contractual representative:
Ms. Betty Kamara
2301 Lucien Way, Suite 120
Maitland, FL 32751
(407) 803-2551 | betty.kamara@tetratech.com

Sincerely,
Tetra Tech, Inc.



Jonathan Burgiel
Business Unit President - Tetra Tech Disaster Recovery

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Qualifications of the Firm

Description and History of the Firm

> ***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.***

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.***

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 12,500 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 Gainesville's (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 14 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.
- We offer a proven and successful technical and management approach that has been refined in disaster activations across the United States, including 23 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.

- The backbone of our disaster debris recovery program is our senior management team's foundation in the solid waste industry. For 15 years, Mr. Jonathan Burgiel, a 30+-year industry veteran, has worked with a team of highly skilled professionals to design and develop a proven approach that has been battle-tested and refined over 58 activations across the United States.

- As a global engineering firm with over 2.6 billion in annual revenues, we have the financial resources and cash flow to support a large, long-term recovery effort.
- 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.

Knowledge and Expertise in Debris Management

Recent Debris Monitoring Experience

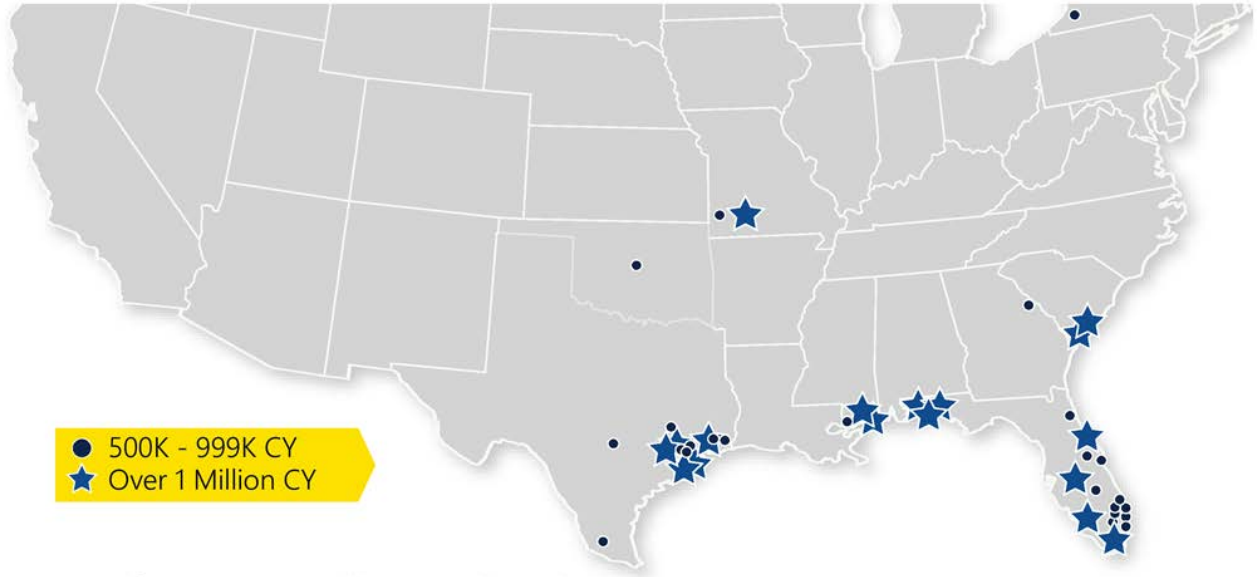
Our team has vast experience providing disaster management, recovery, and consulting services to state and local government agencies. Our approach includes partnering with our clients to establish and test the necessary plans and procedures before a disaster strikes and assisting with disaster response and recovery operations as well as post-disaster grant management. Exhibit 1-1 provides an abbreviated experience matrix for projects conducted since 2001. *Profiles and references from specific projects are featured in Section 5 of this proposal. Tetra Tech can provide additional projects and information upon request.*

Exhibit 1-1: Experience Matrix (2001–2018)

Large-Scale Debris Monitoring Experience

Tetra Tech takes great pride in the reliability of our service. Clients count on us to respond in their time of need, and we deliver. Our team has never failed to respond to our clients' deployment and mobilization needs, regardless of location or type of disaster. Our services under these engagements included environmental permitting, temporary debris storage reduction site (TDSRS) monitoring, contractor invoice reconciliation, and federal grant reimbursement support.

Exhibit 1-2: Large Project Experience



Summary of Projects Over 1 Million (M) Cubic Yards

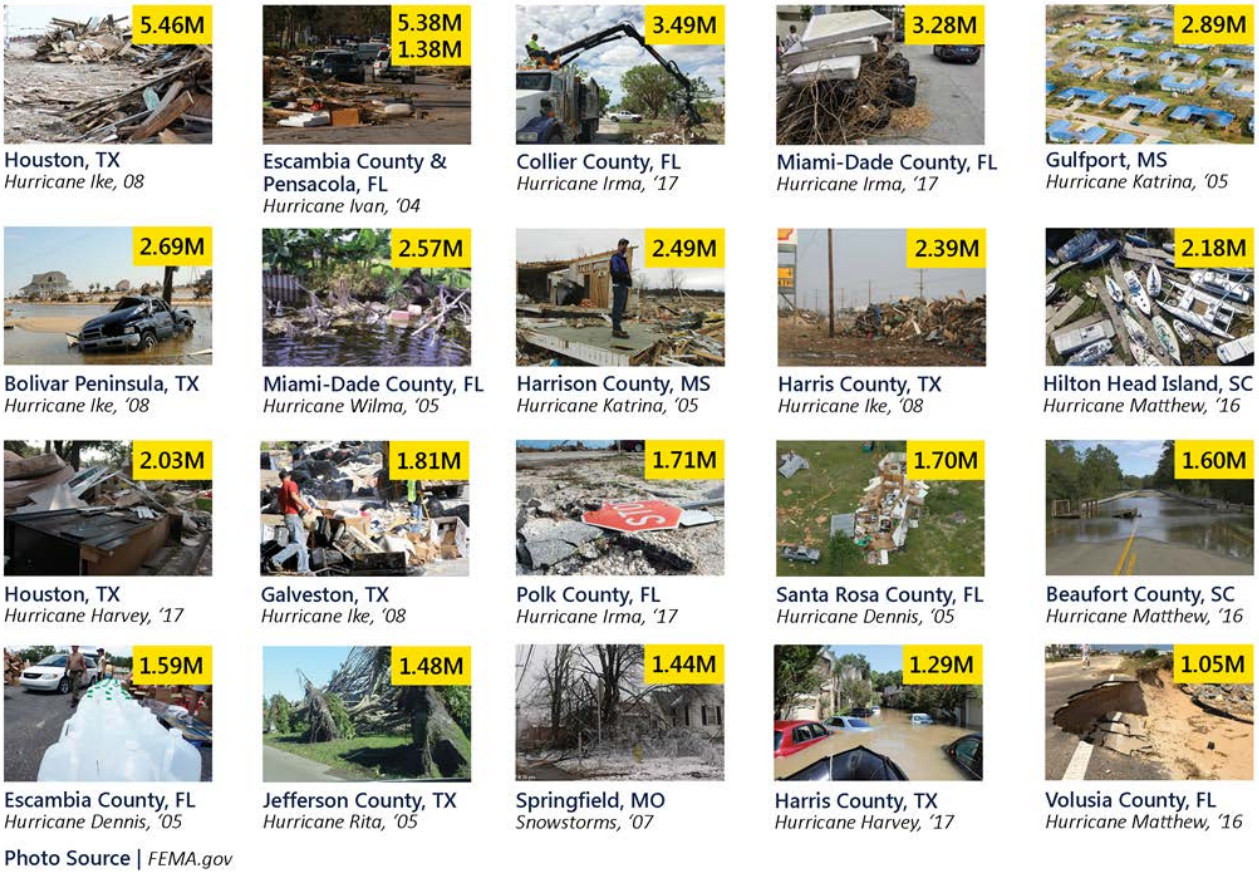


Photo Source | *FEMA.gov*

Florida Debris Monitoring Experience

Our team has assisted numerous communities in Florida with response and recovery efforts following Hurricanes Charley, Frances, Jeanne, Ivan, Dennis, Katrina, Wilma, and most recently Matthew and Irma. The list below summarizes our team's past debris monitoring experience in the State of Florida.

Hurricane Charley (2004)
Total Cubic Yards (CY) of Debris – 1,652,200 | 2 Clients
Lake County | 616,700 CY
City of Orlando | 1,035,500 CY

Hurricane Frances (2004)
Total CY of Debris – 500,000 | 2 Clients
City of Boca Raton | 200,000 CY
City of Orlando | 300,000 CY

Hurricane Ivan (2004)
Total CY of Debris – 7,475,554 | 3 Clients
Escambia County | 5,385,084 CY
Florida Department of Transportation | 708,800 CY
City of Pensacola | 1,381,670 CY

Hurricane Jeanne (2004)
Total CY of Debris – 350,000 CY | 2 Clients
Lake County | 100,000 CY
City of Orlando | 250,000 CY

Hurricane Dennis (2005)
Total CY of Debris – 3,917,267 | 5 Clients
Escambia County | 1,589,182 CY
Monroe County | 200,000 CY
City of Pensacola | 400,000 CY
Santa Rosa County| 1,708,085 CY

Hurricane Katrina (2005)
Total CY of Debris – 9,942,000 | 11 Clients | Representative Clients:
City of Fort Lauderdale | 400,000 CY
City of Hollywood | 360,000 CY
Miami-Dade County | 2,500,000 CY
Monroe County | 200,000 CY
City of Plantation | 450,000 CY

Hurricane Rita (2005)
Total CY of Debris – 4,810,000 | 3 Clients | Representative Clients:
Monroe County | 200,000 CY

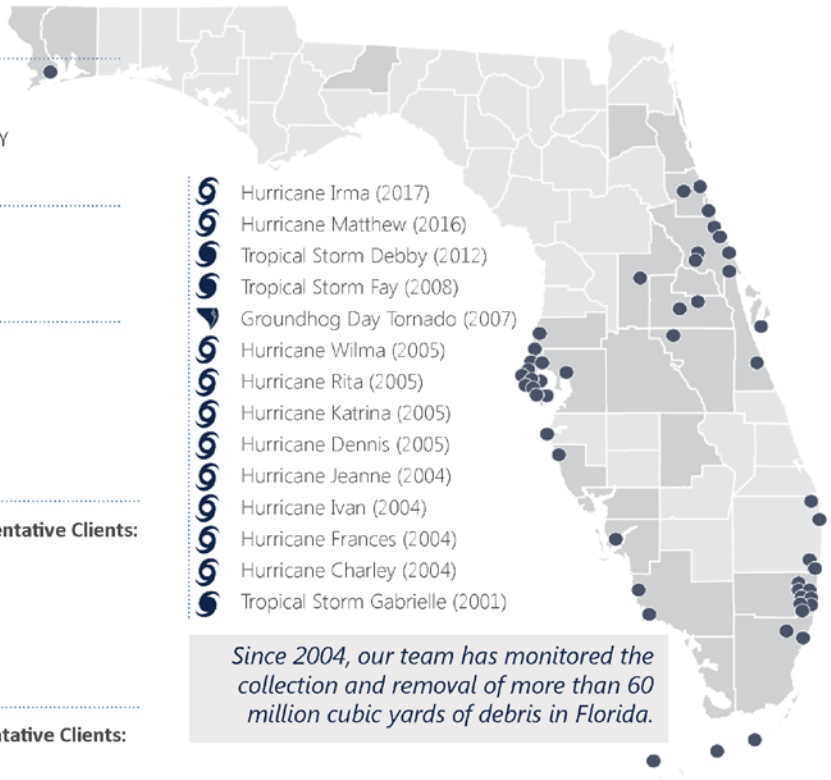
Hurricane Wilma (2005)
Total CY of Debris – 8,914,000 | 17 Clients | Representative Clients:
City of Boca Raton | 646,000 CY
City of Fort Lauderdale | 901,000 CY
Miami-Dade County | 3,000,000 CY
City of Pembroke Pines | 930,000 CY
City of Plantation | 811,000 CY

Groundhog Day Tornadoes (2007)
Total CY of Debris – 281,000 | 2 Clients
Lake County | 144,000 CY
Volusia County | 137,000 CY

Tropical Storm Fay (2008)
Total CY of Debris – 50,000 | 3 Clients | Representative Clients:
St. Johns County | 30,000 CY
Leon County | 20,000 CY

Tropical Storm Debby (2012)
Total CY of Debris – 7,253 | 3 Clients | Representative Clients:
Clay County | 3,777 CY
Pasco County | 2,583 CY

Florida Debris Monitoring Projects by disaster



Since 2004, our team has monitored the collection and removal of more than 60 million cubic yards of debris in Florida.

Hurricane Matthew (2016)
Total CY of Debris – 2,738,106 | 14 Clients | Representative Clients:
Brevard County | 820,779 CY
Flagler County | 129,687 CY
City of Holly Hill | 137,094 CY
City of New Smyrna Beach | 203,981 CY
City of Port Orange | 428,244 CY
St. Johns County | 712,705 CY
Volusia County | 1,058,334 CY

Hurricane Irma (2017)
Total CY of Debris – 18,773,000 | 59 Clients | Representative Clients:
City of Cape Coral | 363,207 CY
Collier County | 3,122,681 CY
Highlands County | 891,782 CY
City of Hollywood | 335,368 CY
City of Miami | 540,305 CY
Maimi-Dade County | 3,559,582 CY
Monroe County | 1,075,134 CY
Polk County | 2,237,547 CY
Seminole County | 821,470 CY

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.***

Disaster Recovery Program Management Services

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 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 1-3 is a representative list of our experience in assisting clients with PPDR activities and demolition program management.

Exhibit 1-3: 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
CalRecycle / CALOES Ventura County	Wildfire - 2018	■	■	■	■	■	■	■	■	■	■	■
USACE – Napa County, CA	Wildfire - 2017	■	■	■	■	■	■	■	■	■	■	■
USACE – Mendocino County, CA	Wildfire - 2017	■	■	■	■	■	■	■	■	■	■	■
USACE – Lake County, CA	Wildfire - 2017	■	■	■	■	■	■	■	■	■	■	■
USACE – Sonoma County, CA	Wildfire - 2017	■	■	■	■	■	■	■	■	■	■	■
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 1-4 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 1-4: Previous Leaner/Hanger/Stump Removal Programs

Client	Event	Total Leaners/Hangers/ Stumps Removed
Miami-Dade County Parks (Florida)	2017 Hurricane Irma	70,908
City of Miami, Florida	2017 Hurricane Irma	29,366
Polk County, Florida	2017 Hurricane Irma	27,267
Seminole County, Florida	2017 Hurricane Irma	25,348
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
Lake County, California	2015 Valley Wildfire	7,544
Calaveras County, California	2015 Wildfire	8,158
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 4: 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 4: Technical Approach**.

FEMA Appeal Assistance and Support

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

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

- **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.
- **South Broward Drainage District.** Following Hurricane Wilma, our team prepared an appeal in support of $4 million in reimbursement associated with lake erosion repairs made by the South Broward Drainage District. With our team's support, the South Broward Drainage District was fully reimbursed.
- **Lake County, Florida.** Our team supported the successful appeal of over $400,000 of previously deobligated funds in response to the 2004 Hurricanes Charley, Frances, and Jeanne. These funds were associated with debris collected on private roads and gated communities. Our team did a comprehensive geographic information system (GIS) analysis of all of the debris collected on the roads in question and was able to appeal the decision and obtain reimbursement from FEMA for these county-incurred costs.

Relevant Project Experience

Profiles and references from specific projects are featured in Section 5 of this proposal. Tetra Tech can provide additional projects and information upon request.

Florida Contracts

Capbility to Meet Time and Budget Requirements

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. **The firm does not have a history of requesting change orders for work or extensions of time other than for unforeseen conditions or change requests from clients.**

QUICK FACT

Following Hurricane Irma, Tetra Tech simultaneously deployed over 2,400 staff in the State of Florida. Tetra Tech provided project management staff to each of its Florida clients, while still responding to Hurricanes Harvey and Maria in other parts of the country. Our simultaneous response to several hurricanes is proof that we have the staff, resources, and expertise to respond to the City's post-disaster needs.

Tetra Tech understands it is critical that the City of Gainesville (City) partner 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 over 4,000 staff on behalf of 105 clients.**

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 2-1 summarizes the firm's current Florida debris monitoring clients within a 100-mile radius from the City.

Exhibit 2-1: Current Florida Contracts Summary

Client Name	
Belleair Bluffs, City of	Pinellas Park, City of
Clearwater, City of	Port Orange, City of
Dunedin, City of	Safety Harbor, City of
Gulfport, City of	Seminole, City of
Hillsborough County	South Daytona, City of
Holly Hill, City of	St. Cloud, City of
Indian Rocks Beach, City of	St. Johns County
Kissimmee, City of	St. Petersburg, City of
Lake County	Tampa, City of

Client Name	
Lake Helen, City of	Tarpon Springs, City of
New Smyrna Beach, City of	Temple Terrace, City of
Orange County	Volusia County
Orlando, City of	Winter Park, City of
Osceola County	

Workload: Past Five (5) Years, Current, and Future

As demonstrated during the very active 2017 hurricane season, Tetra Tech has the capacity to perform the work in relation to other current, ongoing, and future engagements. Tetra Tech provided more than 4,500 emergency response personnel immediately after Hurricanes Harvey, Irma, and Maria to assist with response and recovery and stands ready to assist the City should it be affected by a debris-generating disaster event. **We will provide the City a dedicated project management team for the duration of the project.**

As requested by the City, included below is information related to our past, current, and future workload.

Workload Over the Past Five Years

Please see Exhibit 2-2 at the end of this section for information regarding the firm's workload over the last five years.

Current Workload

Tetra Tech is currently engaged in the following projects:

- Hurricane Harvey – City of Houston, Texas
- Irma – FDEP, Miami Dade County, Florida
- California Wildfires – USACE and CalRecycle

Future Workload

Due to the uncertainty of the location, severity, or frequency of disaster incidents, we are unable to provide information about future workload.

Local Presence Facilitates a Quick Response

Tetra Tech conducts its operations in approximately 400 offices worldwide, including 215 offices located in 45 states and the District of Columbia. As depicted in Exhibit 2-3, Tetra Tech maintains 22 offices in the State of Florida. The Tetra Tech team can use these office locations as necessary to immediately respond to the City's need for personnel and resources following a disaster. These local offices may be used for office space, on-site IT personnel, communication resources, or staging of mobile trailers and equipment if necessary. ***The Maitland office will be the primary office location responsible for this project.***

Tetra Tech also maintains a warehouse located in Central Florida with over supplies capable of supporting over 50 simultaneous recovery operations for over 90 days. Our team has successfully deployed large-scale mobilizations of hundreds of staff and thousands of dollars' worth of equipment to multiple clients in a matter of days and on very short notice.

Exhibit 2-3: Florida Office Map

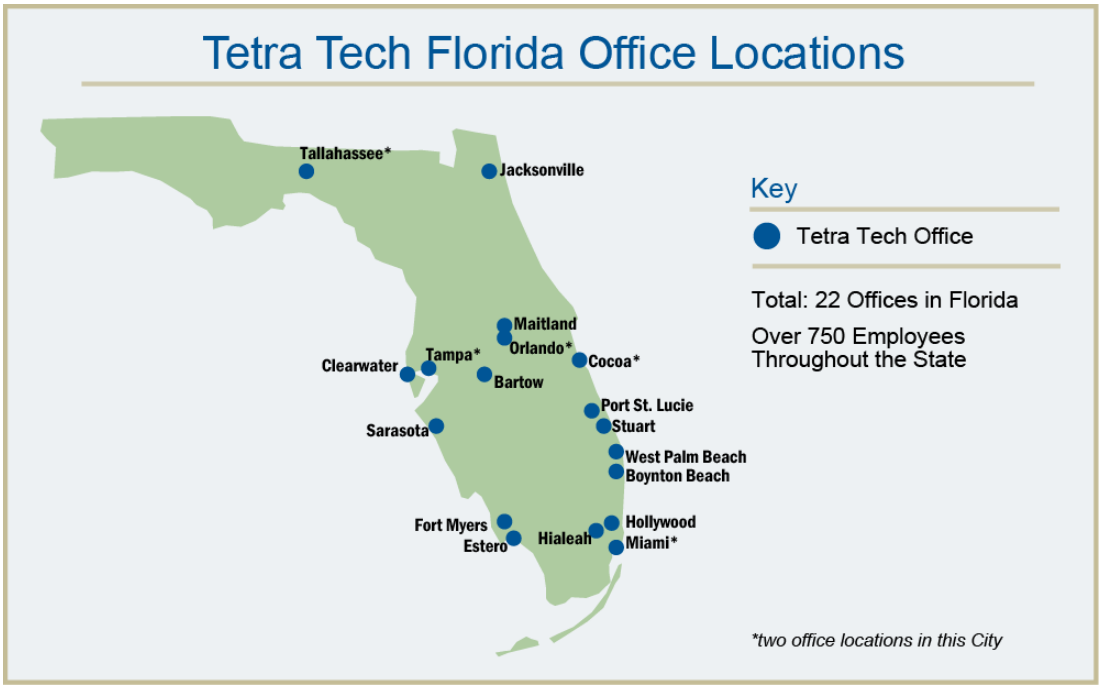


Exhibit 2-2: Workload Over the Past 5 Years

Client
2015 Severe Storms and Flooding
Dorchester County, SC
Richland County, SC
Sumter County, SC
Bellaire, City of TX
Caldwell County, TX
Friendswood, City of, TX
Hays County, TX
Houston, City of, TX

Client
2015 Wildfires
Lake County, CA
Calaveras County, CA
CalRecycle

Client
2016 Severe Storms and Flooding
Ascension Parish, LA
St. John the Baptist Parish, LA
Austin County, TX
Brookshire Katy Drainage District, TX
Caldwell County, TX
Fort Bend County, TX
Harris County, TX
Hays County, TX
Houston, City of, TX
Montgomery County, TX
Waller County, TX

Client
2016 Straight Line Winds
Collier County, FL

Client
2016 Wildfires
Lake County, CA
Calaveras County, CA
CalRecycle

Client
2016 Hurricane Matthew
Brevard County, FL
Cocoa, City of, FL
Deltona, City of, FL
Flagler Beach, City of, FL
Flagler County, FL
Holly Hill, City of, FL
New Smyrna Beach, City, FL
Oak Hill, City of, FL
Orlando, City of, FL
Port Orange, City of, FL
South Daytona Beach, City of, FL
Lake Helen, City of FL
St. Johns County, FL
Volusia County, FL
Albany, City of, GA
Dougherty County, GA
Liberty County, GA
Port Wentworth, City of, GA
Currituck County, NC
Duplin County, NC
Fayetteville, City of, NC
Greene County, NC
Lenoir County, NC
Raleigh, City of, NC
Beaufort County, SC
Briarcliffe Acres, Town of, SC
Colleton County, SC
Hampton County, SC
Hilton Head Island, Town of, SC
Horry County, SC
Myrtle Beach, City of, SC
North Myrtle Beach, City of, SC
Summerville, Town of, SC

Client
2017 Hurricane Harvey
Brazoria County, TX
Corpus Christi, City of, TX
Dickinson, City of, TX
Fort Bend County, TX
Friendswood, City of, TX
Groves, City of, TX
Harris County, TX
Houston, City of, TX
Humble, City of, TX
Jefferson County, TX
Katy City, City of, TX
League City, City of, TX
Montgomery County, TX
Nassau Bay, TX
Nueces County, TX
Orange County, TX
Pasadena, City of, TX
Pearland, City of, TX
Port Neches, City of, TX
Seabrook, City of, TX
Sugar Land, City of, TX
TxDOT Houston District, TX
Victoria County, TX
Victoria, City of, TX
Wharton, City of, TX

Client
2017 Wildfires
USACE
CalRecycle
CalOES

Client	
2017 Hurricane Irma	
Belleair, Town of, FL	Miramar, City of, FL
Boca Raton, City of, FL	Monroe County, FL
Brevard County, FL	Mount Dora, City of, FL
Broward County, FL	New Smyrna Beach, City of, FL
Cape Coral, City of, FL	Oldsmar City, FL, FL
Charlotte County, FL	Orange County, FL
Clearwater, City of, FL	Osceola County, FL
Cocoa Beach, City of, FL	Pasco County, FL
Collier County, FL	Pembroke Pines, City of, FL
Deerfield Beach, City of, FL	Pinellas County, FL
Deltona, City of, FL	Pinellas Park, City of, FL
Doral, City of, FL	Polk County, FL
Dunedin, City of, FL	Port Orange, City of, FL
FDEP (Waterways), FL	Redington Shores, Town of, FL
Gulfport, City of, FL	Sarasota County, FL
Highlands County, FL	Sarasota, City of, FL
Hillsborough County, FL	Seminole County, FL
Holly Hill, City of, FL	Seminole, City of, FL
Hollywood, City of, FL	South Daytona, City of, FL
Islamorada, Village of Islands, FL	South Pasadena, FL, FL
Jupiter, Town of, FL	St. Johns County, FL
Kenneth, City of, FL	St. Petersburg, City of, FL
Key West, City of, FL	Sunrise, City of, FL
Kissimmee, City of, FL	Tamarac, City of, FL
Lake County, FL	Tampa, City of, FL
Longboat Key, Town of, FL	Tarpon Springs, City of, FL
Marathon, City of, FL	West Palm Beach, City of, FL
Melbourne, City of, FL	Wilton Manors, City of, FL
Miami Dade County, FL	Winter Park, City of , FL
Miami, City of, FL	

Overview of Staff Experience

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

Our staff members have successfully managed the removal of and reimbursement for over ***103 million cubic yards (CYs) of debris*** as well as the ***demolition of over 12,500 uninhabitable residential and commercial structures.*** Our team has monitored and obtained FEMA, FHWA, and NRCS reimbursement on ***23 debris removal projects in excess of 1 million CYs of debris*** and understands the significant resource commitment and effort that is necessary to manage and monitor large-scale debris removal operations for local governments.

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

Professional Certifications, Training, and Licensing

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

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

Our proposed team possesses many of the key certifications necessary to provide quality technical services and 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 40-Hour HAZWOPER Certification
- G-202 Debris Management
- Homeland Security Exercise and Evaluation Program (HSEEP)
- IS 100: Introduction to Incident Command System
- IS-120: Introduction to Exercises
- IS-200: Basic Incident Command
- IS-547: Introduction to Continuity of Operations (COOP)
- IS-631: Public Assistance Operations I
- IS-632: Introduction to Debris Operations
- IS-634: Introduction to FEMA's Public Assistance Program
- IS-700: National Incident Management System
- IS-800: National Response Program

- Intermediate Workzone Traffic Control (FDOT)
- Mass Casualty Incident Manager Certification

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

Proposed Staff

Senior Management Team

Our senior management team will provide expert oversight and assistance at critical junctures and is prepared to assist the project management team during disaster recovery operations. 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 communities in Puerto Rico following Hurricane Maria; Miami Dade County and the City of Winter Park (Hurricane Irma); 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); and Harris County, Texas (Hurricane Ike), to name a few.
- **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 100 projects in his 13-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 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 PA program and other federal grant programs and assisting in the preparation, development, and review of FEMA PA project worksheets for disaster-related activities, state appeals, and closeout processes.
- **Mr. Jeff Dickerson** has more than 20 years of experience in program management and information technology and is the principal system architect of our automated debris management system (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, Irma, and Maria.

- **Mr. Oliver Yao** has over 10 years of disaster recovery experience and has supported response efforts to some of the largest disasters to affect the United States, including Hurricanes Katrina, Ike, and Sandy. Mr. Yao is responsible for the operational oversight of field projects, which includes ADMS implementation, logistics management, safety protocols, and senior management of data and reimbursement support. Mr. Yao has developed a team of seasoned data managers trained on the standard operating procedures he has developed to support project closeout and audit. Mr. Yao is a leading subject matter expert in reimbursement documentation and closeout audit support. In addition, Mr. Yao has assisted numerous local governments with FEMA appeals following Hurricanes Charley, Frances, Jeanne, and Wilma.
- **Mr. John Buri** is a versatile emergency management, disaster mitigation, response and recovery, and grant management professional with 16 years of experience. Mr. Buri has provided senior management oversight on 22 major disasters declarations for over 100 clients since 2007, representing over $3 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 PA consulting for tasks and activities associated with each disaster recovery operation. Mr. Buri also is familiar with FEMA Hazard Mitigation Assistance, HUD CDBG-DR and disaster funding strategies for local and state governments.
- **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 the states from Georgia to Delaware, including leading major hurricane preparation exercises in FEMA Region IV and FEMA Region III.

Project Management Team

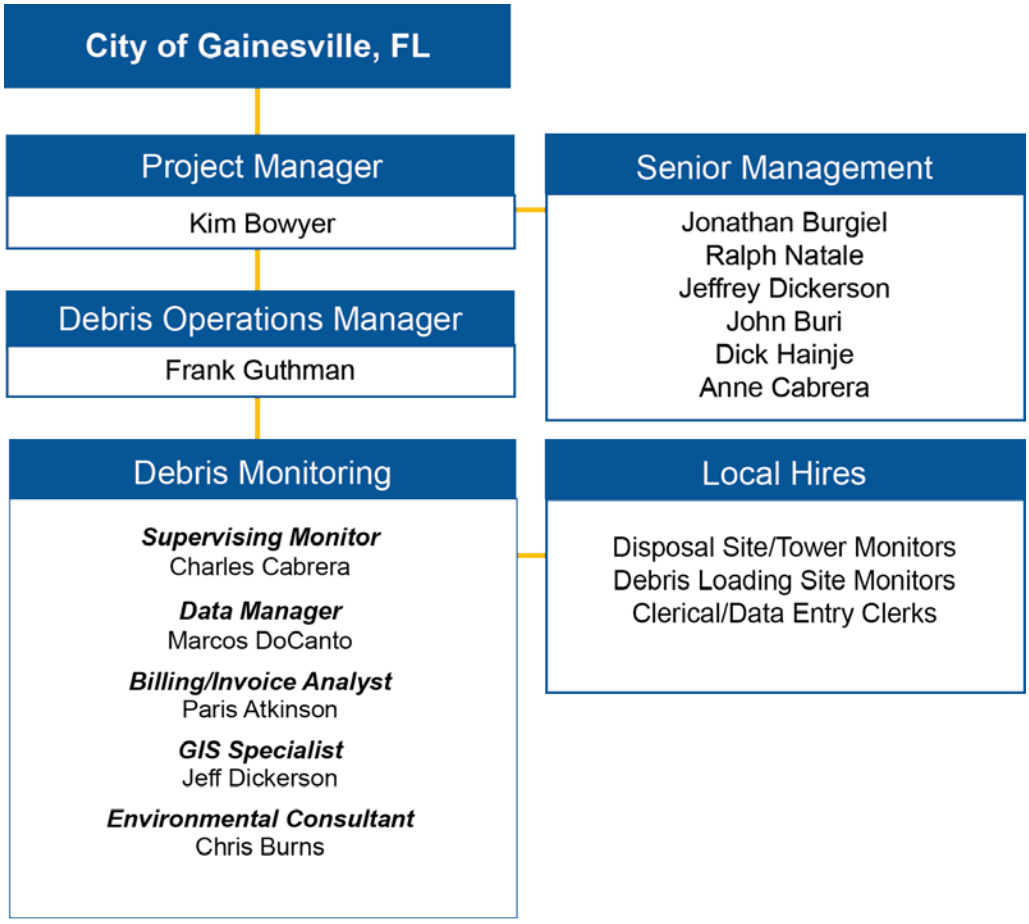
In addition to our senior management team, our dedicated project management team consists of disaster recovery professionals who are uniquely familiar with the policies, procedures, and requirements associated with providing disaster recovery services. ***Tetra Tech's staff members constitute an integrated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

Name	Summary of Qualifications
Simon Carlyle *Regional Manager*	• **Over 12 years of experience** responding to over 20 disasters; directly involved in the phases of disaster recovery efforts with significant knowledge of federal, state, and local regulations. • Provides clients with thorough annual training meetings and constant communication at times of potential storm impact • Works with client staff to review and provide consultation during development of client's FEMA-approved Disaster Debris Management Plans.
Kim Bowyer *Project Manager*	• **Joined the firm in 2007, and has over 11 years of experience** with debris monitoring operations • Industry expert in large-scale mobilizations, project staffing, and expertise in disaster debris program management support under FEMA's PA grant program • Experienced with private property right-of-entry administration and residential/commercial demolition

Name	Summary of Qualifications
	• Recently assisted several clients in Florida following Hurricane Irma and in Texas following Hurricane Harvey
Frank Guthman *Debris Management Operations Manager and Engineer*	• Civil engineer with **4 years of experience** with construction phase services, resident engineering duties, drainage, utility design and site layout • Over the last couple of years has been involved with the firm's disaster response and recovery operations, where he assisted several communities following major hurricanes • Most recently served as project manager for the City of Miami's debris monitoring operations following Hurricane Irma
Charles Cabrera *Supervising Monitor*	• **Over 4 years of experience** and a 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER)-trained operations manager for Tetra Tech • Responsible for the implementation of Tetra Tech's work plans, dispatching field personnel, staffing, safety, field logistics, and training. • Developed an extensive understanding of federal, state, and local regulations, protocols, processes, and guidance with respect to homeland security, disaster preparedness, response, recovery, and mitigation.
Paris Atkinson *Billing/Invoice Analyst*	• **Over 12 years of data management experience** in the disaster recovery field. • Has responded to every major disaster declaration in the last eleven years for Tetra Tech • A senior data manager and billing/invoice analyst, where her responsibilities include data management, management of monitoring documentation for the FEMA, invoice reconciliation, and the use of our ADMS • Extensive experience in the complex aspects of program data management, including project closeout and post-closeout audit support
Marcos DoCanto *Data Manager*	• Civil engineer with 4 years of experience with site/civil engineering, land development, surveying, and improvement projects • Recently served as lead data manager for the Sonoma, Mendocino, and Napa Counties wildfire project where he provided reporting and QA/QC of ADMS field documentation
Chris Burns *Environmental Consultant*	• **Over 15 years of experience** in the environmental field • Responded to over 400 oil spills, numerous wildfires, and other disaster incidents • 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

Exhibit 3-1 shows our proposed project team organizational structure. *Résumés have been included at the end of this section.*

Exhibit 3-1: Project Team Organizational Chart



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 Florida – Hurricane Irma
- 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

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

inspections. This $20 million project performed by Tetra Tech utilized state of 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
Principal in Charge

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

16 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–Ongoing)

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

Simon Carlyle
Regional Manager

EXPERIENCE SUMMARY

Mr. Simon Carlyle has been directly involved in all phases of disaster recovery efforts, and has developed significant knowledge of federal, state, and local regulations, allowing him to provide program and project management in response to some of the largest debris-generating disasters in the nation, including Hurricanes Irma, Harvey, Isaac, Irene, Katrina, Rita, Wilma, Gustav, Ike, and Sandy as well as numerous ice storms, wildfires, flooding events, and other natural disasters.

FEATURED EXPERIENCE

Regional Manager (September 2017 – Ongoing)

Multiple Clients in the State of Florida | Hurricane Irma

Hurricane Irma was the most powerful storm to make landfall in Florida since Hurricane Wilma in 2005. In the immediate aftermath, Mr. Carlyle was deployed to the Gulf Coast of Florida, serving as a regional manager for nearly 20 Cities and Counties including:

- Hillsborough County
- Pasco County
- Pinellas County
- City of Clearwater
- City of Dunedin
- City of Pinellas Park
- City of St. Petersburg
- City of Tampa
- Sarasota County
- Orange County

As regional manager, Mr. Carlyle is responsible for communicating with City and County administrators, scheduling debris removal operations, overseeing training, project staffing and data management, ensuring that debris and documentation remains accurate, representing clients in meetings with State and Federal officials, and coordination between County and City/Town government.

Regional Manager (August 2017 – Ongoing)

Multiple Clients in the State of Texas | Hurricane Harvey

In the wake of Hurricane Harvey, Mr. Carlyle was immediately deployed to the State of Texas, serving as a regional manager for multiple communities damaged by the storm. During the initial ramp-up of debris operations, Mr. Carlyle worked directly with impacted Cities, Counties, and respective communities, scheduling debris removal operations and task orders, and communicating all project matters related to the County's cities and towns to City and County staff. These clients included:

- Brazoria County
- City of Pearland
- City of League City
- City of Pasadena
- City of Dickinson
- City of Corpus Christi
- Nueces County
- County of Orange
- County of Galveston

YEARS OF EXPERIENCE

12 Years

AREA OF EXPERTISE

- Disaster Debris Management
- Private Property Programs
- Leaner/Hanger Programs
- FEMA Reimbursement
- Debris Site Permitting
- Public Information Campaigns
- Project Staffing
- Contract Management
- Public Information

GRANT EXPERIENCE

- FEMA PA
- FHWA ER Program
- NRCS

DISASTERS

- 4344 CA Wildfire
- 4337 Hurricane Irma
- 4339 Hurricane Maria
- 4332 Hurricane Harvey
- 4280 Hurricane Hermine
- 4272 TX Severe Flooding
- 4269 TX Severe Flooding
- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 4029 TX Wildfires
- 4024 Hurricane Irene
- 4106 CT Winter Storm
- 1791 Hurricane Ike
- 1786 Hurricane Gustav
- 1609 Hurricane Wilma
- 1606 Hurricane Rita
- 1602 Hurricane Katrina

TRAINING/CERTIFICATIONS

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

Project Manager (October 2016 – May 2017)

Beaufort County, SC

Mr. Carlyle's relationship with Beaufort County staff dates back nearly a decade. Thorough annual training meetings, constant communications at times of potential storm impact, and working with County staff review and provide consultation to County staff during development of the County's FEMA approved Disaster Debris Management Plan Mr. Carlyle has developed a unique understanding of the County's post-disaster needs. Prior to Hurricane Matthews impact on the County in October of 2016, Mr. Carlyle worked with County staff to devise a project specific mobilization plan. Throughout the storm's impact, Mr. Carlyle was in regular contact with County staff throughout the storm's impact and was in the County's operation center 12 hours after Storm conditions had surpassed. Mr. Carlyle was embedded in Beaufort County throughout the entirety of the County's recovery operations, serving a project manager for Tetra Tech's entire engagement there. Mr. Carlyle oversaw the removal of over 1.7million cubic yards of debris, the removal of 62,000 hanging limbs and dangerous trees, the execution of 83 Right-of entry agreements, and a waterway debris and vessel removal program.

Regional Program Manager (March- August 2016)

Counties of Harris, Montgomery, Waller and Brazoria, Texas

In the spring of 2016, much of Eastern Texas was inundated with two devastating flooding events that inundated the region. As a key member of Tetra Tech's response team, Mr. Carlyle was critical in the immediate coordination of debris removal activities for multiple clients. Mr. Carlyle was main responsibilities included training project staff, coordinating with debris haulers to schedule debris removal, working with the Texas Commission on Environmental Quality to permit temporary debris management sites, establishing reporting protocols and assisting with the development of several unique public information campaigns

Public Outreach Manager (November 2015 – April 2016)

Lake County, California

As part of Tetra Tech's ongoing recovery program management engagement with Lake County, California, following the devastating wildfires that claimed as many as 1,500 homes. Mr. Carlyle worked closely with County officials to develop and execute a public information campaign designed to attract, inform, and assist residents who wished to apply for a Federal Emergency Management Agency (FEMA)-approved right-of-entry program. Mr. Carlyle was instrumental in the coordinating the communication outreach program to over 12,000 residents on multiple occasions.

Public Information Campaign, Producer (May 2015)

Houston-Galveston Area Council

The Houston-Galveston Area Council (H-GAC) tasked Tetra Tech with the development of a post-event debris segregation public information campaign. Mr. Carlyle worked closely with H-GAC staff to develop informational and instructional graphics in both English and Spanish to be posted on public websites and printed for distribution following a debris-generating event. In addition, Mr. Carlyle produced four separate videos in both English and Spanish to be broadcast on social media and local networks immediately following an event. The coordinated efforts between Tetra Tech, H-GAC, and local governments have been successful in educating the general public post-disaster, thus leading to debris collection efficiencies.

Client Manager (August 2012–November 2012)

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

In anticipation of Hurricane Isaac making landfall in Louisiana, Mr. Carlyle mobilized and immediately responded to the Parish post landfall. Mr. Carlyle helped the Parish address and identify primary areas of concern, identify temporary disposal site locations, and establish protocols for a FEMA-approved modified property debris removal. Mr. Carlyle worked closely with the Parish's public information officer to develop daily press briefings and assisted with the Parish's overall public information campaign. Mr. Carlyle also facilitated initial coordination meetings with FEMA officials, state representatives, and the Parish's hauler. Mr. Carlyle followed through on our team's promise to the Parish and staffed entirely local Parish residents for the disaster recovery monitoring program.

Project Manager (September 2011–May 2012)

Bastrop County, Texas | Wildfire Disaster Program Management

Following the largest and most damaging wildfire in Texas history, Mr. Carlyle led our team of experts in initializing Bastrop County's recovery effort. Mr. Carlyle was integral in obtaining expedited project worksheets, coordinating with FEMA to develop disaster-specific documentation protocols, initiating a private property debris removal program, and orchestrating interlocal coordination with county municipalities, electrical co-ops, and regulatory agencies.

Project Manager (September 2008–October 2009)

City of Galveston, Texas | Hurricane Ike Program Management of Debris Removal from Subsurface Stormwater Management System

Following the initial right-of-way debris removal program in the City of Galveston, Mr. Carlyle was mobilized to set up protocols and manage Hurricane Ike-related debris removal from subsurface storm drains and the removal of trees that had been rendered lifeless due to saltwater intrusion. Mr. Carlyle worked closely with the City's public works and engineering departments as well as FEMA to establish documentation protocols that would satisfy FEMA requirements and minimize paperwork and costs to the City of Galveston.

Quality Assurance/Quality Control (November 2007–November 2008)

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

As part of the project team for the demolition program, Mr. Carlyle was responsible for ensuring all utilities were shut off and all required paperwork was complete prior to demolition.

Project Manager (February 2006–August 2006)

City of Waveland, Mississippi | Hurricane Katrina Public and Private Property Debris Removal Program Management

The City of Waveland is considered by many to be "ground zero" of Hurricane Katrina, which made landfall on August 29, 2005, as a Category 4 hurricane with sustained winds of 145 miles per hour. Mr. Carlyle helped to initiate the City of Waveland's right-of-way debris removal operation and right-of-way leaner and hanger removal program and to coordinate debris removal from City parks.

Project Manager (October 2005–February 2006)

City of Miramar, Florida | Hurricane Wilma Disaster Recovery Services

Mr. Carlyle deployed an immediate response team to provide storm debris cleanup and recovery planning in response to Hurricane Wilma. Mr. Carlyle also successfully managed multiple debris-hauling contractors within the City of Miramar, ensuring that there was no duplication of effort.

TETRA TECH

Kim Bowyer
Project Manager

EXPERIENCE SUMMARY

Mr. Kim Bowyer joined the firm in 2007 and has become an industry expert in large-scale mobilizations, project staffing, and debris monitoring operations and has extensive experience in disaster debris project management support under the Federal Emergency Management Agency's (FEMA) Public Assistance (PA) Grant Program. He has worked for numerous communities, from Connecticut to the southern tip of Texas to California, providing disaster recovery operations support. Mr. Bowyer is also experienced in all aspects of disaster planning and recovery, including mobilizing response teams, permitting debris management site locations, public information, call center operations, private property right-of-entry administration, waterway cleanup, and residential/commercial demolition.

FEATURED RELEVANT EXPERIENCE

Regional Lead (September 2017 – Ongoing)
Florida Keys | Hurricane Irma
Mr. Bowyer was tasked with the management and oversite of Monroe County Florida, Islamorada Florida, Marathon Florida and Key West Florida.

Regional Lead (August 2017 – Ongoing)
Various Clients in Texas | Hurricane Harvey
Following Hurricane Harvey and the record rainfall in Texas, Mr. Bowyer headed up debris removal operations in the City of Victoria and Victoria County. He was also tasked with the oversight of several other projects in the Houston area.

Project Manager
Calaveras County | Butte Fire
Following catastrophic fires that impacted Calaveras County in September 2015, many dead or dying trees that were a threat to fall and threaten citizens 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. Bowyer was tasked with project management of 12,000 ROW and private property trees that were located on 86 miles or County ROW and 500 private properties.

Project Manager (November 2015–August 2017)
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 were a threat to fall and threaten citizens 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. Bowyer was tasked with project

YEARS OF EXPERIENCE

11 Years

AREA OF EXPERTISE

- FEMA Compliance Monitoring
- Disaster Debris Management
- Field Monitoring
- Project Staffing
- Truck Certification
- Multiagency Coordination
- FEMA Reimbursement

DISASTERS

- 4240 Valley & Butte Fire
- 4245 Severe Storms Texas
- 4166 SC Winter Storm
- 4165 GA Winter Storm
- 4145 Colorado Floods
- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 4024 Hurricane Irene
- 4106 CT Winter Storm
- 1791 Hurricane Ike
- 1786 Hurricane Gustav
- 1780 Hurricane Dolly
- 1676 MO Winter Storms
- 1606 Hurricane Rita
- 1602 Hurricane Katrina

TRAINING/CERTIFICATIONS

- NIMS Certified
- 40- Hour HAZWOPER
- Supervisor Certification – HAZWOPER
- IS-235.b Emergency Planning

EDUCATION

Thomas Edison State College
Bachelor of Science, Marketing, 2005

Crowder College
Associate of Arts, General

management of 20,000 ROW and private property trees that were located on 130 miles or County ROW and 2500 private properties.

Project Manager (May 2015–September 2015)

Hays County, Texas | Flood Debris Removal Project Management

Mr. Bowyer served as project manager for Hays County's debris removal project on County public ROW following the May 2015 flooding along the Blanco River. To date, our team has removed close to 45,000 yards of debris. Mr. Bowyer is also assisting in managing the identification of eligible debris for reimbursement and administrating the project management for the County's private property debris removal project.

Project Manager (March 2014–April 2015)

Boulder County, Colorado | Flood Debris Removal Project Management

Mr. Bowyer served as project manager for Boulder County's private property debris removal project and public ROW debris removal following the September 2013 flooding. Our team removed close to 10,000 tons of debris. Mr. Bowyer assisted in managing the identification of eligible debris for reimbursement and administrating the project management for the County's demolition project.

Regional Project Manager (February 2014–March 2014)

City of Augusta, Georgia; City of Sumter, South Carolina; Counties of Colleton, Dorchester, Sumter County, South Carolina | Winter Storm Pax Debris Removal Project Management

Mr. Bowyer was a critical component of our response to Winter Storm Pax in South Carolina and Georgia. Mr. Bowyer was tasked with leading our team of recruiters to staff projects that spanned nearly 4,000 square miles of South Carolina and Georgia. Mr. Bowyer's team identified, hired, and trained over 150 monitors within the first few days of operations. Mr. Bowyer also oversaw debris site openings, project initiation, and data management.

Regional Operations Manager (February 2013–January 2014)

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

Following Hurricane Sandy, Mr. Bowyer served as regional operations manager for the New Jersey Department of Environmental Protection, which included the removal of debris, vessels, and silt along two-thirds of New Jersey's coastline.

Deputy Project Manager (October 2012–December 2012)

State of Connecticut | Hurricane Sandy Disaster Debris Project Management

Following Hurricane Sandy, Mr. Bowyer managed the debris removal project for the State of Connecticut Department of Transportation, Connecticut Department of Energy and Environmental Protection, and eight separate municipalities. Mr. Bowyer trained monitors for duties as tower monitors and ROW vegetative and construction and demolition debris collection monitors, organized the staffing of monitor positions, and tracked the progress of the debris collection.

Project Manager (August 2012–November 2012)

Jefferson Parish, Louisiana | Hurricane Isaac Disaster Debris Project Management

Following Hurricane Isaac, Mr. Bowyer served as the project manager for Jefferson Parish. He managed the debris removal, leaners and hangers, and parks projects. He met with city officials regularly to report progress and plan operations. He worked with city officials, contractor management, and disposal site operators to plan disposal site operations, traffic flow through the site, and debris staging strategies.

Deputy Project Manager (October 2011–April 2012)

Connecticut Department of Transportation | Winter Storm Alfred Disaster Management Support Services

Following Winter Storm Alfred, Mr. Bowyer managed debris and hazardous tree removal operations involving 160 monitors and field staff. His territory totaled 1,800 miles of state routes and several interstate highways. Mr.

Bowyer also maintained separate records for FEMA and Federal Highway Administration-Emergency Relief (FHWA-ER) routes to facilitate reimbursement for the State of Connecticut.

Project Manager (August–December 2011)

Henrico County, Virginia | Hurricane Irene Disaster Debris Project Management

Following Hurricane Irene, Mr. Bowyer oversaw the removal of debris and hazardous trees from County-maintained roads. He also expanded the debris management project to include the removal of hazardous trees and branches from County parks.

Operations Manager (July 2008-November 2008)

Hidalgo County, Texas | Hurricane Dolly Disaster Debris Project Management

Mr. Bowyer served as operations manager following Hurricane Dolly for Hidalgo County, where he managed the debris removal and time and materials operations. Mr. Bowyer properly allocated personnel to match the demands of the contractor, while maintaining the proper staffing levels. He was responsible for truck certifications and properly staffing personnel at all debris management site towers. Mr. Bowyer also served as project manager for the City of Alamo, Texas, which is located in Hidalgo County.

Project Manager (December 2010-November 2011)

Terrebonne Parish, Louisiana | Hurricane Ike Residential Demolition Project

Following Hurricane Ike, Mr. Bowyer was responsible for managing and identifying submitted storm-damaged structures to FEMA for reimbursement. Mr. Bowyer walked all properties through the condemnation process that led to the ultimate demolition of 360 properties.

Operations Manager (May 2010–June 2010)

City of Norman, Oklahoma | Tornado Disaster Debris Project Management

Following the tornadoes in 2010, Mr. Bowyer served as the operations manager and provided oversight on debris removal, leaners and hangers, and tower and truck certification. He also monitored hazardous waste removal and ROW debris removal from parks in the City of Norman.

Operations Manager (March–May 2010)

Comanche Nation, Oklahoma | Winter Storm Disaster Debris Project Management

Mr. Bowyer trained Comanche Nation tribal members on debris removal, leaners and hangers, and tower and truck certification. Mr. Bowyer assisted with identifying and assessing the properties owned by the Comanche Nation.

Operations Manager (November–December 2009)

Arkansas Game and Fish Commission | Ice Storm Disaster Debris Project Management

Following the ice storms in 2009, Mr. Bowyer was responsible for training monitors and certifying over 40 crew members for a fast-paced urgent hazardous tree removal in two wildlife management areas. He also assisted in FEMA validations for proper reimbursement.

Project Manager (September 2008–August 2009)

Iberville Parish, Louisiana | Hurricane Gustav Disaster Debris Project Management

Following Hurricane Gustav, Mr. Bowyer managed ROW debris removal and the removal of hazardous branches and leaning trees on Parish ROWs. He also managed the Parish-wide private property debris removal project and the removal of storm-generated debris from several Parish waterways and bayous.

TETRA TECH

Frank H. Guthman III
Operations Manager

EXPERIENCE SUMMARY

Mr. Guthman is a Civil Engineer in the Land Development Group. He supports a wide range of land development and improvement projects for public and private clients. Tasks have included providing construction phase services, Resident Engineering duties, grading, drainage, utility design and site layout.

RELEVANT EXPERIENCE

City of Miami, Hurricane Irma. Following Hurricane Irma's impact in South Florida, Mr. Guthman deployed to the City of Miami where he served as project manager and assisted the City of Miami with disaster debris removal monitoring operations.

Miami Dade County Parks and Miami Dade County Fire Rescue – Project Manager, Hurricane Irma. Mr. Guthman assisted Miami Dade County Parks and Miami Dade County Fire Rescue immediately after Hurricane Irma struck South Florida. Mr. Guthman managed the logistics for the debris removal monitoring operations and supervised the debris management sites used to process the debris.

Hilton Head Island, South Carolina – Operations Manager, Hurricane Matthew. Mr. Guthman served as operations manager where he was responsible for implementing Tetra Tech's work plan, staffing, dispatching field personnel, and overseeing adherence to safety protocols. He also oversaw truck certifications, field and disposal operations.

Massachusetts Convention Center Authority, Boston Convention and Exhibition Center, South lot Remediation, Boston, MA, 2016 to Present – Tetra Tech is providing permitting, design and construction-phase services related to remediation work at the South Parking Lot at the Boston Convention and Exhibition Center in South Boston, MA. Duties include submittal review, SWPPP inspections, on-site inspection of construction/remediation activities, progress meetings and review of contractor payment requisitions.

Massachusetts Convention Center Authority, Boston Convention and Exhibition Center, D Street Parcel Landscape Improvements, Boston, MA, 2015 to 2016 – Provided construction oversight for improvements to the D Street parcel adjacent to the Boston Convention Center & Exhibition Center. Tetra Tech provided permitting, design and construction-phase services for interim landscape improvements to accommodate hotel and potential retail development along D Street. The project consisted of improvements to Claflin Street, new pedestrian walkways, a tent for vendors and events, and associated drainage and utility improvements.

Genzyme Corporate Expansion Program, Framingham and Allston, MA, 2015 to Present – Civil Engineer in support of various projects at Genzyme facilities. For more than 15 years, Tetra Tech has managed comprehensive

EDUCATION

BS, Civil Engineering, Discipline, Roger Williams University, School of Engineering, 2013

REGISTRATIONS / CERTIFICATIONS

OSHA 40-Hour HAZWOPER, OSHA 10-Hour Safety

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

YEARS OF EXPERIENCE

4

land development services for this leading biotechnology company. Work has included site/civil engineering, environmental permitting, transportation planning and design and construction management projects at facilities in Framingham, Allston and Northborough.

Genzyme, Northborough Operations Center Parking Improvements, Northborough, MA, 2016 to Present – Civil Engineer responsible for quality control and construction inspections during the construction phase of the project. Duties included daily client coordination, conducting daily safety briefings, construction quality control, and reporting

Town of Medway, On-Call Design and Review Services, Medway, MA, 2015 to Present – Civil Engineer for Tetra Tech's on-call engineering design and review services contract for the Town of Medway. Tasks have included providing construction observation and oversight for the Millstone Village 55+ residential community, Tri Valley Commons shopping plaza and Applegate Farms subdivision. Tetra Tech provides general engineering design and review services to the Town on an on-call basis. Work includes plan and analysis review for multiple boards, committees and departments with regard to site plans, stormwater analysis, utility design and town regulation review.

Town of Westminster, MA, Subdivision Plan Review and Construction Inspection, 2015 to Present – Review of subdivision plan submissions with all supporting documentation including drainage analyses, traffic analyses and community impact statements. Provides construction inspection services for the subdivisions, including installation of all new utilities (water, sewer, gas, drain, electric, telephone and cable). Inspects earthwork, grading, paving, curb installation and all other work performed within the subdivision road right-of-way.

Prior to joining Tetra Tech, Mr. Guthman held the following positions:

VTRANS, Accelerated Bridge Project, Rochester, VT, July 2014 to May 2015 – as a Bridge Construction Inspector for Parsons Brinckerhoff in Boston, provided construction inspection for this 6M accelerated bridge project for the replacement of four bridges on VT Route 73 that were destroyed by Hurricane Irene in 2011. Helped interpret the project plans and construction drawings in response to contractor questions. Ensured that all construction activities, materials, and workmanship were in conformance with permits, construction plans and VTRANS specifications. Prepared and electronically submitted Daily Work Reports that included pay item quantity calculations and sketches, the stationing of completed pay items, relevant observations, and contractors daily equipment and material usage. Frequently checked elevations of earth and structures in accordance with the project plans using a rod and level. Created 2D and 3D AutoCAD models of pay item dimensions to calculate and display pay quantities in the project binder. Responsible for "red checking" the structural engineers quantities for all pay item calculations in order to submit final payment to the contractor.

Assistant Land Surveyor, Northeast Engineers & Consultants, Inc. Middletown, RI, February 2014 to July 2014 – Responsible for operation of TopCON GPS units at numerous locations to solve occupied GPS positions and tie them into National Spatial Reference System. Surveyed property limits using both a rod and level and TopCON Total Station. Assisted Senior Engineers and Licensed Surveyor with editing and processing project CAD drawings.

Paving Supervisor, Sargis Associates LLC., Rocky Hill, CT, May 2011 to August 2012 – Directed daily operations/simultaneously managed two paving contractors for Yankee Gas. Determined mark-out limits for temporary and permanent roadway restorations. Kept extensive daily reports and photos of daily operations using Tuffbook, including safety management, restoration quality, and traffic control.

Engineering Intern, Department of Public Works Engineering Division, Norwalk, CT Summers 2008, 2009, and 2010 – Served as Engineering Inspector for roadway paving repair projects. Assisted Senior Traffic Engineer on a variety of city-wide projects. Tasks included installing data interpretation traffic counters; performing street sign mark-outs; and analysis of traffic cameras. Assisted Licensed Land Surveyor with city survey assignments, including operating a Leica Total Station for drainage and roadway design projects. Directed and supervised work crews on infrastructure projects; responsible for completed daily engineering reports for supervisor.

TETRA TECH

Charles Cabrera
Field Supervisor

EXPERIENCE SUMMARY

Mr. Charles Cabrera is a 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER)-trained operations manager for Tetra Tech who serves on various projects throughout the country. Mr. Cabrera is responsible for the implementation of Tetra Tech's work plans, dispatching field personnel, staffing, safety, field logistics, and training. Mr. Cabrera will verify eligibility and compliance; oversee collection and disposal operations; and coordinate directly with debris contractors, data managers, and project managers to facilitate the success of fast-moving debris operations projects.

Mr. Cabrera has developed an extensive understanding of federal, state, and local regulations, protocols, processes, and guidance with respect to homeland security, disaster preparedness, response, recovery, and mitigation.

FEATURED RELEVANT EXPERIENCE

Division Supervisor (August 2017 – Present)

Detwiler Fire Response

Mr. Cabrera is currently serving as division supervisor responsible for coordinating staff, directing health and safety operations, and overseeing and documenting debris removal contractor's field activities. Tetra Tech is 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.

Deputy Project Manager (October 2016–August 2017)

Brevard County, Florida | Hurricane Matthew

Hurricane Matthew pummeled Brevard County in 2016, leaving over 800,000 cubic yards of debris in its wake. As deputy project manager, Mr. Cabrera was responsible for implementing all task orders from the City, and provided project oversight, project scheduling, training of personnel, and dispatching of staff.

Division Supervisor (July 2016–October 2016)

CalRecycle | Erskine Fire

As division supervisor for the Erskine wildfire recovery project, Mr. Cabrera was responsible for dispatching field personnel, staffing, safety, field logistics, task force dispatching, training, and other daily activities. Mr. Cabrera was responsible for verifying eligibility, compliance, and collection and disposal operations oversight and coordinated directly with the project manager daily with progress reports and on specific issues

Project Manager (January 2016–February 2016)

Collier County, Florida | Straight-Line Wind Event | Disaster Debris Program Management

YEARS OF EXPERIENCE

4 Years

AREA OF EXPERTISE

- Disaster Debris Management
- Right-of-Way Debris Removal
- Safety
- Private Property Debris Removal
- Disposal Operations
- Quality Assurance Initiatives
- FEMA Compliance Monitoring
- Supervision of Field Operations
- Operational Scheduling and Dispatch
- Hazardous Tree Removal
- FEMA PA Category A documentation and eligibility requirements

DISASTERS

- Collier County Severe Storms and Straight-Line Winds
- 4240 California Valley Fire and Butte Fire
- 4245 Texas Severe Storms
- 4223 Texas Severe Storms and Flooding
- 4165 Georgia Severe Winter Storm

EDUCATION

University of South Florida, Associate Degree, *In Progress*

Following a quick but powerful straight-line wind event, Collier County was faced with 60,000 cubic yards (CY) of vegetative debris that lined a swath of land throughout the southernmost section of the county. This isolated event was not declared federally but was still a large enough amount of debris to warrant an activation of debris collection resources. Mr. Cabrera coordinated with Collier County code enforcement and solid waste employees to document the areas in need of collection while managing the removal and disposal.

Operations Manager (November 2015–February 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 could 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. Cabrera was tasked with management of general operations that included coordination and training of 55 locally trained monitors. Mr. Cabrera also coordinated with contractor resources and oversaw debris disposal operations.

Disaster Debris Specialist (October 2015)

Valley Fire, California | Catastrophic Fires | Debris Sketches and Assessment of Commercial Properties

The Valley Fire affected 76,000 acres of land and destroyed a total of 1,958 structures, including 1,280 homes, 27 multi-family structures, 66 commercial properties, and 585 other minor structures such as outbuildings and sheds. Tetra Tech was tasked with performing environmental surveys of commercial properties, which included a site debris sketch and debris assessment of quantities and materials. Only 40-hour HAZWOPER personnel were dispatched to this event. Mr. Cabrera was selected to perform these assessments on over 100 commercial structures within the fire-damaged area.

Operations Manager (May 2015–August 2015)

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

Mr. Cabrera was deployed as an operations manager for the City of Houston, Texas, following severe storms and flooding that resulted in concentrated volumes of disaster debris in the City. Mr. Cabrera's responsibilities included dispatch of 120 monitors to debris trucks, compliance with the health and safety program, reimbursement documentation, and oversight of field supervisors that covered over 612 road miles throughout the City. Mr. Cabrera also worked closely with data managers and automated debris management system (ADMS) specialists to document and track operations as well as deliver expeditious and accurate reporting to key stakeholders.

Senior Field Supervisor/Operations Manager (February 2014–April 2014)

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

Following Winter Storm Pax, Mr. Cabrera was deployed to assist in the management of nearly 90 debris removal trucks and the collection of over 900,000 CYs of vegetative debris within a four-week period. Mr. Cabrera was promoted from senior field supervisor to operations manager due to his implementation and understanding of Tetra Tech processes and health and safety requirements. As an operations manager, Mr. Cabrera assisted with the dispatch of field monitors, compliance with the health and safety, and compliance with program and documentation 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 EXPERIENCE

Billing/Invoice Analyst (May 2015 - Ongoing)

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 (October 2015–Ongoing)

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.

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

Senior Data Manager (May 2015–Ongoing)

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.

Data Manager and Debris Management Consultant (March 2014–Ongoing)

Boulder County, Colorado | Severe Flooding Disaster Debris Program Management

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

Data Manager (May 2014–August 2014)

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

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

Data Manager (February 2013–April 2014)

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

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

Data Manager (August 2012–February 2014)

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

Ms. Atkinson served as data manager, where she provided invoice reconciliation, data export creation, data center management, document compliance monitoring, management of hazardous tree and hanger photo documentation, and database support for staff. Ms. Atkinson also monitored data to ensure FEMA compliance in the field and the managed us of our ADMS.

Data Manager (September–November 2012)

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

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

Project Manager (July 2012–September 2012)

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

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

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

Collier County, Florida | Hurricane Wilma Disaster Waterways Debris Removal Program Management

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

Operations Manager (October 2005–February 2006)

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

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

TETRA TECH

Marcos DoCanto
Civil Engineer

EXPERIENCE SUMMARY

Mr. DoCanto is a Civil Engineer in Tetra Tech's Land Development Group. He supports a range of site/civil engineering, land development and improvement projects for public agencies and private clients. Mr. DoCanto is proficient in the use of AutoCAD Civil 3D, Geographic Information System (GIS), Auto Turn, Hydrocad, Roadview Workstation, and InfraWorks software, and familiar with the use of field instruments for land surveying.

RELEVANT EXPERIENCE

Sonoma, Mendocino and Napa Wildfires USACE (Federal) and CalOES (State), 2018 – Served as lead data manager for the Sonoma, Mendocino, and Napa Counties wildfire project. Mr. DoCanto coordinated with director of operations to provide reporting and quality assurance/quality control of ADMS documentation in the field. He validated documentation and metrics being reported as accurate and on-schedule for the debris removal of over 500 fire damaged homes.

Hilton Head Island, South Carolina, Hurricane Matthew, 2016 – Mr. DoCanto served as operations manager where he was responsible for implementing Tetra Tech's work plans, developing Standard Operating Procedures to ensure correct estimates of debris being removed and dispatching of field personnel. He also verified eligibility, compliance, and coordinated directly with our project manager daily with progress reports and on specific issues.

Bright Lite Energy, Solar Energy Facilities, Various Locations, MA, 2017 to Present – Engineer assisting with the site design and permitting services of four 5-megawatt ground-mounted solar array projects at multiple locations in Massachusetts. Services included detailed due diligence reviews, site design, preparation of permitting plans and documentation in support of Special Permit, Site Plan Review and Notice of Intent applications.

Vanguard Renewables, Anaerobic Digesters, Various Locations, MA, CT, VT 2016 to Present – Engineer for site design and permitting services at several locations in Massachusetts. Work includes conducting detailed due diligence reviews, preparing conceptual site plans and preparation of permitting strategy for obtaining environmental and zoning approvals for each potential site.

MassDOT Highway Division, Statewide Stormwater Discharge Compliance, 2016 to Present – Engineer assisting in MassDOT's compliance with the statewide National Pollutant Discharge Elimination System (NPDES) stormwater permit for discharges of highway runoff to impaired waters. Responsible for providing MassDOT with recommendations for Best Management Practices (BMPs) for impaired water bodies. Upon acceptance of the recommendations, provides design and permitting services

EDUCATION

BS, Civil Engineering, Wentworth Institute of Technology, 2016

REGISTRATIONS / CERTIFICATIONS

10-Hour OSHA Outreach Training for Construction, 2015

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

Boston Society of Civil Engineers Section

Architectural Engineering Institute

American Water Works Association

New England Water Works Association

OFFICE

Marlborough, MA

YEARS OF EXPERIENCE

3

in support of both the Retrofit and Programmed Project initiatives, including hydraulic and hydrologic analyses, preparation of construction documents and applicable permitting applications for implementation of recommended BMPs. Also included in the scope of services is ongoing technical support to compile documentation of BMPs performance for reporting to the EPA. To date, Tetra Tech has evaluated over 200,000 acres of impaired waters watersheds with MassDOT roadway discharges and developed over 100 stormwater BMP designs for more than 400 acres of MassDOT roadways.

Rushy Marsh Farm Expansion, Engineering and Permitting Services, Cotuit, MA, 2016 to Present – Engineer assisting with site design and environmental permitting services for the proposed expansion of an operating farm within a coastal community on Cape Cod. Work includes site design, project design coordination, state and local permitting, and construction services. Specific tasks included permitting, design and construction of a replacement outfall to Nantucket Sound under emergency authorization from MassDEP and the US Army Corp of Engineers.

United States Army Corps of Engineers (USACE) Middle East District (MED), Royal Saudi Land Forces Aviation Command (RSLFAC) Phase 2A Base Expansion, Kingdom of Saudi Arabia, 2016 to 2017 – Engineer assisting with the development of a design/build package for the Phase 2A infrastructure improvements at the 2nd Aviation Group base located in Khamis Mushait. Phase 2A infrastructure improvements will establish, renovate and augment the base to support the fielding and operations of various rotary wing aircrafts. Site and supporting utility infrastructure, including upgrades to and expansion of the currently non-operational helicopter and support facilities, are designed to accommodate the full future build out of the base.

Mountain Valley Pipeline, Stormwater Calculations and Permitting 2017 to 2018 – Mountain Valley Pipeline (MVP) project is a natural gas pipeline system that spans approximately 303 miles from northwestern West Virginia to southern Virginia – and as an interstate pipeline will be regulated by the Federal Energy Regulatory Commission (FERC). Engineer assisting in the drainage design and permitting process according to The Virginia Department of Environmental Quality (VA DEQ). Design included stormwater BMPs to reduce total phosphorous loading in order to meet stormwater quality requirements and/or reduce runoff peak flow rate and volume to meet water quantity requirements.

HNTB, MassDOT Highway Division, 2016 to 2017 – Engineer assisting with the conceptual design of all drainage and stormwater according to MassDOT standards and DEP stormwater standards for 495/I90 interchange. Evaluated pre-development and post-development hydrology and hydraulic design of the ditches, culverts, pipes and other stormwater control devices.

Prior to joining Tetra Tech, Mr. DoCanto worked as a Transportation Engineer for AECOM, and completed internships at Perini Management Services, and Campanellii Construction.

AECOM, Chelmsford, MA, January 2016-September 2016 – Transportation Engineer. Assisted with Massachusetts Department of Transportation (MassDOT) projects: prepared design for toll booth demolition, developed construction cost estimate for Plaza 13. Was responsible for Overall Pavement Condition (OPC) analysis for Delaware DOT, and used GIS to analyze OPC for the Baltimore Washington International Airport.

Perini Management Services Inc., Framingham, MA, December 2014 to April 2015 – As Office Engineer performed cost engineering analysis for a breakwater project for the State of Maryland. Worked with subcontractors to develop cost estimate for a Marsh Rehabilitation project, Long Island, NY. Construction phase services including coordination and review of over 10 RFIs and submittals per day, and maintenance of project logs.

Campanelli Construction, Braintree, MA, May to August 2014 – As an Assistant Project Manager, proposed and implemented a database management system with past and current projects. Projects included tracking daily construction progress reports for assigned projects for several clients including Preferred Freezer Services, Florida and Houston, High Point Treatment Center, Taunton, MA and O'Reilly Automotive, Inc., Devens, MA. Also assisted site construction and office activities with Superintendents and Project Managers.

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.

Project Approach/Methodology

Project Understanding

The City of Gainesville, Florida (City) is home to nearly 130,000 residents and is the largest and most populous city in the North Central Florida region. Gainesville is also home to the University of Florida, one of the largest universities in the country in terms of both size and enrollment. The City boasts a rich tree canopy dense with multiple species; however, despite its natural beauty, the tree canopy is vulnerable to debris-generating events like tropical storms and hurricanes. City officials understand the catastrophic effects a severe tropical weather event can have on its residents, property, and the local economy. In addition to tropical weather events, the City is vulnerable to tornadoes. In fact, the City has had 97 confirmed tornadoes since 1950. While the City cannot prevent disasters, it can put itself in the best position possible to recover. Furthermore, the City understands that errors, omissions, and oversights in recovery management and documentation following a disaster would compound the devastation. As such, it is the City's intention to retain the services of a contractor who can provide emergency planning services, disaster debris monitoring and management, and long-term recovery grant management.

Tetra Tech implements a best practices approach to disaster debris monitoring when planning for and responding to debris-generating events. Our team has 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, and Sandy. 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 of Gainesville (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. To summarize, our technical approach below captures our unique capabilities, including the following:

- Our team's ability to provide end-to-end services in disaster preparedness, emergency management, and post-event response and recovery to help state and local governments plan for and recover from natural and human-caused disasters
- A project management team that 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

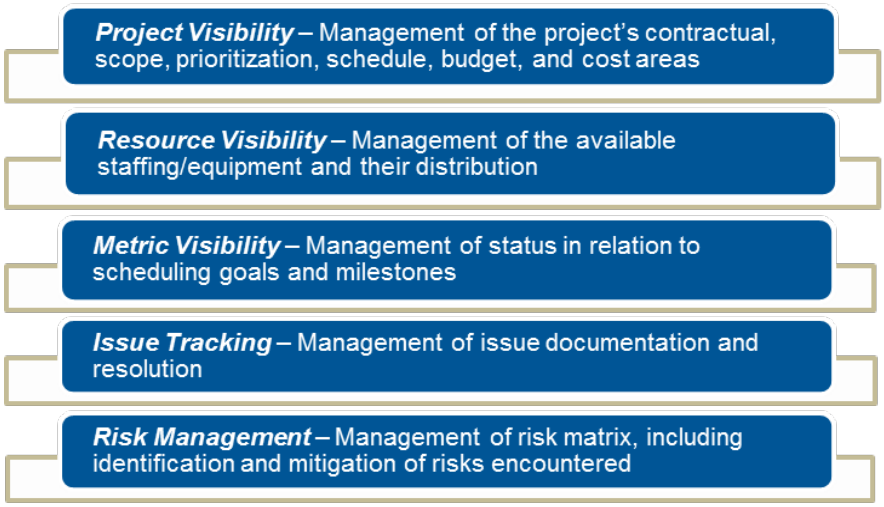
- A focus on local hires and the ability to hire, train, and support a local team of inspectors that oversee the work being completed in their own communities, with local hires being fully supported with technology and a team of dedicated managers
- Detailed reporting systems and mapping capabilities that are driven by our RecoveryTrac™ automated debris management system (ADMS) technology, which will be tailored to the City's data needs.

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 4-1: 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 following 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.

Operational/Time 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 a 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 4-2: 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 • Review the City's disaster recovery contracts for FEMA compliance • Update critical documents and files, including GIS files
H-96	**Review capabilities and resources**	• Contact the City and initiate daily conference call • Determine resource requirements from debris model • Review the City's emergency policies and contracts • Establish contact with the City's debris hauler and confirm 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 • Review protocols for private property, gated communities, and public drop-off sites • Review temporary debris storage and reduction site (TDSRS) locations and follow up with the Florida Department of Environmental Protection (FDEP) on permitting procedures • Estimate equipment requirements and TDSRS capacity to haul and stage debris • Prepare ADMS technology for mobilization
H-48	**Monitor storm track and continue preparations**	• Conduct regular meetings with City staff as requested • Confirm staging location and begin mobilization of resources • Mobilize project assets and begin base camp coordination and logistics (food, water, housing, etc.) with the City and Tetra Tech headquarters (if necessary) • Review list of priority roads and the operational plan • Obtain GIS files for municipalities that the City will assist with debris removal • 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 • Certify emergency road clearance equipment (in coordination with the City's debris hauler) • Determine emergency road clearance priorities

Time	Task	Deliverables/Milestones
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 • Begin emergency push • Maintain time and materials (T&M) logs for push equipment • Coordinate with the City to conduct preliminary damage assessments and road closures (if requested) • Supervisors report to pre-designated locations and prep staff on project • Begin establishing ADMS infrastructure • Begin recruiting and training monitors, project coordinators, and data staff • Initiate opening of TDSRS locations • Follow up with FDEP on debris permits (if required) • Work with the City to establish public information protocols to respond to concerns and comments
H +48	**Emergency push/ damage assessment**	• Continue emergency push • Continue preliminary damage assessment • Develop debris cost estimate required for presidential disaster declaration • Develop operational plan for disaster-specific issues • Refine health and safety plan for disaster-specific issues
H +72	**Disaster debris vehicle certification/ site preparation**	• Begin hauling truck certification • Install ADMS tower monitor infrastructure • Train monitors on policies, ADMS, and safety • Open public drop-off sites as requested
H +96	**Begin debris collection monitoring**	• Assign monitors to trucks • Assign supervisors to monitors • Hold morning and afternoon meeting with City staff and debris hauler • Implement QA/QC procedures
Recovery		
Week 1+	**Right-of-way (ROW) debris collection monitoring**	• Continue ROW collection • Address household hazardous waste (HHW) issues (if critical) • Issue daily reports/GIS maps • Hold daily meetings with the City, hauler, and/or State/FEMA as required • Staff citizens debris management hotline (if requested) • 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 • Establish client GeoPortal to provide insight into project progress • Review truck metrics provided by RecoveryTrac™ • Initiate weekly reconciliation • Initial payment recommendations with retainage
Week 1+	**Reimbursement support/grant administration (FEMA, NRCS)**	• Prepare damage/cost estimates • Compile supporting documentation (debris permits, debris contracts, etc.) • Liaise with FEMA Region 4, Florida Division of Emergency Management (FDEM), U.S. Army Corps of Engineers (USACE), etc.

Time	Task	Deliverables/Milestones
Week 2+	**Special projects (if required)**	• Waterway debris removal • Private property debris removal (PPDR) • Public drop-off sites • HHW • Mud/silt/sand removal (from storm drains, ditches, etc.) • 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 • Draft a PA work plan • Conclude/review preliminary damage assessments • Gather documentation for project worksheet (PW) development • Identify opportunities for mitigation • Conduct site visits
Project completion	**Document turnover/closeout**	• Final reconciliation • Retainage release • Release hard copy files • Provide electronic database • Assist with PW development • Assist the City with long-term reimbursement • Audit assistance • 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 while 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.

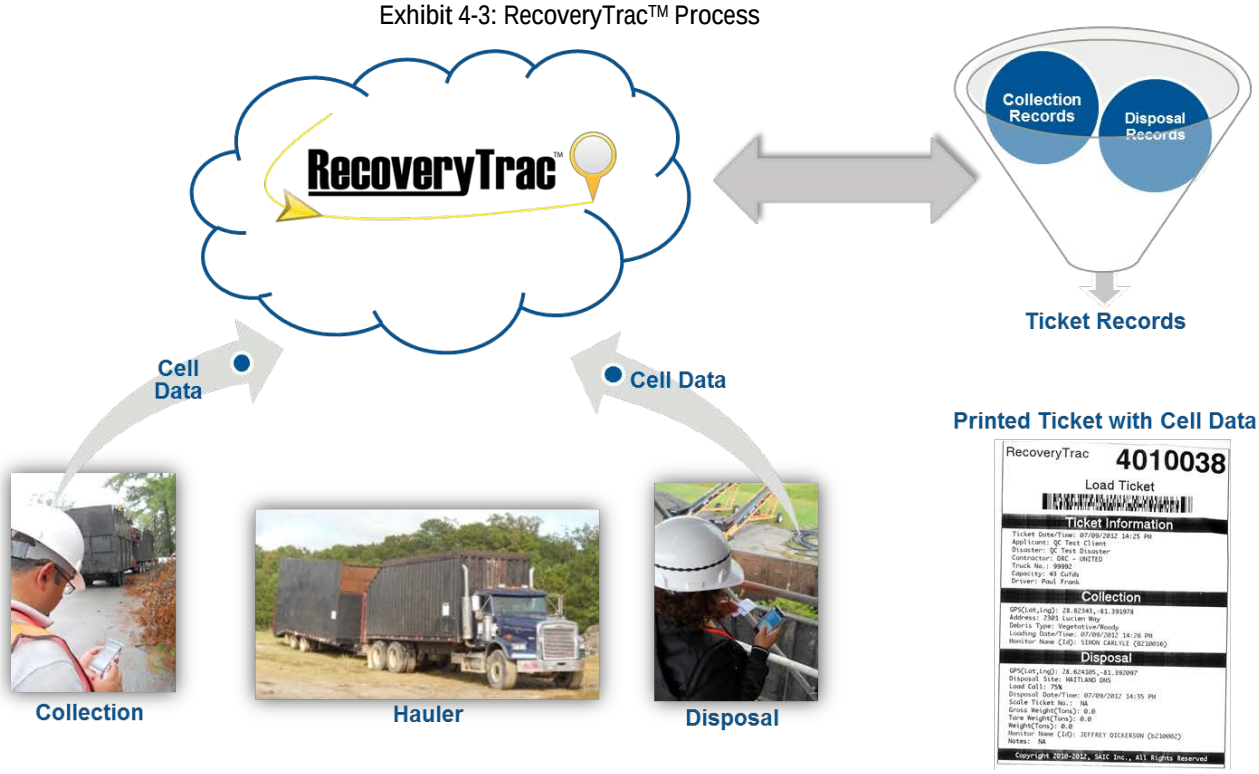
- Owned and operated by Tetra Tech
- Over 5,000 mobile units on-hand and ready for state-wide multi-district mobilizations
- Meets USACE specifications for electronic debris monitoring handhelds
- Real-time situation awareness of field resources and efficient direction to support City priorities
- Real-time 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 4-3 shows the RecoveryTrac™ process under normal operating conditions.

Exhibit 4-3: 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 T&M charges
- Helping staff maintain maps or databases to track road clearance progress and other essential tasks, as requested
- Maintaining documentation for reimbursement of 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 4-4: 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:

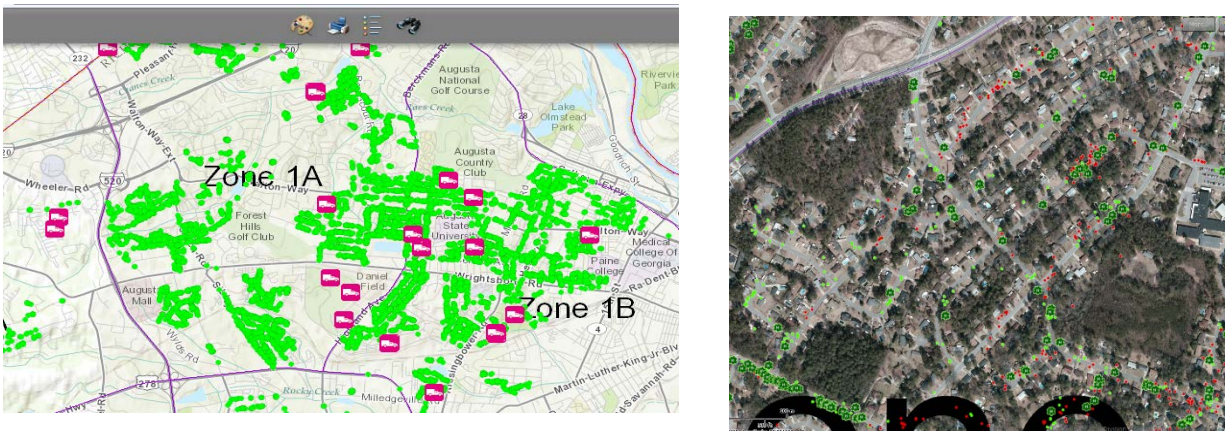
- Generation of unique truck numbers for contractor crews and equipment
- Automated truck certification form, which includes the latest FEMA guidelines on truck certification documentation and volume calculations, and a bar code for automated ticket scanning
- Special vehicle notations on the truck certification 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 a 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 4-5: 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 4-6 and 4-7.

Exhibit 4-6: Monitoring Locations

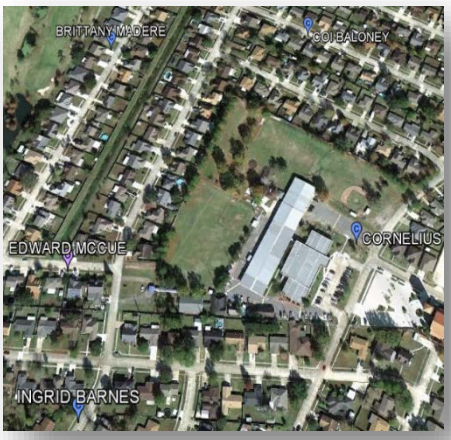
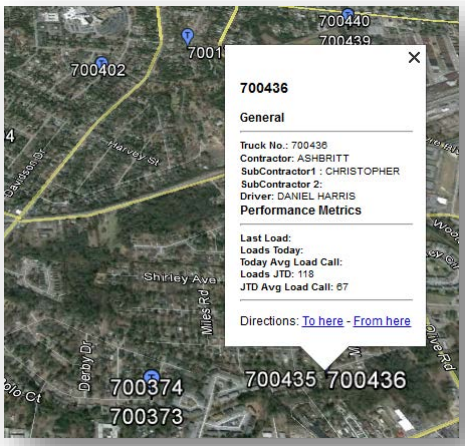


Exhibit 4-7: Truck Locations



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). If these circumstances occur, Tetra Tech will work closely with the City to refine timelines and support an expeditious recovery for the City.

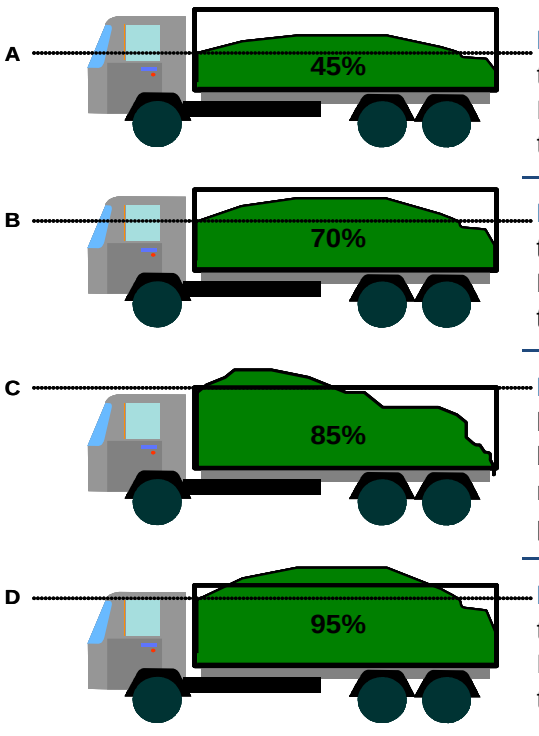
TDSRS Monitoring

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 4-8: 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.

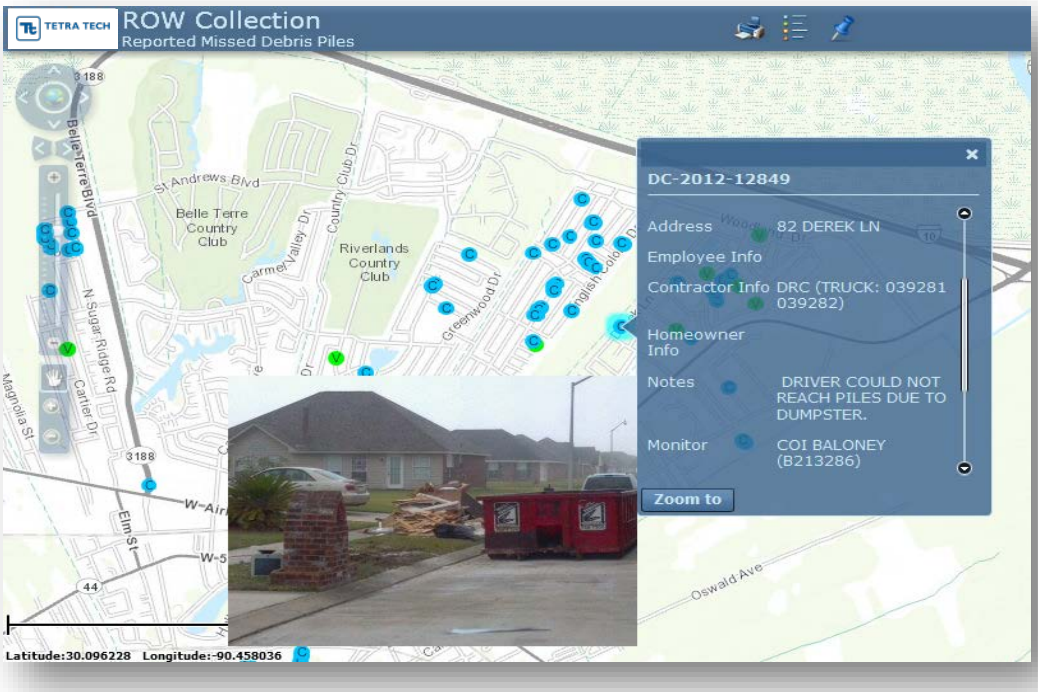
Quality Assurance/Quality Control Program

Implementing 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 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 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 4-9: 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 run on a daily basis to look for data anomalies that may be a result of fraud. The load call report shows all load calls for a given day/monitor to confirm no trucks are receiving extraordinarily high load calls. The load ticket and unit rate daily ticket reports determine if monitors are issuing an excessive number of tickets in relation to the average number of tickets per day. The RecoveryTrac™ system also has built in project controls to alert the data manager to anomalies that may be indicative of fraud. For example, the following data features are flagged:

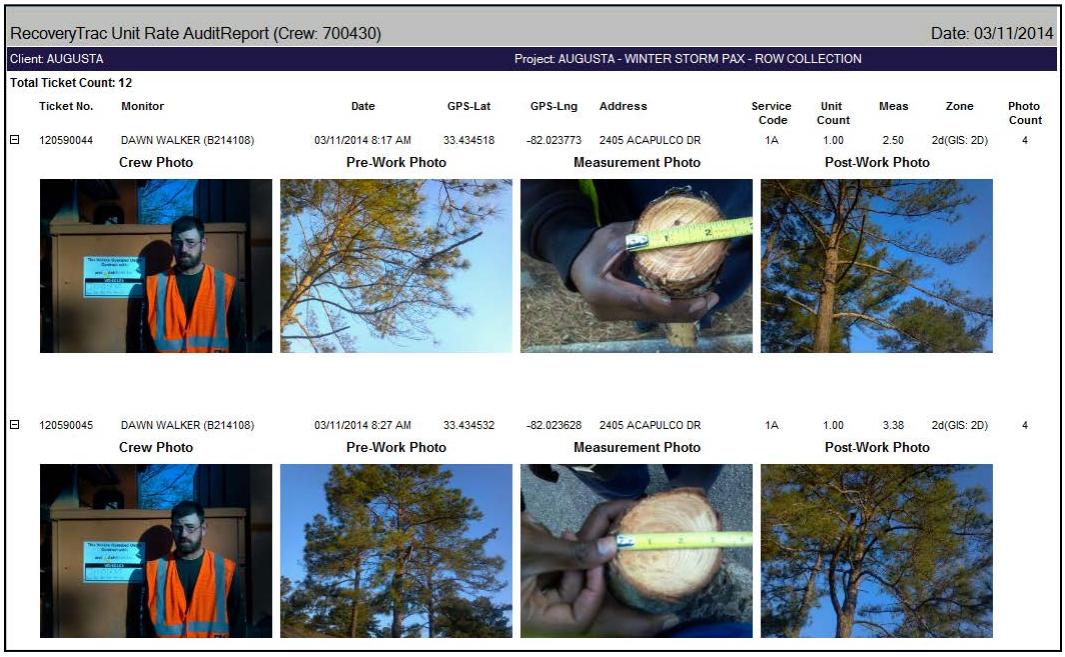
- **Truck Turn-Around-Time.** The time between last pickup location and arrival of a truck at the TDSRS is tracked. A time that is too short may indicate the debris hauling truck not filling the vehicle to capacity.
- **Out-of-Bounds.** The municipality boundaries are programmed geospatially to verify debris pickup remains within the eligible bounds of the City.
- **Debris Type.** Tickets with the debris type discrepancies are 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.

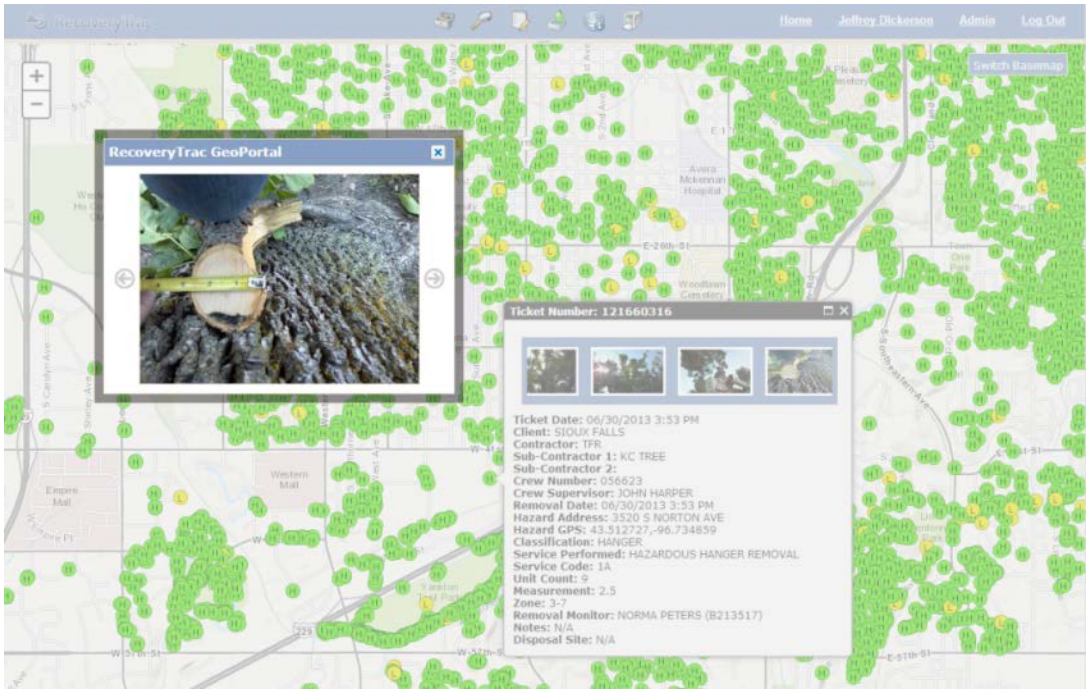
Exhibit 4-10: Real-Time Ticket Report



Unit Rate Ticket Geoportal Report

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

Exhibit 4-11: Unit Rate Ticket Map



Incident Reporting

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

Exhibit 4-12: 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 - F

DAMAGE TO PROPERTY (Count: 80)

PRIVATE PROPERTY-MAILBOX (Count: 9)

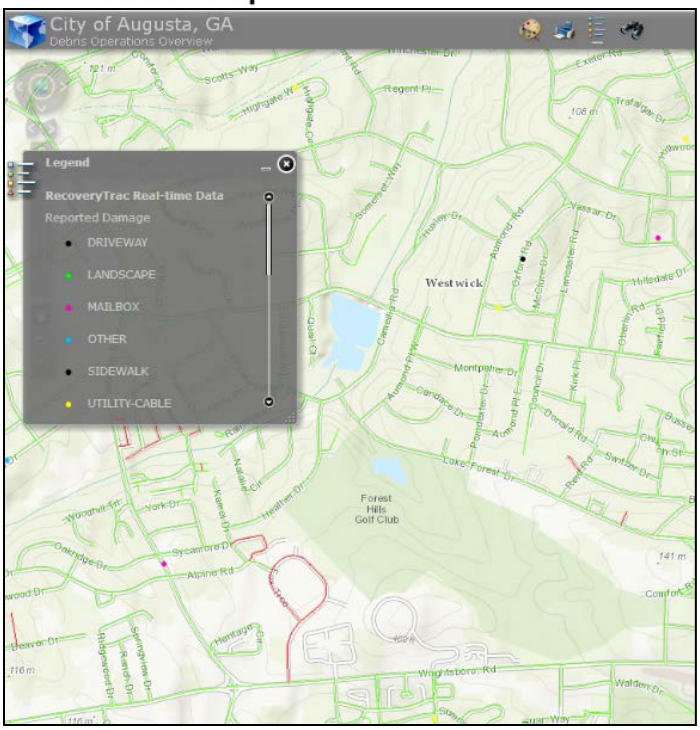
Incident No.	Status	Priority	Date	Emp Invl	Cont Invl	Own Invl	Location
DP-2014-04835	Active	Normal	03/25/2014 8:57 AM	NO	YES	YES	2820 WALT

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.

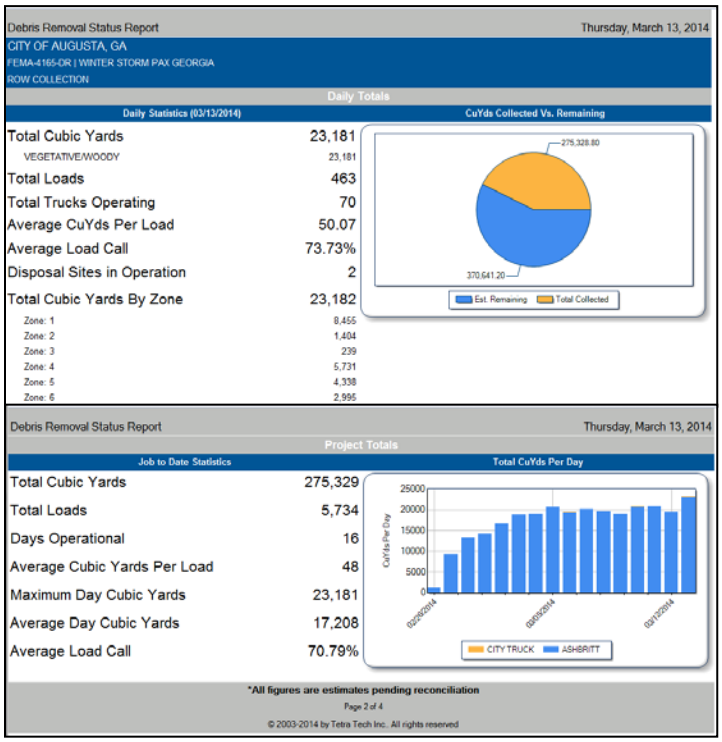
Incident Map

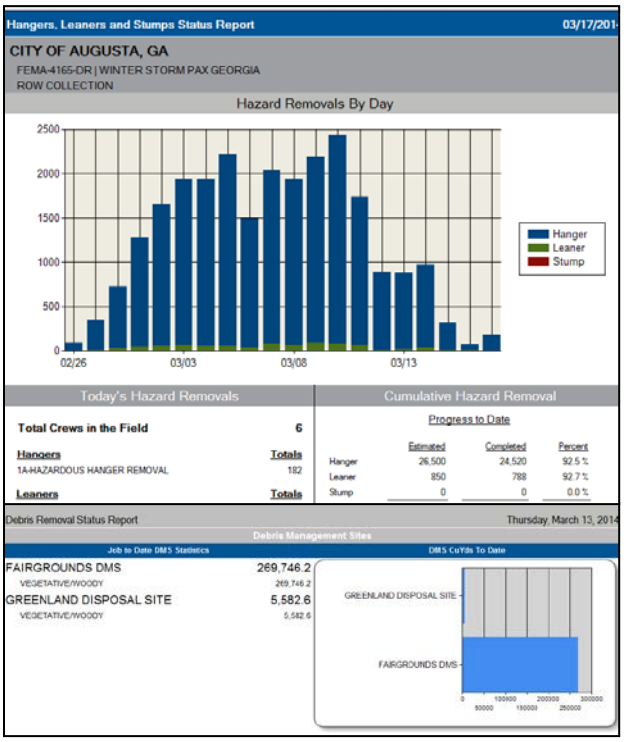


Daily Reporting Metrics

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 metrics not captured in the generic reports.

Exhibit 4-14: Sample Custom Reports Developed3





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.

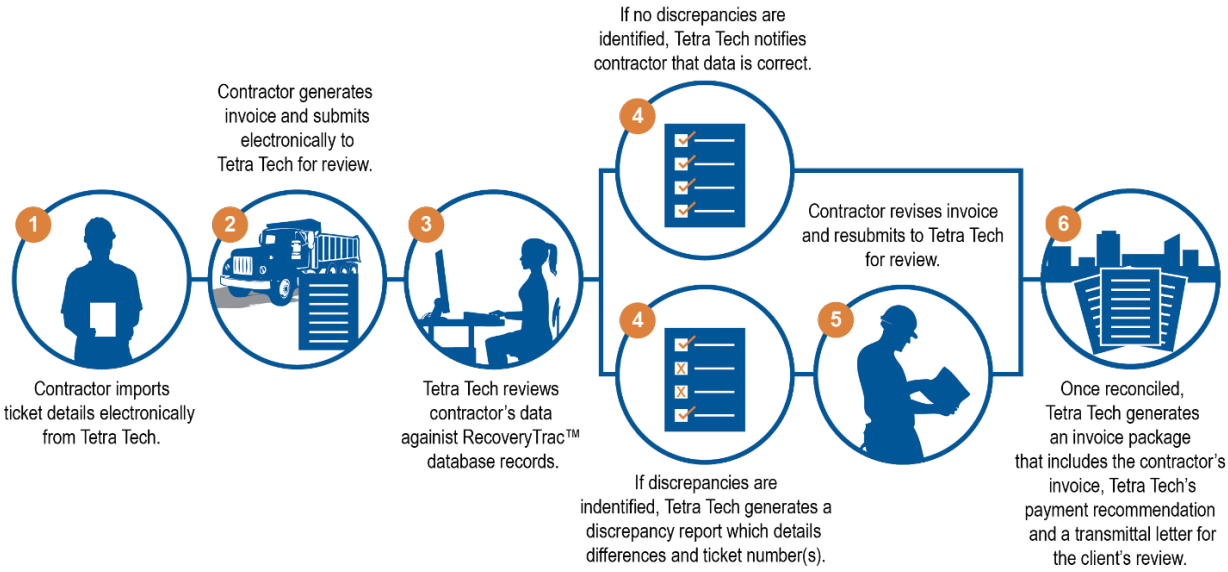
To expedite contractor invoice reconciliation efforts, Tetra Tech requires copies of contracts for all primary debris contractors. After reviewing the necessary contract(s), Tetra Tech sets up the RecoveryTrac™ database to generate transactions applicable to contract terms for tickets issued to each 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 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 4-15: Contractor Invoice Reconciliation Process



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.

As requested in City's request for proposals, a copy of our training manual has been included under a separate cover.

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 verify 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 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.

Additional Services

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 Operations, 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 disaster debris management plans (DDMP). 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 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 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.

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 an 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 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)

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

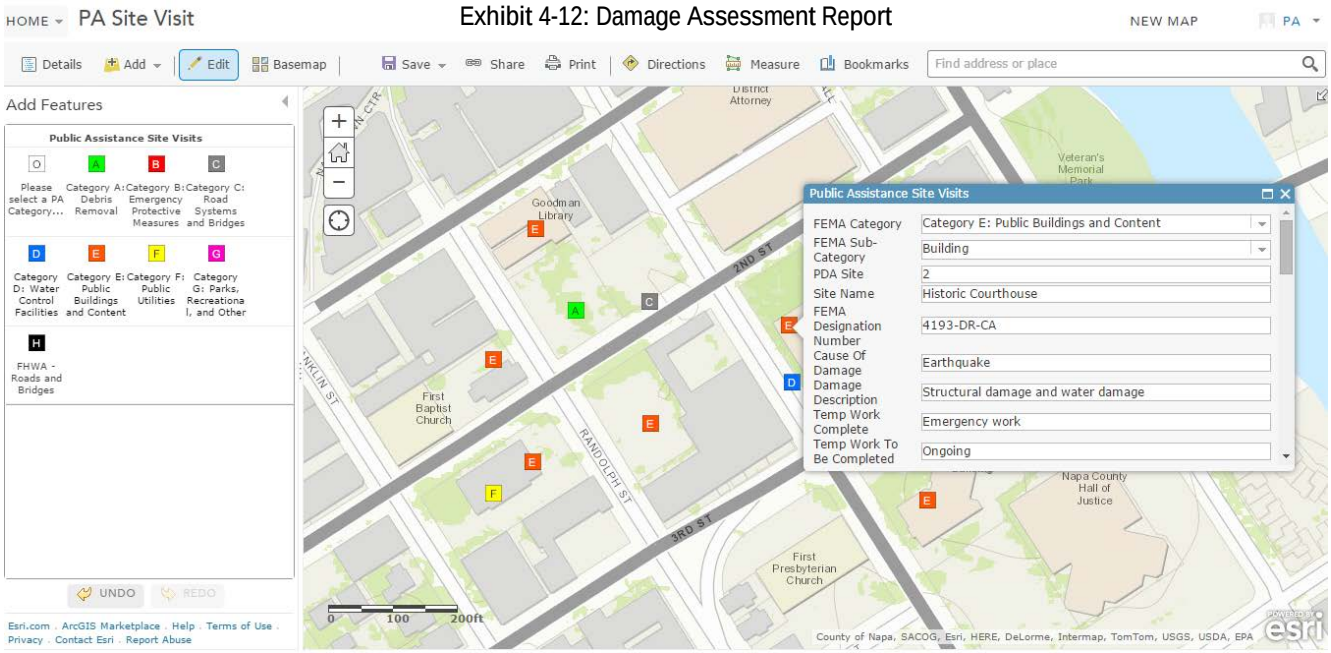
- FEMA PA Program
- Pre-Disaster Mitigation (PDM)
- FHWA-Emergency Relief (FHWA-ER) Program
- FHWA Transportation Investment Generating Economic Recovery Grant
- NRCS Emergency Watershed Protection
- U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant (CDBG) Program

Tetra Tech has broad 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 citywide 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 4-12 for a sample image of Tetra Tech's web-based damage assessment report.

Exhibit 4-12: Damage Assessment Report



References

Similar to the services being requested by the City of Gainesville (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 Federal Emergency Management Agency (FEMA) and Federal Highway Administration (FHWA) guidelines and reimbursement procedures.

Tetra Tech provides step-by-step assistance to clients throughout the FEMA reimbursement process. We routinely work with our clients for years following a disaster incident to support and defend their reimbursement. We are not always informed of the final outcomes of disaster reimbursements, often because the reimbursement amount in question may be small, etc. To date, our team has an impeccable record of obtaining 100% reimbursement of the eligible federal cost share for both FEMA PA and FHWA-ER applications that our team has prepared and monitored on behalf of clients nationwide.

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. We encourage the City to contact each of our references to obtain comments on the quality of services we provide. **Letters of reference have also been included at the end of this section.** Additional references can be provided upon request.

Disaster Debris Management Services – Hurricane Matthew

St. Johns County, Florida

When Hurricane Matthew impacted St. Johns County on October 7, 2016 as a category three storm, it left a trail of destruction in its wake that was felt county-wide. Its physical impacts affected the entire county, with damages including fallen limbs and trees, home fragments, fences, and construction debris. Home to the nation's oldest city, more than 1,000 historic homes and buildings in St. Augustine were significantly damaged because of Hurricane Matthew. Among the famous buildings inundated during the hurricane was Flagler College's ornate Spanish Renaissance-style main hall, built in 1888, where as much as four feet of water surged through its lower floors.

Reference/Project Information

Client Name: St. Johns County, FL
Contact: Greg Caldwell, MPA
Phone: (904) 209-0132
Email: gcaldwell@sjcfl.us
Volume of Debris: 712,705 cubic yards
Dollar Value: $1,303,000

Tetra Tech was retained as St. Johns County's debris monitoring service provider under a pre-positioned contract. Our team mobilized in the immediate aftermath of the storms impact, hiring nearly 50 local monitors to manage and document the County's debris removal efforts. This included the staffing of seven temporary debris management sites (DMS) throughout the County; five for vegetative debris and two that accepted C&D debris.

The Tetra Tech team also monitored the haul-out of debris and the remediation and close-out of all seven DMS.

In addition to right-of-way (ROW) debris removal, our team conducted several special programs, including beach debris removal and private road debris removal. Debris management consultants working with the County helped put together the documentation for FEMA approval of debris on private roads and helped manage the County's application of the Public Assistance Alternative Procedures Pilot Program for accelerated debris removal. Although this project is still ongoing, our team has monitored the removal of over 700,000 cubic yards of debris. We are

currently in the process of beginning a program with a separate contractor for the removal of hazardous hanging limbs and leaning trees from throughout the County.

Disaster Debris Management Services – Hurricane Irma
City of Tampa, Florida

The City of Tampa (City), with approximately 370,000 in population, is located on the western coast of Central Florida and is one of the most populated metropolitan areas in the State. Located on Tampa Bay, portions of the City such as Bayshore Boulevard are prone to frequent urban flooding. Being situated on the Gulf of Mexico, the City is always threatened by hurricanes during the fall hurricane season.

Over the last 12 years, the City has been impacted by a number of heavy rainfalls and hurricanes. Most recently, the City was affected by Hurricane Irma, which made landfall first in the Florida Keys, then again in Marco Island along Florida's Gulf Coast. Tetra Tech senior staff deployed to the City's emergency operations center prior to the hurricane making landfall to assist with preparations for post-disaster response operations.

Reference/Project Information

Client Name: City of Tampa, FL
Contact: Mark Wilfalk, Solid Waste Director
Phone: (813) 348-1153
Email: mark.wilfalk@tampagov.net
Volume of Debris: 166,927 cubic yards
Dollar Value: $1,117,417

Although the City avoided a direct hit, there were numerous power outages and large quantities of debris throughout the City. Tetra Tech staff immediately coordinated efforts to begin debris removal operations and assisted with the monitoring of over 166,000 cubic yards of debris and managed the subsequent data associated with debris removal.

The success of this project can be attributed to our team's expertise and years of dedicated service to help the City increase its hurricane preparedness. Over the last 5 years, Tetra Tech has participated in each in the City's annual hurricane preparedness workshop as well as a minimum of two additional coordination meetings annually. Tetra Tech has also provided FEMA reimbursement training to City staff, including best management practices for preparing FEMA reimbursement paperwork. In 2014, Tetra Tech updated the City's disaster debris management plan (DDMP) that was subsequently approved by the State of Florida and FEMA.

Disaster Debris Management Services – Hurricane Irma
Pinellas County, Florida

Pinellas County is one of the most densely populated counties in Florida. Its low-lying elevation places most its residents in flood zones, putting millions of homes and structures at risk. Although the County avoided a direct hit from Hurricane Irma in September 2017, the storm nonetheless caused widespread power outages and hundreds of tons of disaster debris.

In the immediate aftermath, Pinellas County activated the Tetra Tech team to conduct post-disaster debris monitoring services under a pre-positioned contract. Our management team was on-site within hours of the storm's passing to conduct initial damage assessments and begin monitoring the cleanup process. Over 120 local personnel were hired as debris monitors, documenting over 12,000 loads of debris. This totaled over 380,000 cubic yards of debris removed from County roads. In addition, the County allowed its municipalities to use County disposal

Reference/Project Information

Client Name: Pinellas County, FL
Contact: Sean Tipton, Public Works
Phone: (727) 464-8809
Email: stipton@co.pinellas.fl.us
Volume of Debris: 382,148 cubic yards
Dollar Value: $1,759,698

locations to ease the burden of long haul distances. Tetra Tech coordinated and tracked the segregation of debris by origin at multiple disposal sites.

Disaster Debris Management Services – Hurricane Irma

City of Winter Park, Florida

The City of Winter Park is part of the Orlando-Kissimmee-Sanford Metropolitan Statistical Area and is known for it's small, winding brick roads, art galleries, and canopy of southern live oak trees. The City is also home to the oldest, and one of the most beautiful, post-secondary institutions in Florida - Rollins College.

In September 2017, Hurricane Irma was the first major hurricane to make landfall in Florida since Hurricane Wilma more than a decade before. Favorable conditions allowed Irma to rapidly intensify, causing catastrophic damage throughout the Caribbean and the Florida Keys. Although the City was spared a direct hit, the storm caused power outages and damages to many of the oak trees that line the City's streets.

Immediately after the storm's passing, the City activated our pre-positioned contract to provide program management and documentation of the debris removal effort. Our team conducted initial damage assessments and began certifying trucks to begin the cleanup process. Over 30 personnel were hired to monitor and document the removal of nearly 60,000 cubic yards of debris.

Reference/Project Information

Client Name: City of Winter Park, FL
Contact: Jason Seeley, Parks and Recreation Manager
Phone: (407) 643-1613
Email: jseeley@cityofwinterpark.org
Volume of Debris: 56,176 cubic yards
Dollar Value: $156,540.05

Section 5: References

Letters of Reference

TETRA TECH

Pinellas County
PUBLIC WORKS

May 3, 2018

Mr. Jonathan Burgiel
Business Unit President - Tetra Tech Disaster Recovery
2301 Lucien Way, Suite 120
Maitland, FL 32751

Subject: Letter of Recommendation

Dear Mr. Burgiel,

On September 10th 2017, Hurricane Irma made landfall, causing widespread power outages and heavy debris throughout Pinellas County. Tetra Tech, who's team had been in constant communication with County officials in the days and hours leading up to the storm's impact, was quickly activated to conduct post-disaster debris monitoring services under a pre-positioned . Tetra Tech's management staff was on-site within hours of the storm's passing to conduct initial damage assessments and begin monitoring the cleanup process. Over 120 local personnel were hired as debris monitors, documenting over 12,000 loads of debris. This totaled over 380,000 cubic yards of debris removed from County roads.

In addition, the County allowed its municipalities to use County disposal locations to ease the burden of long haul distances. Tetra Tech's use of its automated debris management system (ADMS) assisted in the coordination and tracking of the segregation of debris by origin at multiple disposal sites. Your team's use of technology, real-time reporting, and knowledgeable on-site staff were critical to the success of this project.

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

Sincerely,

Sean Tipton - Public Works Debris Manager

Pinellas County Public Works
22211 U.S. 19 N. • Building 1
Clearwater, FL 33765
Main Office: (727) 464-8900
FAX: (727) 464-8915
V/TDD: (727) 464-4062

www.pinellascounty.org

CITY OF TAMPA

Bob Buckhorn, Mayor

Department of Solid Waste & Environmental Program Management

Mark C. Wilfalk, Director

April 17th, 2018

Mr. Jonathan Burgiel, Business Unit President
Tetra Tech Disaster Recovery
2301 Lucien Way, Suite 120
Maitland, FL 32751

Subject: Letter of Recommendation

Dear Mr. Burgiel,

The City of Tampa (City) would like to acknowledge the professionalism, and dedication displayed by your entire team during the City's recent response to Hurricane Irma. Prior to Hurricane Irma making landfall on September 10, 2017, Tetra Tech deployed senior staff members to the City of Tampa's Emergency Operations Center (EOC) to assist the City in preparing for our post-disaster debris removal response. It was that same staff that stayed on-site and was dedicated to the City throughout your entire engagement here. The Tetra Tech team worked very closely with City staff on a day-to-day basis providing full transparency into field operations through your dedicated geoportal, in addition to constant professional consultation and guidance.

While providing the necessary support, Tetra Tech also managed the enormous amount of data - including load tickets, invoices and daily reports, which are critical for FEMA reimbursement. Your staff is highly trained and has an in-depth understanding of the specific parameters and guidelines surrounding FEMA eligibility requirements.

This activation was the culmination of nearly a decade of dedicated planning with Tetra Tech staff. It was our combined preparedness and familiarity that allowed your team to perform above expectations; and, I would highly recommend the Tetra Tech team for any future debris monitoring projects to any community that is faced with the enormous challenge of collecting and disposing of the debris from any natural or human-caused disaster- particularly on a large scale and under unique or special circumstances.

Sincerely,

Mark C. Wilfalk, Director, Department of Solid Waste &
Environmental Program Management

BEAUFORT COUNTY PUBLIC WORKS
Solid Waste and Recycling
120 Shanklin Road
Beaufort, South Carolina 29906
Voice (843) 255-2800 Facsimile (843) 255-9435

Mr. Jonathon Burgiel
Vice President, Operations Manager
Tetra Tech Inc.
2301 Lucien Way, Suite 120
Maitland, FL 32751

Dear Mr. Burgiel:

I am writing to express my appreciation for the performance of the entire team from Tetra Tech in the debris operations for Hurricane Matthew. As our debris monitoring firm the level of support and professional performance provided has been exceptional in all regards. My direct point of contact with your firm was Project manager Simon Carlyle. Simon supported the County in an outstanding manner and his counsel was invaluable throughout this operation. He is a professional in all respects and helped to establish a high standard for compliance. On a personal level, Simon was extremely responsive to answer any questions and provide the assistance I required. As the Debris Manager I am not exaggerating when I state that without his diligence, knowledge, and ability to gain the cooperation within the team we would not have been as effective. As a team we moved 72% of all ROW debris into the DMS sites in the first 90 days of operation; over 90% of hangers and leaners were addressed in the same period. FEMA and SCEMD officials remarked that "Beaufort County had their operation together". Simon played a huge part in making that happen. If I ever had to do this again I would want Simon as my Project Manager.

Providing Jill Schaeffer to assist with the PPDR process allowed the County to get a jump on a difficult task. Without this vital help we would have been overwhelmed with obtaining PPDR approval from FEMA for 83 individual private communities. Jill is a highly capable professional and worked seamlessly with the entire County staff. She certainly saved what is left of my sanity. Additionally, Anne Cabrera provided me with timely support developing a spreadsheet to track invoices that simplified this tedious process. Our FEMA Public Assistance Crew Lead remarked how clearly her team was able to understand the invoices in development of our project worksheets. Karen Selph provided on site help to ensure the monitoring operation recordkeeping was established and functioning properly. Owen Chen was relentless and unwavering churning out the daily recap reports which were an essential management tool. These reports provided real time data of our progress to stakeholders in the operation. Ralph Natale provided the high level support and his input into getting our marine debris removal operation going was critical. Ralph is a treasure trove of knowledge and expertise.

Bottom line, Tetra Tech did an exceptional job and I am thankful for each member of your team. You exceeded expectations in every area and continue to provide us with excellent customer service. I am forwarding a copy of this letter to our Administration and Purchasing Department for future reference.

Regards

James S Minor Jr.

JAMES S. MINOR, JR
SOLID WASTE / DEBRIS MANAGER

Collier County

Public Utilities Department

Solid & Hazardous Waste Management Division

October 17, 2016

The Board of County Commissioners approved Tetra Tech, Inc. (Tetra Tech) as our primary contractor for disaster debris monitoring services with the approval of their contract in 2014. Ralph Natale, Tetra Tech's Director of Post Disaster Programs, has served as lead project manager for Collier County over the past 11 years with predecessor entities Beck Disaster Recovery, SAIC, and Leidos.

Following Hurricane Wilma in 2005, Beck Disaster Recovery, Inc. provided exceptional and professional post-disaster debris monitoring services. The collection and monitoring of approximately 1 million cubic yards of Hurricane Wilma generated debris was completed in 45 days. Following the project's final audit, Collier County received a reimbursement of $24 million, with only $1,000 disallowed due to rounding errors.

Tetra Tech was deployed in January 2016, in response to a severe wind storm that hit Collier County during the pre-dawn hours of January 17th. Tetra Tech was activated to monitor and provide project guidance over the County's debris removal contractor, AshBritt Inc. Tetra Tech also agreed to provide on-project training and guidance to County staff drawn from the PUD SHWMD and UEC sectors. Considerable help in locating and quantifying the debris volume was made by the daily use of up to 10 UEC inspectors who were provided with and trained on the use of Tetra Tech's handheld data recorders. In total well over 1,000 separate debris piles were so documented and could be mapped on GIS images/layers in Tetra Tech's mapping software.

During this mission, the trucks were all volumetrically measured and their details documented into the Tetra Tech debris management software by their qualified staff. At the end of each workday, Tetra Tech staff compiled and entered all the days load tickets, pickup locations, etc. into the software which then automatically stored it and generated a daily operations report. The close contact between County staff and Tetra Tech staff was extremely important during this debris mission.

Tetra Tech has also served as consultant for our 2015 update of our FEMA approved Disaster Debris Management Plan (DDMP). The availability and guidance provided by Tetra Tech during the review, research, compilation, revision, finalization and approval process of our DDMP was stellar. It resulted in our DDMP receiving praise from FDEM as one of the most comprehensive plans that they have reviewed.

Tetra Tech representatives are always available to County staff, not just during hurricane season or when an event occurs, but provide quality training for our employees throughout the year.

Should you have any questions, please do not hesitate to contact me at (239) 252-2506.

Sincerely yours,

Daniel Rodriguez, Division Director

Reduce...Reuse...Recycle

ATTACHMENT B

PRICE PROPOSAL

(Based on a 500,000 cubic yard event for evaluation purposes)

Equipment/ Personnel	# People x Hrs/Day x Days/wk	Total Est. Hours for Event	Unit Price Per Hour	Extension
(example)	*2 x 12 x 7*	*2,016*		
Project Manager/Liason Officer	1 x12hr x 40 days	484*	$75.00	$ 36,300.00
Debris Mgt. Operations Manager (if requested)	As needed	0	$70.00	0.00
Engineer	1 x 1hr x 1 day	1	$90.00	$ 90.00
Environmental Consultant	1 x 1hr x 1 day	1	$85.00	$ 85.00
Environmental Field Technician	1 x 1hr x 1 day	1	$69.00	$ 69.00
GIS Analyst/Specialist	1 x 1hr x 20 days	20	$49.00	$ 980.00
Supervising Monitors with vehicle and phone	3 x 12hr x 40 days	1,440	$42.00	$ 60,480.00
RovingMonitors with vehicle and phone	N/A	0	0	0.00
Loading Site Monitors with vehicle and phone	20 x 12hrs x 40 days	9,600	$34.00	$326,400.00
Disposal Site Monitors with phone	4 x 12hrs x 40 days	1,920	$34.00	$ 65,280.00
Call Center Operator	1 x 8hrs x 30 days	240	$29.00	$ 6,960.00
Data Entry Clerk – Paper Ticket	N/A	0	$28.00	$ 0.00
Total				$496,644.00
Scale at each TDSRS	###########	########	#########	Billed at cost

All labor rates are to be fully burdened to include all taxes, benefits, handling charges, equipment, mileage, rentals, per diem, housing, reproduction, supervisory tasks, record keeping tasks, reporting tasks, quality control, verification/validation tasks, overhead, profits, and any other expenses necessary to the execution of a contract to be developed as a result of this RFP.

**The Project Manager total is for 40 days plus an additional 4 hours that may be needed after the operational period.*

DRUG-FREE WORKPLACE FORM

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies that

Tetra Tech, Inc. does:

(Name of Business)

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 the drug abuse violations.

3. Give each employee engaged in providing the commodities or contractual services that are under bid 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 bid, 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 firm complies fully with the above requirements.

Bidder's Signature

May 7, 2018

Date

ADDENDUM NO. 1

Date: April 18, 2018

Bid Date: ~~April 23, 2018~~
May 2, 2018
at 3:00 P.M. (Local Time)

Bid Name Disaster Debris Monitoring

Bid No.: PWWM-180069-DH

NOTE: This Addendum has been issued only to the holders of record of the specifications.

The original Specifications remain in full force and effect except as revised by the following changes which shall take precedence over anything to the contrary:

BID DUE DATE

The Bid Due Date is hereby extended until May 2, 2018 @ 3:00 PM (local time).

1. An addendum with responses to questions received is expected to be issued next week.

2. Please find attached:

   a) Copy of the blackout period information (Financial Procedures Manual Section 41-423 Prohibition of lobbying in procurement matters).

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 1 by his or her signature below, **and a copy of this Addendum to be returned with proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 1 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: Tetra Tech, Inc.

BY: Jonathan Boyd

DATE: May 7, 2018

ADDENDUM NO. 2

Date: April 26, 2018

Bid Date: May 2, 2018
~~April 23, 2018~~
at 3:00 P.M. (Local Time)

Bid Name Disaster Debris Monitoring

Bid No.: PWWM-180069-DH

NOTE: This Addendum has been issued only to the holders of record of the specifications.

The original Specifications remain in full force and effect except as revised by the following changes which shall take precedence over anything to the contrary:

1. Please find attached:

   a) Copy of the blackout period information (Financial Procedures Manual Section 41-423 Prohibition of lobbying in procurement matters).

2. Section 1 Request for Proposal Overview & Proposal Procedures, B. RFP Time Table is revised as follows:

   B. RFP TIME TABLE

   The anticipated schedule for the RFP and contract approval is as follows:

RFP available for distribution	March 27, 2018
Pre-Proposal Conference	N/A
Deadline for receipt of questions	April 16, 2018
Deadline for receipt of proposals	~~April 23~~ May 2, 2018 (3:00 p.m. local time)
Evaluation/Selection process	Week of ~~April 23~~ May 7, 2018
Oral presentations, if conducted	Week of ~~May 7~~ May 21, 2018
Projected award date	June 7, 2018
Projected contract start date	TBD

The following are answers/clarifications to questions received:

3. Question: Would the City consider waiving the Payment and Performance Bond (Item (C) on page 17)? Can we instead use our Professional Liability insurance in lieu of the bond (which typically apply to contractors, not professional services contracts)?
   Answer: No. The Payment and Performance Bond requirement remains.

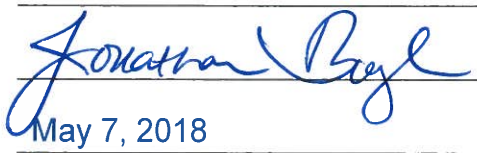
4. Question: Does the City want a list of current debris monitoring contracts or all recovery services contracts?
   Answer: A list of the current debris monitoring contracts will be sufficient.

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 2 by his or her signature below, **and a copy of this Addendum to be returned with proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 2 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: Tetra Tech, Inc.

BY: 

DATE: May 7, 2018

ADDENDUM NO. 3

Date: April 30, 2018

Bid Date: May 8, 2018
~~May 2, 2018~~
~~April 23, 2018~~
at 3:00 P.M. (Local Time)

Bid Name Disaster Debris Monitoring

Bid No.: PWWM-180069-DH

NOTE: This Addendum has been issued only to the holders of record of the specifications.

The original Specifications remain in full force and effect except as revised by the following changes which shall take precedence over anything to the contrary:

BID DUE DATE

The Bid Due Date is hereby extended until May 8, 2018 @ 3:00 PM (local time).

1. An addendum with responses to questions received will follow.

2. Please find attached:

   a) Copy of the blackout period information (Financial Procedures Manual Section 41-423 Prohibition of lobbying in procurement matters).

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 3 by his or her signature below, **and a copy of this Addendum to be returned with proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 3 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: Tetra Tech, Inc.

BY: Jonathan Boyle

DATE: May 7, 2018

ADDENDUM NO. 4

Date: April 30, 2018

Bid Date: May 8, 2018
~~May 2, 2018~~
~~April 23, 2018~~
at 3:00 P.M. (Local Time)

Bid Name Disaster Debris Monitoring

Bid No.: PWWM-180069-DH

NOTE: This Addendum has been issued only to the holders of record of the specifications.

The original Specifications remain in full force and effect except as revised by the following changes which shall take precedence over anything to the contrary:

1. Please find attached:

   a) Copy of the black out period information (Financial Procedures Manual Section 41-423 Prohibition of lobbying in procurement matters).

The following are answers/clarifications to questions received:

2. Question: On Attachment B, Price Proposal, the positions Supervising Monitors and Roving Monitors are listed as two separate line items although they fulfill the same tasks on a debris monitoring project. May proposers provide a price for one of these positions only, as the positions are duplicative? Alternatively, would the City consider updating the Price Proposal with the duplicate position removed?
   Answer: Please provide a price for both positions. Our assumption was that on large event there might be a need for Roving Monitors to be available to fill in temporarily for bathroom breaks or other reasons such as accident or illness that might require replacing a monitor part way through the day. Roving Monitors would be distinct from Supervising Monitors who presumably would require a higher level of compensation due to their supervisory responsibilities.

3. Question: Can you please indicate whether the debris hauling contract is based on cubic yards or tonnage?
   Answer: It is our intention to base the debris removal contract on tonnages, but we have also requested bids in cubic yards as well, in case we are unable to use scales when an event occurs.

4. Question: We are kindly requesting that the City waive the Payment and Performance Bond requirement as the Federal procurement regulations in 2 CFR §200.325 only recommends bonding requirements for construction or facility improvements contracts. 2 CFR 200.325 states the following:

   § 200.325 Bonding requirements. For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold, the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or passthrough entity has made a determination that

the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

a) *A bid guarantee from each bidder equivalent to five percent of the bid price. The ''bid guarantee'' must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.*

b) *A performance bond on the part of the contractor for 100 percent of the contract price. A ''performance bond'' is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.*

c) *A payment bond on the part of the contractor for 100 percent of the contract price. A ''payment bond'' is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.*

Answer: The City prefers to keep the Payment and Performance Bond as a requirement to help ensure the contractor's performance in the event of a disaster affecting multiple cities and counties throughout the state.

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 4 by his or her signature below, **and a copy of this Addendum to be returned with proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 4 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: Tetra Tech, Inc.

BY: Jonathan Byl

DATE: May 7, 2018

ADDENDUM NO. 5

Date: May 2, 2018

Bid Date: May 8, 2018
~~May 2, 2018~~
~~April 23, 2018~~
at 3:00 P.M. (Local Time)

Bid Name Disaster Debris Monitoring

Bid No.: PWWM-180069-DH

NOTE: This Addendum has been issued only to the holders of record of the specifications.

The original Specifications remain in full force and effect except as revised by the following changes which shall take precedence over anything to the contrary:

1. Please find attached:

   a) Copy of the blackout period information (Financial Procedures Manual Section 41-423 Prohibition of lobbying in procurement matters).

The following are answers/clarifications to questions received:

2. Question: Per the attached Addendum 4, the City will not waive the Payment/Performance Bond requirements.

   Pulled from the RFP:
   *"Contractor shall, **upon award of contract**, provide the City with a Payment and Performance Bond in the form and manner set forth in Section 255,05, Florida Statutes, guaranteeing the performance of the work under this contract and the payment of all subcontractors, suppliers, and sub-subcontractors. For purposes of the Agreement, the contract price shall be deemed to be $250,000.00."*

   We understands the City's desire to ensure the firm selected for this project is financially solvent and will be available to manage a multi-million dollar debris monitoring program in the event of a disaster. As this is a four (4) years prepositioned/standby contract (possibly 8 years if extended) that is intended to be activated after a disaster event, we are respectfully requesting the City to consider requiring the Payment and Performance Bond upon contract activation versus contract award. Should the City decide not to accept this request, will the awarded Contractor be able to invoice the City for the cost to maintain the Payment and Performance Bond for the term of the contract?

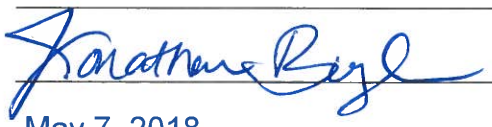
   Answer: The City amends the requirement for a Performance Bond. It will only be required upon contract activation. The City waives the requirement for a Payment Bond and Bid bond.

ACKNOWLEDGMENT: Each Proposer shall acknowledge receipt of this Addendum No. 5 by his or her signature below, **and a copy of this Addendum to be returned with proposal.**

CERTIFICATION BY PROPOSER

The undersigned acknowledges receipt of this Addendum No. 5 and the Proposal submitted is in accordance with information, instructions, and stipulations set forth herein.

PROPOSER: Tetra Tech, Inc.

BY: 

DATE: May 7, 2018

CERTIFICATE
TETRA TECH, INC.

To: City of Gainesville, Florida

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

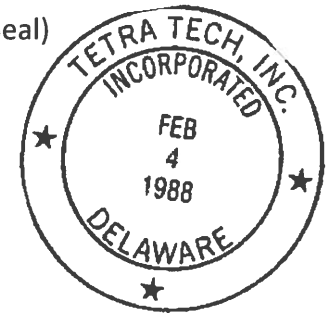
Jonathan Burgiel, Operations Manager within the Company's United States Government Division of the Government Services Group, is authorized and empowered, in accordance with the Company's Signature Approval Authority Matrix, as approved by the Company's Board of Directors, for and on behalf of the Company, to sign a proposal in response to RFP No. PWWM-180069-DH for Disaster Debris Monitoring.

Further, Mr. Burgiel is authorized and empowered to sign any resulting contract and is authorized to bind the Company.

IN WITNESS WHEREOF, I have hereunto set my hand as of this 4th day of May 2018.

Preston Hopson
Senior Vice President, General Counsel and Secretary

(Seal)



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY) 09/26/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:	
Aon Risk Insurance Services West, Inc. Los Angeles CA Office 707 Wilshire Boulevard Suite 2600 Los Angeles CA 90017-0460 USA	PHONE (A/C. No. Ext): (866) 283-7122	FAX (A/C. No.): (800) 363-0105
	E-MAIL ADDRESS:	

INSURED	INSURER(S) AFFORDING COVERAGE		NAIC #
Tetra Tech, Inc. 1 S Wacker Drive 37th Floor Chicago IL 60606 USA	INSURER A:	Lexington Insurance Company	19437
	INSURER B:	National Union Fire Ins Co of Pittsburgh	19445
	INSURER C:	The Insurance Co of the State of PA	19429
	INSURER D:	American Home Assurance Co.	19380
	INSURER E:	AIG Europe Limited	AA1120841
	INSURER F:		

COVERAGES **CERTIFICATE NUMBER:** 570063784534 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
B	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR X X,C,U Coverage GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			GL7468716	10/01/2017	10/01/2018	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$2,000,000 $1,000,000 $10,000 $2,000,000 $4,000,000 $4,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			CA4288055	10/01/2017	10/01/2018	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$2,000,000
E	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $100,000			CSUSA1702199	10/01/2017	10/01/2018	EACH OCCURRENCE AGGREGATE	$5,000,000 $5,000,000
C D C C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N: N If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		WC014629496 WC014629497 WC014629498 WC014629499	10/01/2017 10/01/2017 10/01/2017 10/01/2017	10/01/2018 10/01/2018 10/01/2018 10/01/2018	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE-EA EMPLOYEE E.L. DISEASE-POLICY LIMIT	$1,000,000 $1,000,000 $1,000,000
A	Professional Liability and Contractor's Pollution Liability			028182375 Prof/Poll Liab SIR applies per policy terms & conditions	10/01/2017	10/01/2019	Each Claim Aggregate	$5,000,000 $5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

Evidence of Insurance

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Insurance Services West, Inc.