Town of Kiawah Island

SPECIAL CALL
WAYS & MEANS COMMITTEE MEETING
Municipal Center Council Chambers
July 5, 2022; 12:45 pm

AGENDA

I. **Call to Order:**

II. **Pledge of Allegiance**

III. **Roll Call:**

IV. **Approval of Minutes:**
A. Ways and Means Committee Meeting of May 25, 2022 **[Tab 1]**

V. **Citizens' Comments: (Agenda Items only)**

VI. **Old Business:**
None

VII. **New Business:**
A. Review and Recommendation to Town Council for Approval of the Proposal for Debris Monitoring Services **[Tab 2]**
B. Review and Recommendation to Town Council for Approval of the Contract with Lou Hammonds Group to assist Town Communication Staff **[Tab 3]**

VIII. **Chairman's Report:**

IX. **Treasurer's Report:**

X. **Committee Member's Comments:**

XI. **Adjournment:**

FOIA: Notice of this meeting has been published and posted in accordance with the Freedom of Information Act and the requirements of the Town of Kiawah Island.

Tab | 1

WAYS AND MEANS

Agenda Item

WAYS & MEANS COMMITTEE MEETING

Kiawah Island Municipal Center
Council Chambers
May 25, 2022; 1:00 pm

Minutes

I. Call to Order: ***Chairman Prickett called the meeting to order at 1:08 pm.***

II. Pledge of Allegiance

III. Roll Call:

Present at the meeting: Dan Prickett, *Chairman*
John D. Labriola, *Mayor*
Maryanne Connelly, *Committee Member*
John Moffitt, *Committee Member*
Dr. Scott Parker, *Committee Member*

Also Present: Stephanie Tillerson, *Town Administrator*
Dorota Szubert, *Town Treasurer*
Petra Reynolds, *Town Clerk*

IV. Approval of Minutes:

A. Ways and Means Committee Meeting of April 28, 2022

Committee Member Parker made a motion to approve the minutes of the April 28, 2022, Ways and Means Committee meeting. Committee Member Moffitt seconded the motion.

Following discussion, the motion was unanimously approved.

V. Citizens' Comments: (Agenda Items only)

None

VI. Old Business:

None

VII. New Business:

A. Review and Recommendation to Town Council for Approval of the Proposal for Debris Management and Emergency Response Management and Recovery Services

Ms. Tillerson stated that in the event the island is impacted by a significant disaster, the Town has had a contract in place for many years with Philips and Jordan for disaster recovery and debris management services. The contract is a stand-by contract in which the Town does not incur any cost until activation and the contractor mobilizes equipment and personnel**.**

In the past, the Town has had only one firm contracted for these services; however, it is very common among municipalities to have contracts with multiple firms if one has been engaged at another site. For this reason, staff will be recommending two firms to hold contracts for Debris Management and Emergency Recovery Services.

The contract with Phillips and Jordan expires at the end of May 2022, so Town staff publicly posted an RFP (request of proposals) for contractors to bid on disaster recovery and debris management services. The Town received bids back from the following contractors:

Phillips and Jordan
Looks Good Services
TFR
Southern Disaster Recovery
DRC

Staff thoroughly reviewed all the bids and recommended that Phillips and Jordan and Southern Disaster Recovery, both experienced in working within FEMA guidelines, be contracted for debris management and emergency recovery services for The Town.

Committee Members discussed cost calculation when the contract is activated, FEMA reimbursement, the benefit of having more than one contractor, and subcontractors that would be used in a smaller storm.

Committee Member Connelly made a motion to recommend to Town Council the approval of the proposal from Phillips and Jordan and Southern Disaster Recovery for debris management and emergency recovery services. Committee Member Parker seconded the motion, and it was unanimously approved.

B. Review and Recommendation to Town Council for Approval of the proposal for the Kestrel Court Solid Waste Center Improvements Project

In the past several years, there has been tremendous growth on the island that has directly impacted the amount of solid waste on the island. The public solid waste drop-off center located on Kestrel Court needed to be improved to accommodate the increase.

The Town contracted with LS3P to work with Carolina Waste to develop a design that would increase the capacity of waste that can be handled, allow for better movement in and out of the facility, and make the site more user-friendly. The construction design RFP was publicly posted for contractors to review and bid. The Town received three bids back:

Duke Construction, LLC:	***$179,310.00***
Truluck Construction:	***$187,247.50***
Insistenza Group, LLC:	***$1,395,601.00***

After reviewing the bids, staff recommended that Duke Commercial Construction be awarded this project.

Mayor Labriola expressed concern about removing three trees included in the construction design. Ms. Tillerson confirmed the only option to allow a truck to access the site made the tree removal necessary.

Committee Member Parker made a motion to recommend to Town Council the approval of the proposal from Duke Construction for $187,247.50. Committee Member Moffit seconded the motion.

Committee Members Connelly recommended that an arborist be engaged to see if other options exist to save the trees.

The motion was unanimously approved as amended.

VIII. Chairman's Report:
None

IX. Treasurer's Report:
None

X. Committee Member's Comments:
None

XI. Adjournment:

Mayor Labriola made a motion to adjourn the meeting at 1:17 pm. Committee Member Parker seconded the motion, and it was unanimously approved.

Submitted by,

_____
Petra S. Reynolds, Town Clerk

Approved by,

_____
F. Daniel Prickett, Chairman

_____
Date

Tab | 2

WAYS AND MEANS

Agenda Item

Request for Ways and Means Committee Recommendation

TO: **Ways and Means Chairman and Committee Members**

FROM: **Brian Gottshalk, Public Works Director**

SUBJECT: **Request to Recommend Emergency Debris Monitoring Contractor**

DATE: **27 June, 2022**

BACKGROUND:

After a natural disaster, it is crucial to have professional contractors aid in the recovery effort to ensure a smooth recovery and to help compile documentation required by FEMA Public Assistance. Alongside the Debris Management contractors is a Debris Monitoring Contractor to accurately document all debris picked up and processed by the management contractor. The Town has had a contract with All South Engineering to perform these services, although this contract has never been activated. This contract expires July 18, 2022.

ANALYSIS:

Town staff put together a Request for Proposals that was posted publicly on June 3, 2022. The bidding closed on June 21, and The Town received bids from the following firms:

Disaster Programs and Operations
Rostan Solutions
Tetra Tech, Inc
Volkert, Inc

These bids received were carefully reviewed and compared against the other offerors based on technical capabilities, reasonableness of price, references, and professional experience.

ACTION REQUESTED:

Town Staff requests that the Ways and Means Committee recommend to Town Council awarding this contract for emergency debris monitoring services to Tetra Tech, Inc.

BUDGET & FINANCIAL DATA:

This is a stand-by contracts. No transactions will be made until The Town issues a Notice to Proceed and the contractor mobilizes equipment and personnel.

PROPOSAL FOR

DEBRIS MONITORING SERVICES 2022

Town of Kiawah Island, SC

TETRA TECH

complex world | CLEAR SOLUTIONS™

Copy | June 2022

Table of Contents

Section 1: Minimum Qualifications *(B.01)*

Founded in 1966, Tetra Tech, Inc., (Tetra Tech) is a leading provider of consulting, engineering, and technical services worldwide. The disaster debris monitoring industry was established in 1999 as a result of the Federal Emergency Management Agency's (FEMA) issuance of Publication 325, which provided reimbursement eligibility guidelines for disaster debris monitoring. Shortly after the establishment of FEMA Publication 325, Tetra Tech began providing local and state governments with debris monitoring services in 2001. **Tetra Tech was one of the first companies to use these regulations and has been providing FEMA reimbursable debris monitoring services to clients for 21 years.**

Tetra Tech has included a summary of examples of similar projects where debris management services were performed in the last 5 years in the table below. **Further detail can be found in Section 3.G.**

Exhibit 1-1: References

Reference	Point of Contact
Town of Hilton Head Island, SC *Disaster Debris Program Management Services* October 2016 – June 2017	**Jeffrey S. Buckalew, PE, Town Engineer** Phone: (843) 341-4772 Mobile: (843) 384-5142 Fax: (843) 842-8587 jeffb@hiltonheadislandsc.gov
New Bern, NC *Debris Monitoring Services* September 2018 – January 2019 January 2021 – Present (Drainage Project)	**David Cox, Solid Waste Superintendent** Phone: (252) 639-7521 Fax: (252) 636-1848 coxd@newbernnc.gov
Craven County, NC *Disaster Debris Monitoring Services* September 2018 – January 3, 2019	**Steven Aster, Solid Waste Director** Phone: (252) 658-7179 saster@cravencountync.gov
City of Lake Charles, LA *Debris Monitoring Services* September 2020-Ongoing	**Jeff Jones, Director of Public Works** Phone: (337) 491-1220 jjones@cityoflc.us
St. Johns County, FL *Disaster Debris Monitoring Services* October 2016 – May 2018	**Greg Caldwell, MPA, Public Works Director** Phone: (904) 209-0132 Mobile: (904) 669-5221 gcaldwell@sjcfl.us

Debris Monitoring Experience Over the Past 5 Years

Exhibit 1-2 provides an abbreviated experience matrix for projects conducted over the past 5 years. Tetra Tech can provide specific references and additional information upon request.

Exhibit 1-2: Experience Matrix (2017–Present)

Year	Disaster	Representative Client(s) *Work in Progress	Contract Management	Data Management	Collection Monitoring	Disposal Monitoring	Leaner/Hanger/Stump Removal	Private Property Debris Removal	Marine/Waterway	FEMA Reimbursement
2021	**Dixie Fire** Clients Served: 1	**CalRecycle (State Contract)** Alan Zamboanga, (916) 341-6450		■	■	■	■	■	■	■
	Hurricane Ida Clients Served: 11	**City of Central, LA**	■	■	■	■	■	■	■	■
		Iberville Parish, LA Randall Dunn, (225) 776-1109, dunn@ibervilleparish.com	■	■	■	■	■	■	■	■
		Tangipahoa Parish	■	■	■	■	■	■	■	■
	Surfside Condo Collapse Clients Served: 1	**Miami-Dade County, FL** Michael Fernandez, (786) 473-7314, michael.fernandez@miamidade.gov	■	■	■	■	■	■	■	■
	Tennessee Severe Storms and Floods Clients Served: 1	**Metro Nashville and Davidson County, TN** Phillips Jones, (615) 533-2377, phillip.jones@nashville.gov	■	■	■	■	■	■	■	■
	Alabama Tornado Clients Served: 3	**Calhoun County, AL**	■	■	■	■	■	■	■	■
	Winter Storms Clients Served: 1	**Virginia Department of Transportation** Stephen Fritton (804) 609-5399, stephen.fritton@vdot.virginia.gov	■	■	■	■	■	■	■	■
2020	**California Wildfire** Clients Served: 1	**CalRecycle Northern Branch***	■	■	■	■	■	■	■	■
	Hurricane Zeta Clients Served: **7**	**Audubon Society of LA** Cecilie Halliwill, (504) 212-5325 challiwill@audubonsinstitute.org	■	■	■	■				■
		City of Diamondhead, MS* Mike Reso (228) 222-4626 Ext. 1802 | mreso@diamondhead.ms.gov	■	■	■	■				■
		City of Gulfport, MS* Wayne Mller (288) 868-5740 | wmiller@gulfport-ms.gov	■	■	■	■				■
		City of Waveland, MS* Mickey Lagasse (228) 467.4143 | mlagasse@waveland-ms.gov	■	■	■	■				■
		City of Slidell, LA Blaine Clancy (985) 646-4270 | bclancy@cityofslidell.org	■	■	■	■				■
		Dallas County, AL* Heath Sexton (334) 375-1587 | hsexton@dallscounty_al.org	■	■	■	■				■
		Hancock County, MS Scotty Adam (228) 467-0172 | Scotty.Adam@co.hancock.ms.us	■	■	■	■				■
	Hurricane Delta Clients Served: **3**	**City of Youngsville, LA** Sally Angers (337) 857-6925 | SallyAngers@youngsvilleLA.gov	■	■	■	■				■
		St. Martin Parish, LA Heath Babineaux (337) 394-4798 | Hbabineaux@stmartinparish.net	■	■	■	■				■
	Hurricane Sally Clients Served: **4**	**Baldwin County, AL*** Terri Graham (251) 331-4158 | TGraham@baldwincountyal.gov	■	■	■	■				■
		City of Pensacola, FL John Pittman (850) 435-1894 | Jpittman@cityofpensacola.com	■	■	■	■				■
		Okaloosa County, FL Jim Reece	■	■	■	■				■

		(850) 978-1063 | jreece@co.okaloosa.fl.us					
	Hurricane Laura Clients Served: **17**	**Acadia Parish, LA** Chance Henry (337) 824-7720 | electchancehenry@gmail.com	■	■	■	■	■
		Calcasieu Parish, LA* Theresa Champeaux (337) 540-8094 | tchampeaux@calcasieuparish.gov	■	■	■	■	■
		City of Lake Charles, LA* Jeff Jones (337) 540-1707 | jjones@cityoflc.us	■	■	■	■	■
		City of Sulphur, LA* Stacy Dowden (337) 764-8044 | sdowden@sulphur.org	■	■	■	■	■
		Jefferson Davis Parish, LA Renee Hicks (337) 824-4792 | renee@jdppj.net	■	■	■	■	■
		Orange County, TX Leon George (409) 238-9169 | lgeorge@co.orange.tx.us	■	■	■	■	■
	Hurricane Isaias Clients Served: **6**	**Town of Holden Beach, NC** Heather Finnell (910) 842-6488 | heather@hbtownhall.com	■	■	■	■	■
		Town of Ocean Isle Beach, NC* Justin Whiteside (910) 579-3469 | justin@oibgov.com	■	■	■	■	■
		Town of Oak Island, NC Rose Braam (910) 201-8015 | rbraam@ci.oak-island.nc.us	■	■	■	■	■
	Hurricane Hanna Total CYs: **327,035** Clients Served: **4**	**Hidalgo County, TX** Mr. Judge "J.D." Salinas (956) 318-2600 | jd.salinas@gsa.gov	■	■	■	■	■
	South Carolina Severe Storms and Tornadoes Total CYs: **783** Clients Served: **1**	**Barnwell County, SC** Mr. Roger Riley (803) 541-2013 | rriley@barnwellsc.com	■	■	■	■	■
	Tennessee Severe Storms and Tornadoes Total CYs: **1,039,455** Clients Served: **3**	**City of Chattanooga, TN** Elizabeth Goss (229) 894-4591 | egoss@chattanooga.gov	■	■	■	■	■
		Hamilton County, TN John Agan (423) 315-3840 | johna@HamiltonTN.gov	■	■	■	■	■
		Metro Nashville and Davidson County, TN Phillips Jones (615) 533-2377 | phillip.jones@nashville.gov	■	■	■	■	■
2019	**Tropical Storm Imelda** Total CYs: **73,336** Clients Served: **3**	**Harris County, TX** Ms. Danielle Cioce, MS (551) 427-6581 |danielle.cioce@hcpid.org	■	■	■	■	■
	Hurricane Dorian Total CYs: **63,719** Clients Served: **5**	**Jefferson County, TX** Patrick Swain (409) 835-8500 | pswain@co.jefferson.tx.us	■	■	■	■	■
		Colleton County, SC Carla W. Harvey, PE (843) 782.3104 | Cell – (843) 909-4653 charvey@colletoncounty.org	■	■	■	■	■
		Dorchester County, SC Mr. Mario Formisano (843) 832-0341 | MFormisano@dorchestercounty.net	■	■	■	■	■
	Louisiana Severe Storms and Tornadoes Total CYs: **30,516** Clients Served: **5**	**City of Ruston, LA** John Freeman (318) 245-2398 | jfreeman@ruston.org	■	■	■	■	■
	Alabama Severe Storms and Tornadoes Total CYs: **176,780** Total Tons: **7,262**	**Lee County, AL** Patrick Harvill (334) 737-7011 | Pharvill@leeco.us	■	■	■	■	■

	Clients Served: **1**						
2018	**Hurricane Michael** Total CYs: **10,618,496** Clients Served: **13**	**Lynn Haven, City of, FL** Vickie Gainer (850) 265-2121 ext 112 | vgainer@cityoflynnhaven.com	■	■	■	■	■
		Callaway, City of, FL Ed Cook (850) 215-6691 | Citymanager@cityofcallaway.com	■	■	■	■	■
		Parker, City of, FL Rich Musgrave (850) 871-4104 | richmusgrave@cityofparker.com	■	■	■	■	■
		Wakulla County, FL Brandy Raye King (850) 745-7711 | bking@mywakulla.com	■	■	■	■	■
		Franklin County, FL Pamela Brownell (850) 653-8977, ext. 10 | Em3frank@fairpoint.net	■	■	■	■	■
		Albany County, GA Phil Roberson (229) 357-0667 | PRoberson@dougherty.ga.us	■	■	■	■	■
		Dougherty County, GA Michael McCoy (229) 431-2193 | MMcCoy@dougherty.ga.us	■	■	■	■	■
	Hurricane Florence Total CYs: **1,365,327** Total Tons: **19,889** Clients Served: **15**	**New Bern, City of, NC** Matt Montanye (252) 646-3984 | MontanyeM@newbern-nc.org	■	■	■	■	■
		Craven County, NC Steven Aster (252) 658-7179 | saster@cravencountync.gov	■	■	■	■	■
		Lenoir County, NC Samuel Kornegay (252) 361-1788 | skornegay@co.lenoir.nc.us	■	■	■	■	■
		Fayetteville, City of, NC Jackie Tuckey (910) 433-1854 jtuckey@ci.fay.nc.us	■	■	■	■	■
	Connecticut Tornadoes **Total CYs: 193,222** Clients Served: **4**	**Brookfield, CT** Ralph Tedesco (203) 775-7318 jrtedesco@brookfieldct.gov **New Fairfield, CT** Russ Loudon (203) 312-5628 rloudon@newfairfield.gov	■	■	■	■	■
2017	**California Wildfires (2017-18)** Total Tons: **2,278,740** Clients Served: **4 (6 Wildfires)**	**CalRecycle, CA** Alan Zamboanga (916) 341-6450 | alan.zamboanga@calrecycle.ca.gov	■	■	■	■	■
	Hurricane Irma Total CYs: **20,113,657** Clients Served: **67**	**Miami-Dade County, FL** Michael Fernandez (786) 473-7314 | michael.fernandez@miamidade.gov	■	■	■	■	■
		Polk County, FL Jay M. Jarvis, P.E (863) 581-0163 | JayJarvis@polk-county.net	■	■	■	■	■
		Collier County, FL Dan Rodriguez (239) 252-2504 | danrodriguez@colliergov.net	■	■	■	■	■
		Miami, City of, FL Mario Nunez (786) 479-4097 | MFNunez@miamigov.com	■	■	■	■	■
		Seminole County, FL Jeff Waters (407) 665-2253 | jwaters02@seminolecountyfl.gov	■	■	■	■	■
		Lake County, FL Mary Hamilton (352) 253-6006 | mhamilton@lakecountyfl.gov	■	■	■	■	■
		Brevard County, FL Euripides Rodriguez (321) 633-2042 | Euripides.rodriguez@brevardfl.gov	■	■	■	■	■

		Pinellas County, FL Sean Tipton (727) 464-8809 | stipton@co.pinellas.fl.us	■	■	■	■	■
		Holly Hill, City of, FL Antoine Khoury (386) 248-9493 | akhoury@hollyhillfl.org	■	■	■	■	■
		South Daytona, City of, FL Les Gillis, P.E. (386) 322-3080 | lgillis@southdaytona.org	■	■	■	■	■
		Corpus Christi, City of, TX Gabriel Maldonado (361) 826-3165 | gabrielm@cctexas.com	■	■	■	■	■
	Hurricane Harvey Total CYs: **5,445,225** Clients Served: **31**	**Dickinson, City of, TX** Connie Nicholson (281) 337-2489 ext. 224 | cnicholson@ci.dickinson.tx.us	■	■	■	■	■
		Fort Bend County, TX Marc Grant (832) 473-2730 | grantmar@co.fort-bend.tx.us	■	■	■	■	■
		Friendswood, City of, TX Brian Mansfield (281) 996-3335 | bmansfield@ci.friendswood.tx.us	■	■	■	■	■
		Harris County, TX Danielle Cioce (551) 427-6581 | danielle.cioce@hcpid.org	■	■	■	■	■
		Houston, City of, TX Joanne Song Yu (832) 393-0484 | Joanne.Song@houstontx.gov	■	■	■	■	■
		Humble, City of, TX James Nykaza (281) 853-7832 | jnykaza@cityofhumble.net	■	■	■	■	■
		Katy, City of, TX Jason Rivera (281) 391-4796 | jrivera@cityofkaty.com	■	■	■	■	■
		League City, City of, TX Ogden "Bo" Bass, AICP (281) 554-1007 | bo.bass@leaguecitytx.gov	■	■	■	■	■
		Montgomery County, TX Darren Hess (936) 523-3910 | Darren.Hess@mctx.org	■	■	■	■	■
		Nassau Bay, City of, TX Jamie L. Galloway (281) 336-6298 | jamie.galloway@nassaubay.com	■	■	■	■	■
		Pasadena, City of, TX Robin S. Green, Jr., P.E. (713) 475-7836 | rgreen@pasadenatx.gov	■	■	■	■	■
		Seabrook, City of, TX Kevin Padgett (281) 291-5656 | kpadgett@seabrooktx.gov	■	■	■	■	■
	Georgia Tornadoes Total CYs: **920,000** Clients Served: **2**	**Albany County, GA** Phil Roberson (229) 357-0667 | PRoberson@dougherty.ga.us	■	■	■	■	■
		Dougherty County, GA Michael McCoy (229) 431-2193 | MMcCoy@dougherty.ga.us	■	■	■	■	■

Section 2: Administrative Submittal *(B.02)*

As required by the RFP, Tetra Tech has included the administrative attachments on the following pages:

a. Drug Free Workplace Certification (Attachment A)

b. Fee Schedule (Attachment B)

c. Proposal Signature Form (Attachment C)

d. Non-Collusion Oath (Attachment D)

ATTACHMENT A

Town of Kiawah Island
Drug-free Workplace Certification
(Contractor/Vendor Other Than Individuals)

This certification is required by the Drug-free Workplace Act, Section 44-107-10 et seq South Carolina Code of Laws (1976, as amended). The regulations require certification by Contractors/Vendors prior to award, that they will maintain a drug-free workplace as defined below. The certification set out below is a material representation of fact upon which reliance will be placed when determining the award of a contract. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of contract, or suspension or debarment from the right to submit bids for proposals for Town of Kiawah Island projects.

For purposes of this Certification, "Drug-free Workplace" is defined as set forth in Section 44-107019 (1), South Carolina Code of Laws (1976, as amended). The aforesaid Section defines workplace to include any site where work is performed to carry out the Contractor's/ Vendor's duties under the contract. Contractor's/Vendor's employees shall be prohibited from engaging in the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance in accordance with the requirements of the Drug-free Workplace Act.

By signing this document, the Contractor/Vendor hereby certifies that it will provide a drug-free workplace by:

1) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Contractor's/Vendor's workplace and specifying the actions that will be taken against employees for violation of the prohibition;

2) Establishing a drug-free awareness program to inform employees about:
   (a) The dangers of drug abuse in the workplace;
   (b) The Contractor's/Vendor's policy of maintaining a drug-free workplace;
   (c) Any available drug counseling, rehabilitation, and employee assistance programs; and
   (d) The penalties that may be imposed upon employees for drug violations;

3) Making it a requirement that each employee to be engaged in the performance of the contract be given a copy of the statement required by paragraph (1) above;

4) Notifying the employee in the statement required by paragraph (1) that, as a condition of employment under the contract, the employee will:
   (a) Abide by the terms of the statement, and

   (b) Notify the employer of any criminal drug statue conviction for a violation occurring in the workplace no later than five (5) days after the conviction;

5) Notifying the using agency within ten (10) days after receiving notice under subparagraph (4) (b), from an employee or otherwise receiving actual notice of the conviction;

6) Taking one of the following actions, within thirty (30) days of receiving notice under subparagraph (4) (b) with respect to any employee who is convicted:

   (a) Taking appropriate personnel action against the employee, up to and including termination; and

   (b) Requiring the employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

7) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (1), (2), (3), (4), (5), and (6) above.

Name and Address of Business:

Tetra Tech, Inc.

2301 Lucien Way, Suite 120

Maitland, FL 32751

WITNESSETH:

Betty Kamara, Contracts Administrator

Signature of Authorized Agent

Print Name and Title:

Date: June 16, 2022

Jonathan Burgiel

Business Unit President

ATTACHMENT B

FEE SCHEDULE

Please submit a list of all personnel, equipment, and service rates as necessary that will be required to successfully and accurately perform Debris Monitoring Services as noted in the Scope of Services and as prescribed by the latest FEMA guidelines for Debris Monitoring and Public Assistance.

Each respondent shall submit a daily rate of compensation for each position (i.e. Manager, supervisor, field monitor, and clerical, etc.) which is to include lodging per diem or subsistence pay, vehicle mileage, and any other associated expenses(s) relating to the position. Daily rates are based on a 40 hour work week. An overtime rate, if applicable, should be listed separately for each position.

Tetra Tech has included the proposed fee schedule on the following page.

Attachment B – Fee Schedule

The hourly rates shall remain firm for the first year of the initial term. Hourly rates for subsequent years and any extension term years shall be subject to an annual adjustment based on the latest yearly percentage increase of the Consumer Price Index for All Urban Consumers (CPI-U)(All Items) as published by the Bureau of Labor Statistics, U.S. Department of Labor.

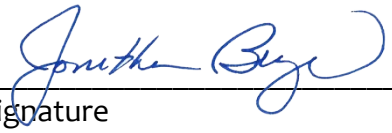
Position	Hourly Rate
Project Manager	$ 85.00
Operations Manager	$ 65.00
Field Supervisor	$ 45.00
Crew Monitor	$ 37.00
DMS and Drop-Off Site Monitors	$ 37.00
Data Manager	$ 55.00
GIS Specialist	$ 55.00
Project Coordinator	$ 35.00
Ticket Data Entry Clerk	$ -
Billing/Invoice Analyst	$ 45.00

Attachment C

Proposal Signature Form

In Compliance with Request for Proposals, the undersigned hereby proposes to provide all services, materials, equipment, and labor, except as otherwise noted, for Debris Monitoring Services.

NAME OF COMPANY: Tetra Tech, Inc.

By:  Jonathan Burgiel
Signature Print Name

Title: Business Unit President (i.e., Owner, Partner, Corporate Officer, etc.)

Address: 2301 Lucien Way, Suite 120

City: Maitland State: FL Zip: 32751

Telephone Number: 321-441-8511 Business Fax Number: 321-441-8501

Is your firm a X Corporation, _____ Sole Proprietorship, or _____ Partnership?

If incorporated, please list state of incorporation: Delaware

FEIN or SSN: 95-4148514

Attachment D
NON-COLLUSION OATH

COUNTY OF: Orange

STATE OF: Florida

Before me, the Undersigned, a Notary Public, for and in the County and State aforesaid, personally appeared Jonathan Burgiel and made oath that the Offeror herein, his agents, servants, and/or employees, to the best of his knowledge and belief, have not in any way colluded with anyone for and on behalf of the Offeror, or themselves, to obtain information that would give the Offeror an unfair advantage over others, nor have they colluded with anyone for and on behalf of the Offeror, or themselves, to gain any favoritism in the award of the contract herein.

SWORN TO BEFORE ME THIS 16 DAY OF June, 2022 ~~2021~~

Authorized Signature for Offeror

Please print Offeror's name and address:

Jonathan Burgiel, Business Unit President

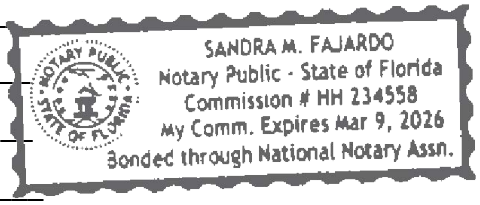
2301 Lucien Way, Suite 120

Maitland, FL 32751

NOTARY PUBLIC FOR THE STATE OF Florida

My Commission Expires: March 9, 2026

Print Name: Sandra M. Fajardo



Section 3: Information to be Submitted *(B.03)*

A. Background & Size

Firm History

Tetra Tech is a leading provider of consulting, engineering, environmental, and technical services worldwide. Founded in 1966, **Tetra Tech is a C Corporation** and 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; environmental services, 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. We are a global company with over 21,000 employees that is Leading with Science® to provide innovative solutions to complex problems for our public and private clients.

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.

25 YEARS OF DISASTER RESPONSE EXPERIENCE

160 MILLION CY OF DEBRIS MONITORED...

28 PROJECTS OVER 1 MILLION CY

... PLUS **6.8M** CYs OF PPDR DEBRIS

90 MAJOR DISASTERS

IN 23 STATES & 2 TERRITORIES

2.35M HAZARDOUS TREES & LIMBS REMOVED

30,000+ PPDR PARCELS SERVICED

$8B IN POST-DISASTER GRANTS MANAGED

10,000+ PROJECT WORKSHEETS (PWs)

650 TOTAL DEBRIS REMOVAL PROJECTS MANAGED

#1 MOST PREFERRED ADMS TECHNOLOGY

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 $8 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 *160 million cubic yards (CYs) of debris as well as the demolition of over 22,000 uninhabitable residential and commercial structures*.

In addition to disaster recovery, Tetra Tech offers a diverse suite of solutions to complex problems in water, environment, infrastructure, resource management, energy, advanced data analytics, and more. In all, Tetra Tech has dedicated problem solvers and innovators from 60 disciplines collaborating on innovative projects worldwide.

Knowledge and Expertise

55	25	160M	$8B	300+
Years in Business	Years in Disaster Recovery	CYs of Debris Monitored	Reimbursed to Clients	Clients Nationwide

Tetra Tech Disaster Recovery is a national leader in the field of disaster management. Our contracts with federal agencies and state and local governments are in diverse areas such as disaster recovery consulting and technical assistance; staff augmentation; community resilience; grant management; and disaster debris planning and preparedness. Our team offers deep understanding of the Federal Emergency Management Agency (FEMA), Federal Highway Administration (FHWA), and other regulatory agencies' policies and procedures. We have worked closely with these agencies, recipients, and subrecipients on billions of dollars' worth of projects to determine project eligibility and to provide technical assistance, detailed damage inspection reports, cost estimates, validation and testing, audit documentation, and process reimbursements. Our team also maintains strong relationships with many of the lead federal officers, state agency leadership, local governments, and other staff.

Unmatched Debris Monitoring Experience

Our team has provided disaster management, recovery, and consulting services to hundreds of state and local government agencies since 2001. These services have included environmental permitting; monitoring of debris collection, hazardous tree programs, debris management sites (DMS), and specialized debris missions; fire damage restoration; contractor invoice reconciliation; and federal grant reimbursement support. **Profiles and references from specific projects are featured later in this section. Tetra Tech can provide additional projects and information upon request.**

Exhibit 3-1: Experience Matrix (2001–2022)

90 EVENTS 2001 - 2022

2022
WINTER STORM VA - 1 Client
KY SEVERE STORMS/TORNADOES - 2 Clients

2021
TORNADOES KY - 2 Clients
DIXIE FIRE - 1 Client
HURRICANE IDA - 9 Clients
BUILDING COLLAPSE - 1 Client
SEVERE STORMS/TORNADOES AL - 1 Client
WINTER STORM TX - 3 Clients
SEVERE STORMS/FLOODING TN - 1 Client
WINTER STORM VA - 1 Client

2020
HURRICANE ZETA - 6 Clients
HURRICANE DELTA - 4 Clients
WILDFIRES - 2 Clients
HURRICANE SALLY - 4 Clients
HURRICANE LAURA - 18 Clients
HURRICANE ISAIAS - 2 Clients
HURRICANE HANNA - 3 Clients
TORNADOES - 3 Clients
IOWA DERECHO - 1 Client

2019
TROPICAL STORM IMELDA - 3 Clients
HURRICANE DORIAN - 4 Clients
TORNADOES - 2 Clients

2018
HURRICANE MICHAEL- 13 Clients
HURRICANE FLORENCE - 12 Clients
WILDFIRES - 1 Client

2017
WILDFIRES - 2 Clients
HURRICANE MARIA - 1 Client
HURRICANE IRMA - 67 Clients
HURRICANE HARVEY - 38 Clients
TX & GA TORNADOES - 2 Clients

2016
HURRICANE MATTHEW - 34 Clients
HURRICANE HERMINE - 1 Client
SEVERE STORMS & FLOODING -2 Clients
WILDFIRES - 2 Clients
FLOODING - 6 Clients

2015
WILDFIRES - 2 Clients
SEVERE STORMS - 3 Clients
FLOODING - 10 Clients

2014
FLOODING - 1 Client
TORNADOES - 2 Clients
ICE STORM - 7 Clients

2013
ICE STORM - 2 Clients
FLOODING - 1 Client

2012
HURRICANE SANDY - 13 Clients
HURRICANE ISAAC - 5 Clients
TROPICAL STORM DEBBY - 3 Clients

2011
NOR'EASTER WINTER STORMS - 19 Clients
TEXAS DROUGHT - 1 Client
TEXAS WILDFIRES - 1 Client
HURRICANE IRENE - 22 Clients
TORNADOES - 4 Clients

2010
FLOODING - 2 Clients
TORNADOES - 1 Client
ICE STORMS - 1 Client
TROPICAL STORM ALEX - 1 Client

2009
ICE STORMS - 1 Client
SNOW STORMS - 2 Clients
TROPICAL STORM IDA

2008
HURRICANE IKE - 78 Clients
HURRICANE GUSTAV - 7 Clients
TROPICAL STORM FAY - 3 Clients
HURRICANE DOLLY - 30 Clients
MIDWEST FLOODING - 2 Clients

160 Million
Total Cubic Yards
of Disaster Debris

2007
MIDWEST ICE STORM - 3 Clients
GROUNDHOG DAY TORNADOES - 2 Clients
MIDWEST SNOW STORMS - 3 Clients

2006
BUFFALO SNOW STORMS - 6 Clients

2005
HURRICANE WILMA - 17 Clients
HURRICANE RITA - 3 Clients
HURRICANE KATRINA - 11 Clients
HURRICANE DENNIS - 5 Client

2004
HURRICANE JEANNE - 2 Clients
HURRICANE IVAN - 3 Clients
HURRICANE FRANCES - 2 Clients
HURRICANE CHARLEY - 2 Clients

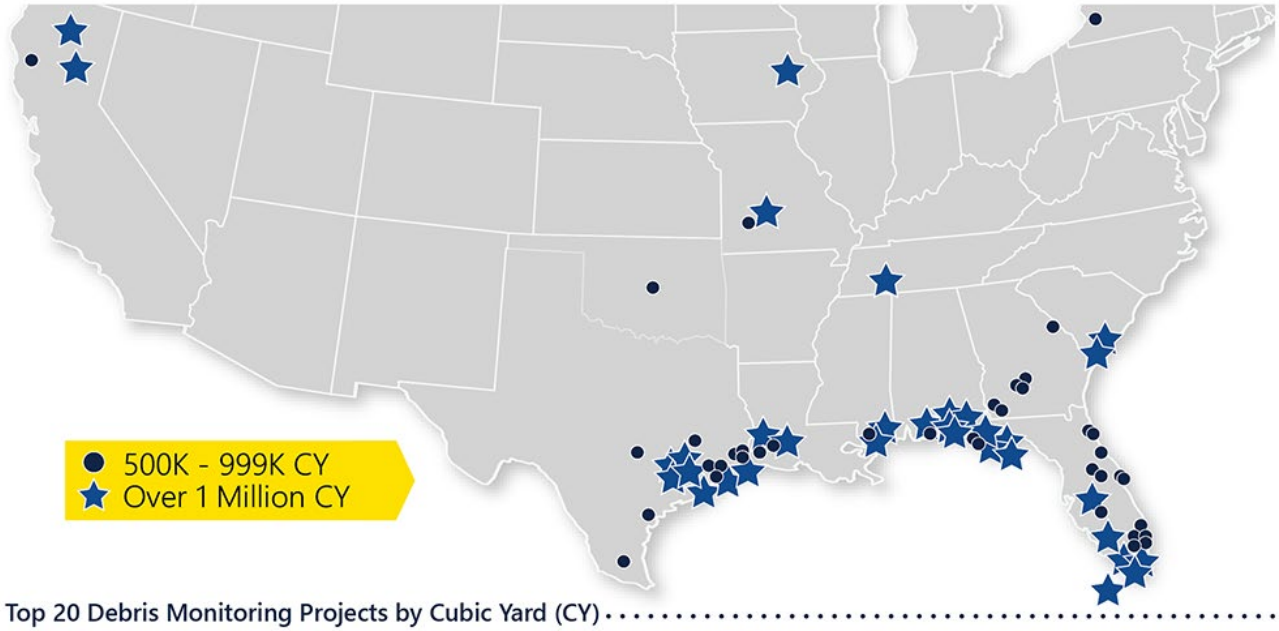
2002
HURRICANE LILI - 1 Client

2001
TROPICAL STORM GABRIELLE - 1 Client

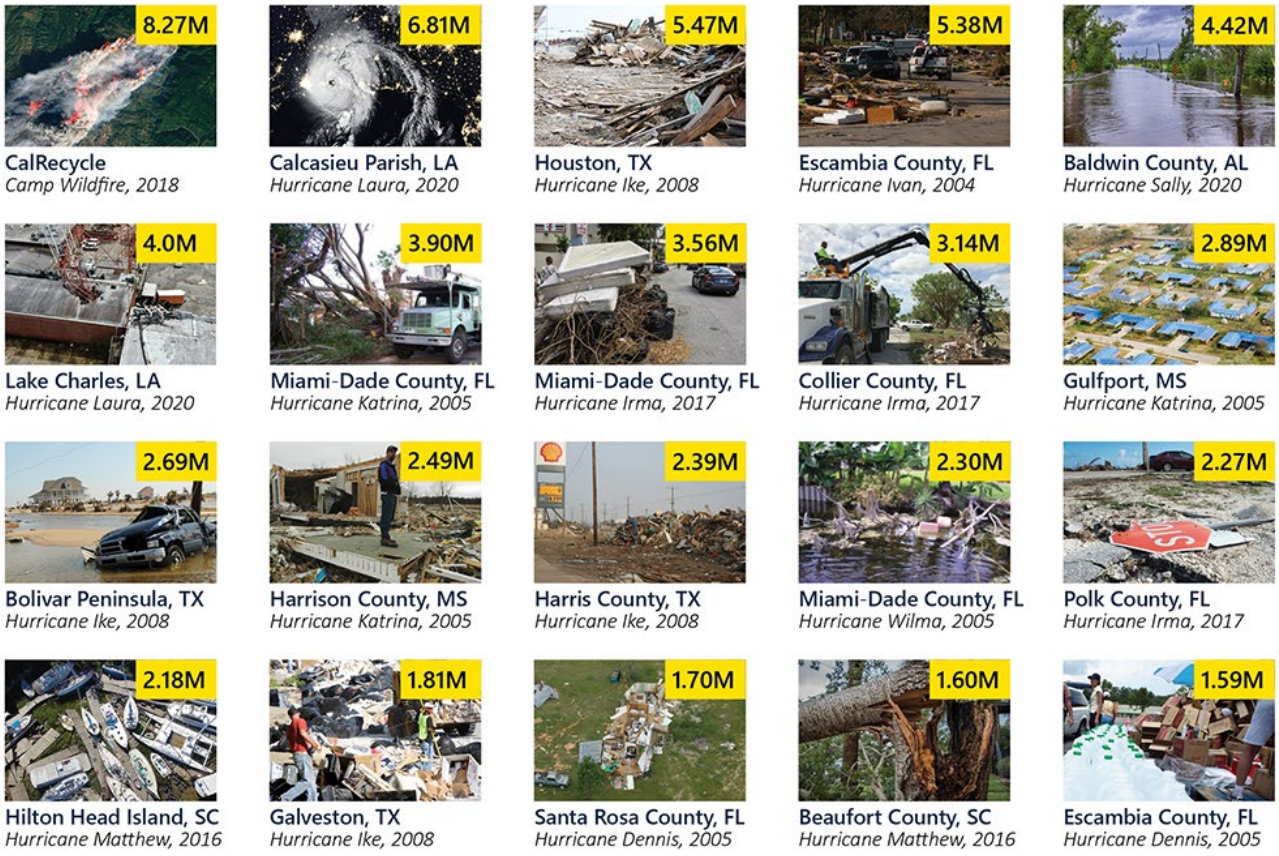
Large-Scale Debris Monitoring Experience

Clients count on us to respond in their time of need, and we have never failed to deliver. Our team of debris experts and vast resources allow us to respond to our clients' deployment and mobilization needs, regardless of size, location, or type of disaster. *More than 6,000 Tetra Tech field staff were deployed in concurrent responses to Hurricanes Harvey, Irma, Maria, and the California wildfires in 2017–2018.* Tetra Tech understands the unique aspects and special considerations related to large-scale operations.

Exhibit 3-2: Large Project Experience

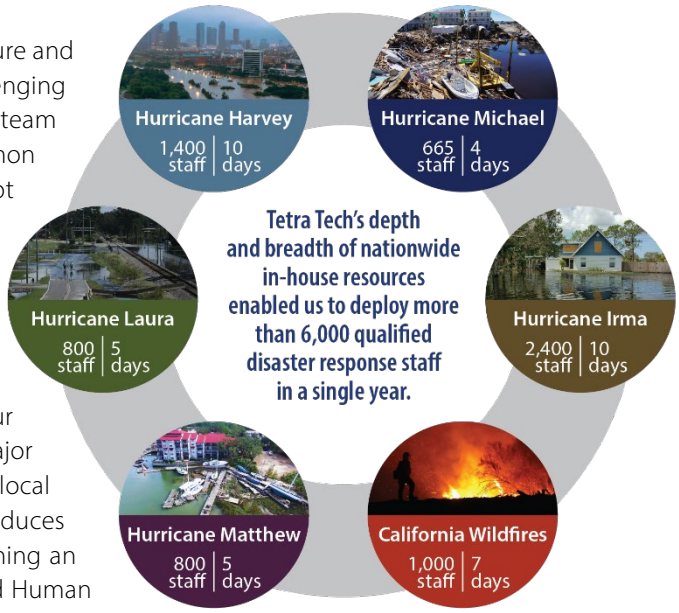


Top 20 Debris Monitoring Projects by Cubic Yard (CY)



Ability to Respond

Clients count on us to respond in their time of need, and we have never failed to deliver. Our ability to respond rapidly is accelerated by utilizing the following:



- **ICS Structure:** Our projects are operated under the ICS structure and have a proven track record of meeting even the most challenging staffing level requirements. ICS allows the Tetra Tech project team to scale as needed, coordinate response, establish common processes for planning and managing resources, and adapt organizational structure to match the needs and complexities of projects.
- **Ability to Hire Rapidly:** Tetra Tech's immediate response staffing plan utilizes our vast network of disaster recovery professionals, including full-time employees, reserve staff from the Tetra Tech Disaster Recovery Unit, and local hires. Our staffing process has rapidly mobilized project teams for major disaster recovery projects nationwide. We prioritize deploying local staff, which benefits the local post-disaster economy and reduces mobilization and transportation costs. In addition to maintaining an extensive field staff database, Tetra Tech can deploy our Field Human Resources (HR) Hiring Center, which is designed to be quickly mobilized, transported, and set up to allow near immediate response for field staffing needs. The number of trained HR representatives can scale up to 20 at a moment's notice, with the ability to hire 200+ staff per day. Under this process, local teams can be hired, trained, and deployed within 24 hours.
- **Depth of Resources:** Tetra Tech maintains a fully stocked warehouse located in Orlando, Florida with over 120 fully stocked bays of debris monitoring supplies capable of supporting over 50 simultaneous recovery operations for over 90 days. We also have dedicated logistics staff that manages resources and supplies and can have a fully functioning field office in a matter of days, and often several simultaneous offices at once. Tetra Tech has consistently deployed large-scale mobilizations of hundreds of staff and thousands of dollars' worth of equipment to multiple clients in a matter of days and on very short notice.

Broad Experience Maximizing Federal Grant Programs

Over the course of working with hundreds of local and state governments on disaster debris management projects, our team has developed a deep understanding of FEMA, FHWA, NRCS, and other reimbursement and regulatory agencies' policies and procedures. Our efforts allow clients to maintain their focus on continuing daily operations while relying on us to oversee the management of debris removal operations in compliance with programmatic guidelines and procedures. Our understanding of requirements for eligibility, documentation, and reimbursement has helped our clients obtain **over $8 billion in reimbursed costs.**

Our team has direct experience with federal grant programs, including:

- FEMA PA Program (including Section 406 mitigation and Section 428 alternative procedures program)
- FEMA Hazard Mitigation Grant Program (HMGP, Section 404 mitigation)
- FEMA Hazard Mitigation Assistance (HMA)
- FEMA Individual Assistance (IA) Program
- FHWA-Emergency Relief (FHWA-ER) Program
- FHWA Transportation Investment Generating Economic Recovery Grant
- Natural Resources Conservation Service (NRCS) Emergency Watershed Protection
- U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Program (CDBG)
- U.S. Treasury Coronavirus Aid, Relief, and Economic Security (CARES) Act and COVID-related funds

For this engagement, Tetra Tech anticipates that majority of reimbursement will be pursued through the FEMA PA Program. Our team holds comprehensive qualifications in working both for and with FEMA. Tetra Tech maintains six current contracts directly supporting FEMA, in addition to our routine work with FEMA as part of state and local projects seeking FEMA reimbursement.

Tetra Tech is able to maximize FEMA PA disaster debris reimbursement funding for the Town based on the following:

- **Procedures Tailored to FEMA:** Our data management and document storage procedures are tailored to facilitate FEMA review and the generation of project worksheet versions throughout the entire project. We incorporate changes or updates to the FEMA PA Program and Policy Guide (PAPPG) into our procedures for field documentation and data management as they occur.
- **Comprehensive Understanding of FEMA Regulations:** Our management team and field staff 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.
- **Direct Relationships with FEMA Regional Representatives:** Our team maintains strong relationships with many of the lead federal coordinating officers, debris specialists, Public Assistance (PA) coordinators and officers, and other staff. Regular interface and communication with FEMA at the headquarters, regional, and local levels allow our team to obtain quick responses on disaster-specific guidance and issues.
- **Team of Grant Experts to Assist with Funding and Audits:** Our grant management experts have assisted clients with applying for and retaining grant funds, even after closeout and audit processes. Our FEMA appeals and funding specialists have worked with FEMA closeout officers to obtain millions of previously deobligated dollars for communities.

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.**

Exhibit 3-3: Overview of Federal Grant Funding Experience

Year	Client	Event	Program	Value ($)	Preliminary Damage Request	Develop Request for Public Assistance	Applicant Briefing	Applicant Kickoff Meeting	Site Visits/Inspections	Project Scoping	Project Cost Estimation & Documentation	PW/Application Development	Alternate/Improved/Pilot Program Projects	Project Cost Reconciliation	Interim Inspections	Funding Disbursement	Grant Closeout	Audit/Appeals Support
2021	Iowa, State of	CV19	CCS	227,500,000						■	■			■		■		
2021	Texas, State of	CV19	ERAP	1,308,000,000						■	■			■		■		
2021	Richland County SC	CV19	ERAP	12,500,000						■	■			■		■		
2021	Broward County	CV19	ERAP	58,965,000						■	■			■		■		
2021	Charleston County, SC	CV19	ERAP	22,200,000						■	■			■		■		
2021	Pinellas County, FL	CV19	ERAP	21,400,000						■	■			■		■		
2021	St. Petersburg, FL	CV19	ERAP	8,000,000						■	■			■		■		

Year	Client	Event	Program	Value ($)	Preliminary Damage Request	Develop Request for Public Assistance	Applicant Briefing	Applicant Kickoff Meeting	Site Visits/Inspections	Project Scoping	Project Cost Estimation & Documentation	PW/Application Development	Alternate/Improved/Pilot Program Projects	Project Cost Reconciliation	Interim Inspections	Funding Disbursement	Grant Closeout	Audit/Appeals Support
2021	Leon County, FL	CV19	ERAP	19,600,000						■	■			■		■		
2021	Mobile County, AL	CV19	ERAP	12,300,000						■	■			■		■		
2021	Winston-Salem/Forsyth Cty., NC	CV19	ERAP	11,500,000						■	■			■		■		
2021	Greenville County, SC	CV19	ERAP	15,800,000						■	■			■		■		
2021	Orlando, FL	CV19	ERAP	8,600,000						■	■			■		■		
2021	Lexington County, SC	DR-4241	CDBG-MIT	15,000,000	■	■	■	■	■	■	■	■	■	■	■	■	■	
2021	Monroe County, FL	DR-4337	CDBG-DR	15,000,000	■	■	■	■	■	■	■	■	■	■	■	■	■	
2021	Walton County, FL	CV19	COVID PA	131,470	■	■	■	■	■	■	■	■	■	■	■	■	■	
2021	Frisco, TX	DR 4586	FEMA PA	700,000							■	■	■	■	■	■	■	
2021	Frisco, TX	CV19	FEMA PA	500,000							■	■	■	■	■	■	■	
2021	Frisco, TX	CV19	CRF	3,700,000						■	■	■	■	■	■	■	■	
2021	Harris County, TX	DR 4586	PA	12,300,000	■						■	■				■	■	
2021	City of Philadelphia, PA	DR 4618	PA	30,000,000	■	■	■	■	■	■	■	■		■			■	
2021	Ft. Myers, FL	DR 4486	PA, CRF	2,748,000						■	■	■		■				
2020	Hamilton County, TN	DR-4514 CV19	FEMA PA	1,000,000	■	■	■	■	■	■	■	■	■	■	■	■	■	
2020	Commonwealth of Massachusetts	DR 4496	FEMA PA	200,000,000	■	■	■	■	■	■	■	■	■	■	■	■	■	
2020	Harris County, TX	DR 4855	FEMA PA	200,000,000	■	■	■	■	■	■	■	■	■	■	■	■	■	
2020	Houston, TX	DR 4855	FEMA PA	10,000,000	■	■	■	■	■	■	■	■	■	■	■	■	■	
2020	Miami, FL	DR-4337	Appeals	17,000,000														■
2020	Houston, TX	CV19	CRF	404,000,000							■							
2020	Philadelphia, PA	CV19	CRF	276,400,000							■							
2020	Palm Beach County, FL	CV19	CRF	261,000,000							■							
2020	Brevard County, FL	CV19	CRF	105,000,000							■							
2020	U.S. Virgin Islands Housing	DR 4335-VI DR 4340-VI	CDBG-MIT	2,000,000,000						■	■							
2020	LA GOHSEP Vernon-Parish	DR 4559	PA	13,000,000							■	■						
2020	LA GOHSEP Lafayette Delta	DR 4570	PA	14,488,000														
2020	LA GOHSEP Abbeville Laura	DR 4559	PA	376,000							■	■						
2020	LA GOHSEP Lafayette Laura	DR 4559	PA	3,757,000														
2020	LA GOHSEP Abbeville Delta	DR 4570	PA	222,000							■	■						
2020	City of Houston, TX	DR 4586	PA	10,000,000	■	■	■	■	■	■	■	■	■	■	■	■	■	

Year	Client	Event	Program	Value ($)	Preliminary Damage Request	Develop Request for Public Assistance	Applicant Briefing	Applicant Kickoff Meeting	Site Visits/Inspections	Project Scoping	Project Cost Estimation & Documentation	PW/Application Development	Alternate/Improved/Pilot Program Projects	Project Cost Reconciliation	Interim Inspections	Funding Disbursement	Grant Closeout	Audit/Appeals Support
2020	City of Long Beach, CA	DR 4482	PA, CRF	150,753,000						■	■	■		■		■	■	
2020	Iowa Department of Human Services	DR 4482	CRF	7,800,000						■	■	■						
2020	LA GOHSEP SAL	DR 4570, DR 4559	PA	312,600,000		■	■	■	■	■		■						
2020	LA GOHSEP COVID19 TO 8.2	DR 4484	PA	87,048,000							■							
2020	CR-Mass COVID-19 WO3/05	DR 4496	PA	75,000,000			■	■		■	■	■		■				
2020	State of Connecticut	DR 4500	PA	450,000,000						■	■	■		■		■	■	
2020	Philadelphia, PA	DR 4506	PA, CRF, HMGP	375,000,000					■	■	■	■		■		■	■	
2020	Dunedin, FL	DR 4486	PA	38,000	■	■	■	■	■	■	■	■		■				
2020	Harris County, TX	DR 4485	PA, CRF	200,000,000 426,000,000	■	■	■	■	■	■	■	■		■				
2020	Houston, TX		CRF	404,000,000										■			■	
2020	Houston, TX	DR 4332	PA	575,000,000	■	■	■	■	■	■	■	■	■	■	■	■	■	
2019	Harris County, TX	DR 4332	CDBG	1,200,000,000					■	■				■	■	■		
2019	Missouri, State of	DR 4451	PA	2,947,200							■			■		■	■	
2019	Missouri, State of	DR 4435	PA	5,664,229							■			■		■	■	
2019	Commonwealth of Puerto Rico	DR 4339	PA, HMGP	60,000,000,000		■	■	■	■	■	■	■	■	■				
2019	Barnwell County, SC	DR 4479	HMGP	4,800,000														
2018	State of Florida DEO	DR 4337	CDBG-DR	616,000,000	■	■	■	■	■	■	■	■	■	■	■	■	■	
2018	City of Callaway, FL	DR 4399	PA	50,000,000	■	■	■	■	■	■	■	■	■	■				
2018	City of Lynn Haven, FL	DR 4399	PA	50,000,000	■	■	■	■	■	■	■	■	■	■				
2018	Dougherty County, GA	DR 4400	PA	10,000,000	■	■												
2018	City of Albany, GA	DR 4400	PA	10,000,000	■	■												
2018	Ventura County, CA	DR 4353	PA	100,000,000						■	■	■		■				
2018	City of Callaway, FL	DR 4399	PA	27,098,000	■	■	■	■	■	■	■	■	■	■		■	■	
2018	City of Lynn Haven, FL	DR 4399	PA	54,810,000	■	■	■	■	■	■	■	■	■	■		■	■	
2018	City of Albany, GA	DR 4400	PA	17,773,000	■	■	■	■	■	■	■	■				■	■	
2018	Anchorage, AK	DR 4413	PA	11,936,000					■	■	■	■	■	■		■	■	
2018	Lake County, CA	DR 5262	PA	21,531,000							■							
2018	Ventura County, CA	DR 4407	PA	76,755,681							■							

Year	Client	Event	Program	Value ($)	Preliminary Damage Request	Develop Request for Public Assistance	Applicant Briefing	Applicant Kickoff Meeting	Site Visits/Inspections	Project Scoping	Project Cost Estimation & Documentation	PW/Application Development	Alternate/Improved/Pilot Program Projects	Project Cost Reconciliation	Interim Inspections	Funding Disbursement	Grant Closeout	Audit/Appeals Support
2018	Lake County, CA	DR 4399	PA	1,990,433,000							■							
2018	Walton County, TX		FMA	1,500,000							■							
2018	Houston, TX	DR 4485	PA	12,500,000	■	■	■	■	■	■	■	■		■			■	
2017	State of Louisiana OCD	DR 4277	CDBG-DR	1,600,000,000	■				■						■			
2017	City of Houston, TX	DR 4332	PA	2,400,000,000	■	■	■	■	■	■	■	■	■	■				
2017	City of South Daytona, FL	DR 4337	PA	6,000,000			■	■	■	■	■	■	■	■				
2017	Fort Bend County, TX	DR 4332	PA	50,000,000	■	■	■	■	■	■	■	■	■	■				
2017	City of Albany, GA	DR 4294 DR 4297	PA	14,000,000	■	■	■	■	■	■	■	■	■	■				
2017	Dougherty County, GA	DR 4297	PA	12,500,000	■	■	■	■	■	■	■	■	■	■				
2017	Port of Corpus Christi, TX	DR 4332	PA	10,000,000					■	■	■	■	■	■	■	■	■	
2017	Butte County, CA	DR 4407	PA	1,500,000,000							■							

Disaster Recovery Program Management Services

Our team is a national leader in providing management and support documentation for all facets of the debris removal monitoring industry, including special disaster recovery program management services.

Exhibit 3-4: Disaster Recovery and Special Program Management Capabilities

Disaster Recovery Program Management	
Emergency road clearance	Final debris disposal at a landfill or other end use
Curbside debris collection	Conflict and damage resolution
Operation of citizen drop-off sites	Truck certification
Data management and invoice reconciliation	Right-of-entry administration
Oversight of debris management sites	
Special Programs Management	
Animal carcass removal and disposal	Marine and waterway debris removal
Asbestos abatement	Private property demolition and debris removal
Beach remediation and restoration	Nuisance abatement ordinance administration
Construction and demolition debris removal	Saltwater killed tree removal
Creosote piling removal	Sediment dredging and removal
Drainage and canal debris removal	Subsurface storm drain debris removal
E-waste debris removal	Vessel and vehicle recovery
Hazardous waste debris removal	Wetland and parkland debris
Hazardous tree and stump removal	White goods and putrescent waste removal

Private Property/Right-of-Entry Debris Removal

Our team has administered many of the largest private property debris removal (PPDR) programs in U.S. history. Tetra Tech assists communities with ensuring they have the legal authority via local and state ordinances to enter onto private property. We also assist with preparing submittal packages for FEMA to approve the program, promoting the ROE program with residents, and ensuring the program is properly documented. Included below is a representative sample of our PPDR projects.

Exhibit 3-5: PPDR Experience

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
Miami-Dade County, FL	Surfside Condo Collapse (2021)					■		■	■	■		■
Bay County, Florida	Hurricane Michael (2018)	■	■	■	■	■	■	■	■	■	■	■
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)	■	■	■	■	■		■	■	■	■	■
Township of Middletown, NJ	Hurricane Sandy (2012)					■	■	■	■	■		■
St. John the Baptist Parish, LA	Hurricane Isaac (2012)	■			■	■			■	■		■
Bastrop County, TX	Wildfires (2011)	■	■	■	■	■			■	■	■	■
Comanche Nation, OK	Ice Storm (2009)					■	■		■	■		■
City of Cedar Rapids, IA	Flooding (2008)			■		■		■	■	■	■	■
University of Iowa	Flooding (2008)			■		■		■	■	■	■	■
City of Galveston, TX	Hurricane Ike (2008)	■	■	■	■	■	■		■	■	■	■
Terrebonne Parish, LA	Hurricanes Ike (2008)	■	■	■	■	■	■	■	■	■	■	■
Iberville Parish, LA	Hurricane Gustav (2008)	■	■		■	■			■	■	■	■
City of New Orleans, LA	Hurricane Katrina (2005)	■	■	■	■	■	■	■	■	■	■	■
City of Waveland, MS	Hurricane Katrina (2005)	■	■		■	■	■	■	■	■	■	■
City of Naples, FL	Hurricane Wilma (2005)					■			■	■	■	■

Coastal Restoration

Critical to the recovery of any coastal community following a disaster is the remediation of its beaches. Tetra Tech scientists and engineers work in partnership to provide a balanced approach to coastal engineering projects. The living shoreline

design approach helps our clients reduce erosion and restore habitat while creating more resilient coastlines ready to adapt to sea level rise and storm risks. We work in a variety of geographic areas across the eastern and western coastlines of the US and throughout the Caribbean. Tetra Tech is a leader in providing clear solutions for coastal restoration and protection within sustainable natural and socioeconomic frameworks. Our clients seek us out for our project planning, design, engineering, permitting, and construction oversight services expertise. We are adept at formulating the appropriate solution, tailored to the specific and unique characteristics of each project site.

Following Hurricane Katrina and the Deep Water Horizon oil spill, millions of federal grant dollars were made available to the Louisiana and Mississippi Gulf Coast for post-event restoration projects. Tetra Tech understands how important those funds are to an economy that is recovering from disasters. Tetra Tech is prepared to assist in evaluating damages, working with FEMA and the South Carolina Department of Health and Environmental Control (DHEC) to determine eligibility, and overseeing recovery efforts on the Town's beaches. If tasked, Tetra Tech will employ proven displaced sand removal and beach remediation protocols to create a program in an effort to reopen the beaches as soon as possible and minimize the impact that a beach closure could have on the Town's economy. Tetra Tech has assisted St. Johns County, FL; Escambia County (Pensacola Beach/Perdido Key), FL; and Harrison County, MS with coastal restoration services.

Waterways Debris Removal

Our team has worked extensively with local, state, and federal agencies (including the United States Army Corps of Engineers [USACE] and the National Oceanic and Atmospheric Administration) to determine legal responsibility and to evaluate and implement marine debris removal programs. We will help the Town legal staff rapidly determine legal responsibility for waterway debris removal, verify scope eligibility, and document the work in a fashion deemed appropriate by reimbursement agencies. Our team has performed waterways debris removal and related services to communities across the country, including the following projects:

Waterway debris removal efforts on behalf of the New Jersey Department of Environmental Protection (NJDEP) following Hurricane Sandy; FDEP following Hurricanes Matthew and Irma; and the City of Cape Coral, Lee County, Brevard County, Monroe County, and Collier County following Hurricane Irma

Inland waterway debris removal assignments for the Galveston City Municipal Utility District #12, Jefferson County Drainage District #7, the Trinity Bay Conservation District, and the Harris County Flood Control District with Following Hurricane Ike

Removal of derelict vessels and traps from waterways for Monroe County, Florida (the Florida Keys) following Hurricanes Katrina, Gustav, Ike, and Wilma

Vessel and Vehicle Recovery

Tetra Tech is able to assist the Town in documenting the locations and quantities of vessel and vehicle debris in the Town and presenting a case to FEMA to approve and fund the program. The Town must first show that they have a legal responsibility to remove the debris and that the debris is not the responsibility of another state or federal agency such as the

South Carolina Department of Health and Environmental Control, USACE, or the NRCS. Vessel and vehicle debris on private land may present unique ingress/egress challenges and require ROE agreements for access.

Tetra Tech has monitored vessel recovery for several clients, including:

- **NJDEP** – Hurricane Sandy | 80 vessels
- **Escambia County, FL and Monroe County, FL (Florida Keys)** – Hurricanes Wilma | 450 vessels
- **Beaufort County, SC** - Hurricane Matthew | 50+ vessels
- **FDEP -** Hurricane Matthew, Michael, & Irma | 64 vessels
- **Miami Dade County -** Surfside Condo Collapse | 100 vehicles

Leaning Trees, Hanging Limbs, and Stump Removal

Tetra Tech offers expertise in reimbursement for the removal of leaning trees, hanging limbs, and stumps. Our team has extensive experience helping communities avoid the de-obligation of funds or non-reimbursement for these activities due to ineligible work. **In 2020, our team monitored the removal and disposal of nearly 200,000 hazardous trees and hangers following consecutive Hurricanes Laura, Sally, Delta, and Zeta.**

Exhibit 3-6: Previous Leaner/Hanger/Stump Removal Programs

2,145,676 Total	1, 738,389 Hanging Limbs	245,122 Leaning Trees	162,165 Stumps

Our team has assisted numerous clients in surveying, documenting, and monitoring the removal of over 2 million leaning trees, hanging limbs, and stumps. Highlights include:

Event	Hanging Limbs	Leaning Trees	Stumps
2015-Present CA Wildfires	3,777	13,292	-
2020 Hurricane Sally	43,692	5,888	56
2020 Hurricane Laura	120,198	13,160	30
2018 Hurricane Michael	27,562	9,949	124
2018 Hurricane Florence	14,609	259	8
2017 Hurricane Irma	316,108	9,045	94,030
2016 Hurricane Matthew	183,214	12,769	2,529
2011 Winter Storm Alfred	84,135	12,355	-
2008 Hurricane Ike	364,860	29,489	1,152
2007 Midwest Winter Storm	99,382	2,682	3

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 but not limited to containers with paints, pesticides, household cleaners, oils/solvents, and fuels. Our team has broad experience helping local governments plan, procure, implement, and track disaster-related HHW collection programs at curbside or drop-off locations. **Following Hurricane Ike, a storm surge covered almost all of Galveston Island, Texas. 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.**

Data Management

Tetra Tech minimizes client costs and maintains consistent visibility of debris project operations by implementing our streamlined processes and utilizing our ADMS, *RecoveryTrac*™. *RecoveryTrac*™ ADMS technology 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 hundreds of clients.** For more information on data management, please see **Section B.03.e: Technical Approach.**

Experience Defending Client's Interests During an Audit

A representative example of past clients we have supported during dispute resolution includes, but is not limited to:

- Our team is currently retained by the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) to assist on hundreds of appeals related to 11 disasters dating back to Hurricane Katrina in 2005.
- Our team is currently working with FEMA's new VAYGo process for clients in Texas such as Fort Bend County and the City of Houston along with the Commonwealth of Puerto Rico.

- During our work with the State of Vermont, Tetra Tech worked on five (5) appeals for PWs related to Tropical Storm Irene. As a result, four appeals were overturned, and one appeal upheld.
- During our work with the Port of Galveston, our team has been involved in appeals related to storm-induced erosion and 705(c) claims. At this time, we have been successful on the appeals, with many remaining to be decided by FEMA region during first appeal.
- Our team supported the successful appeal of over $400,000 of previously deobligated funds in response to the 2004 Hurricanes Charley, Frances, and Jeanne for Lake County, Florida. These funds were associated with debris collected on private roads and gated communities. Our team did a comprehensive GIS analysis of the debris collected in question and was able to appeal the decision and obtain reimbursement from FEMA.

B. Changes & Disclosures

Tetra Tech has had no mergers acquisitions, consolidations, downsizing, or bankruptcy proceedings or filings within the past three (3) years. Tetra Tech has had no charges, violations, fines, or convictions against it associated with disaster debris monitoring services within the past (3) years.

C. Key Personnel

Tetra Tech has assembled a team of debris removal monitoring experts with direct experience responding to recent disasters. **Our dedicated project management team is deeply familiar with the policies, procedures, and requirements associated with delivering successful disaster debris monitoring services.**

Our staff members have **managed the removal of and reimbursement for over 160 million cubic yards (CYs) of debris as well as the demolition of over 22,000 uninhabitable residential and commercial structures.** Our team has monitored and obtained FEMA, FHWA, and NRCS reimbursement on over 30 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.

Our record of success includes serving over 300 state and local government clients in response to over 75 presidential disaster declarations over the last decade. Our team has obtained **over $8 billion in reimbursement funds** for our clients from federal agencies.

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

Proposed Team

Tetra Tech has assembled a project team with the qualifications and expertise necessary to support the Town following a disaster. The individuals selected for this project not only have national expertise from having worked on every major disaster in the past decade, but also have **hands-on experience working on prior (or current) South Carolina-based projects.** As a result, our staff has an in-depth understanding of how disaster response and recovery works in South Carolina.

Senior Management and Advisory Team

Our senior management and advisory team will provide expert oversight and assistance at critical junctures. This team is prepared to provide both tactical and strategic guidance for the duration of any disaster recovery operation. These individuals bring decades of disaster debris monitoring and reimbursement expertise. **Resumes for project management and advisory staff have been provided at the end of this section.**

Mr. Chuck McLendon has been providing consulting engineering services to federal, state, and local governments across the U.S. for more than 30 years. His background in solid and hazardous waste management has led him to become one of the leading experts in the country on the implementation of large-scale post-disaster debris removal programs. He leads large teams to support major infrastructure and emergency response efforts, including most recently to Miami Dade County's response to the Surfside condo collapse. Mr. McLendon has served as principal in charge for upwards of 30 major disaster activations, including projects totaling more than 150 million CYs of debris and approximately $2.5 billion in FEMA PA reimbursement. He lends this expert-level insight to help overcome any obstacles the Town may encounter in recovery.

Mr. Tommy Webster is an expert in responding to and assisting with recovery from disasters for offers knowledge from more than 20 years of experience in disaster response and debris management, including more than 10 years' experience with consulting monitoring firms. He has served in multiple functions regarding Emergency Response Project Management for a wide variety of emergency response and recovery projects, over a wide range of events across the nation including ice storms, hurricanes, flood events, wildfires, and environmental incidents. Mr. Webster has worked in direct coordination with FEMA, local and state governments, public utilities, volunteer organizations, and various Departments of Transportation.

Ms. Allison McLeary, JD, Senior Policy Advisor, will apply her program administration and policy expertise to facilitate procedural and data compliance with FEMA requirements. Ms. McLeary is an Attorney and experienced emergency response and recovery executive with a demonstrated history of building meaningful relationships across all levels of government. As the former **Recovery Bureau Chief of the Florida Division of Emergency Management and Recovery Legal Counsel for GOHSEP,** she offers direct, senior-level experience administering grant programming in coordination with federal agencies.

Project Field Operations Team

Tetra Tech has identified a team of field staff to support the Town. We have selected team members who have previous experience in similar operations. Brief summaries of each team member's experience are provided below. **Resumes for project field operations staff have been provided at the end of this section.**

Proposed Staff	Summary of Qualifications	Key Areas of Expertise
Bob Gresenz, *Project Manager*	Mr. Gresenz has been involved in all aspects of debris removal monitoring operations, including some of the largest and technically challenging projects in the history of the Federal Emergency Management Agency (FEMA) Public Assistance (PA) program. This includes the Beaufort County	• Disaster Debris Management • Right-of-Way Debris Removal • Disposal Operations

Proposed Staff	Summary of Qualifications	Key Areas of Expertise
	and Town of Hilton Head Island waterway and navigable canal debris removal efforts following Hurricane Mathew; multiple simultaneous recovery projects in Texas following Hurricane Harvey; and Florida following Hurricane Irma; and most recently our response to Hurricane Maria in Puerto Rico. He has extensive knowledge of FEMA 325 and 327 guidelines including implementation of right-of-way debris monitoring, debris site and tower monitoring, and hazardous tree removal. Mr. Gresenz is also one of Tetra Tech's designated staff trainers and is an expert in the operations of our automated debris management system (ADMS), where he has trained over 1,000 field staff on the interworking of the system and its reporting capabilities.	• FEMA Compliance Monitoring • Supervision of Field Operations • Operational Scheduling and Dispatch • Private Property Programs • Hazardous Tree Removal • FEMA PA Category A documentation and eligibility Project Staffing
Hal Helterhoff, *Operations Manager*	Mr. Helterhoff is an experienced disaster recovery professional and has served as a project manager, operations manager, and field supervisor for multiple hurricanes and various other projects for Tetra Tech. Mr. Helterhoff has been a key member of some of Tetra Tech's largest fire and hurricane response teams in recent history, serving in the field for the Camp Fire response as a Task Force Leader and Division Supervisor for debris removal and asbestos abatement teams. He also assisted with environmental soil sampling during the Camp Fire response. In addition to his field work, Mr. Helterhoff has also worked for Tetra Tech as a project manager, public liaison, and site inspector during our Rebuild Florida housing engagement.	• Project Management • Scheduling and routing • Disaster Debris Management • Right-of-Entry • Monitor Training • Monitor Dispatch • Right-of-Way Debris Removal • Disposal Operations • Field Operations • Quality Assurance/Quality Control • Demolition Operations
Paris Atkinson, *Data Manager*	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.	• FEMA Reimbursement and Audit Support • Reimbursement Policies and Procedures • RecoveryTrac™ ADMS • Data Management • Debris Monitoring Compliance • Invoice Reconciliation • Geospatial Analysis
Casey Ogden, *GIS Specialist*	Mr. Casey Ogden has more than 20 years of experience in Geographic Information Systems, with experience with the ESRI suite of products. He holds a master's degree from Florida State University with a Certificate of Emergency Management, as well as, a Bachelor's Degree from Louisiana State University in the field of Geography. As the Geospatial Applications Manager, Mr. Ogden manages a team of five GIS personnel and is responsible for developing GIS applications that are efficient, accurate and cutting edge.	• GIS Programming • ESRI Enterprise Geodatabase and Services • GNSS Survey Grade Data Collection • ArcGIS Pro / ArcMap Operation and Support • ArcGIS Server and AGOL Administration

Proposed Staff	Summary of Qualifications	Key Areas of Expertise
Christina Hendrick, *Grant/Reimbursement Manager*	Ms. Hendrick is a seasoned grant manager with more than 14 years of experience. She has overseen more than $4 billion of Federal Emergency Management Agency (FEMA) and U.S. Department of Housing and Urban Development (HUD) grant funding under FEMA Public Assistance (PA), FEMA Hazard Mitigation Grant Program (HMGP), COVID-19, and Community Development Block Grant (CDBG) programs. In her current role as a Deputy Director for financial recovery services, Ms. Hendrick has maintained oversight of Tetra Tech's most critical PA and CDBG recovery projects across 7 FEMA regions, as well as multiple COVID-19 recovery projects utilizing PA, CARES Act and other grant funding.	• Program Design / Implementation • Grant Administration • Business Planning • Project Budgeting & Accountability • Reimbursement Maximization • Process Engineering • State and Federal Regulations/Policies • Process Improvement • Resource Management

Professional Certifications, Training, and Licensing

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 key certifications that help them provide quality technical services and have attended numerous training courses related to debris operations and emergency management.**

Some of these include:

- 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
- IS 100: Introduction to Incident Command System
- IS-120: Introduction to Exercises
- IS 191: ICS/EOC Interface
- IS-200: Basic Incident Command
- IS 242: Effective Communication
- IS-288: Local Volunteer and Donations Management
- IS-230: Fundamentals of Emergency Management
- 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
- ICS 300: Intermediate ICS for Expanding Incidents

Additionally, all collection and disposal monitors and field supervisors must attend a debris monitoring training session prior to working. In addition, our environmental health and safety training 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. Our field teams attend daily safety sessions with field employees to discuss potential hazards and review safe work practices.

Scalability and Additional Resources

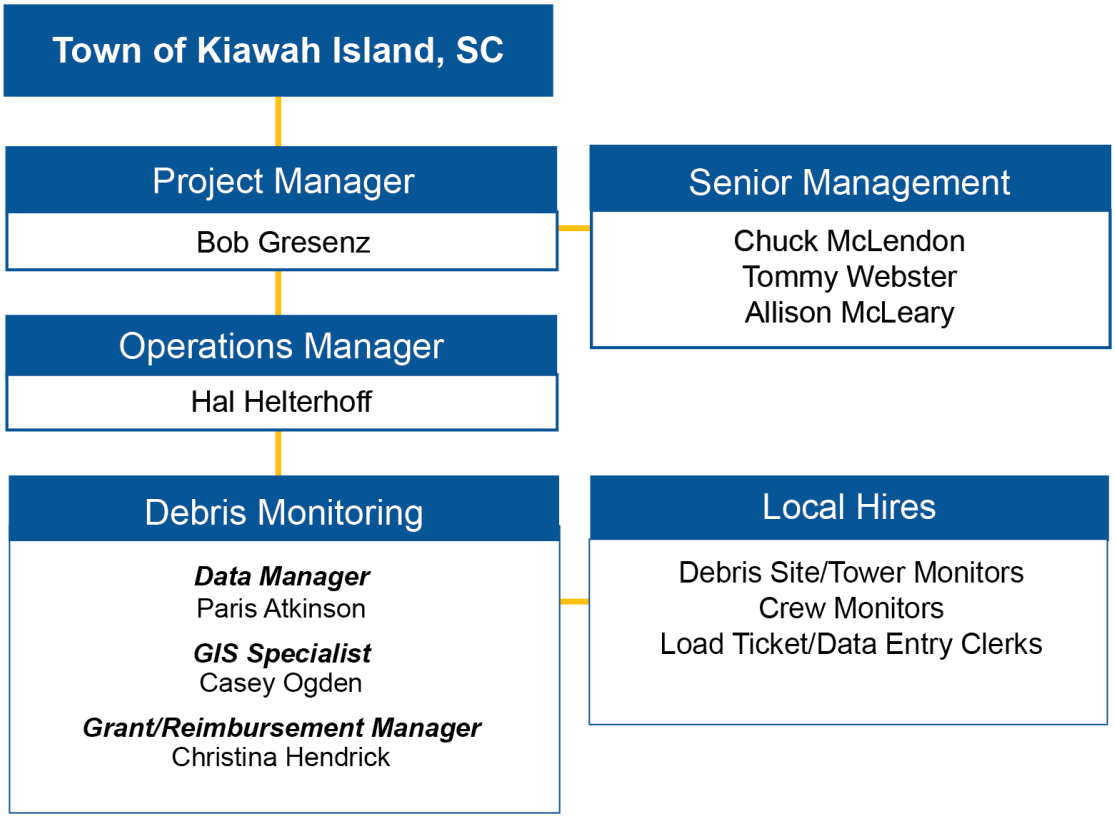
Our scalable disaster recovery operations are staffed by a deep bench of experienced disaster recovery professionals that includes:

9	38	42	55	35
Project Principals	Project Managers	Operations Managers	Field Supervisors	Project Coordinators

This core team provides management and oversight to our disaster response and recovery operations. They are seasoned experts in their field, with experience managing disaster recovery projects in response to hurricanes, floods, tornadoes, fires, ice storms, and straight-line wind events in 20 states and simultaneous activations in nine states.

While the Tetra Tech senior management team has worked together for more than 15 years, the firm also frequently welcomes new talent to meet client needs. Positions will be filled using Tetra Tech's vast network of disaster recovery professionals, including full-time employees and local hires.

Organizational Chart



The proposed organization structure is based on industry best practices and an understanding of geography and the distinct management responsibilities of each position. Our proposed organizational structure ensures orderly communication, distribution of information, effective coordination of activities, and accountability. Tetra Tech's project team can scale as needed, coordinate response, establish common processes for planning and managing resources, and adapt organizational structure to match the needs and complexities of projects. **Résumés have been included at the end of this section.**

Incident Command Structure

Tetra Tech's emergency management professionals, many of whom are certified ICS instructors, provide guidance to our disaster recovery staff on how to effectively organize and respond to disasters. Our debris project managers have spent many hours in emergency operations centers across the country and understand how ICS works at the local and state level. Our debris project managers know how to apply IC-100, 200, 700, and 800 training in the field.

We understand the value ICS has in organizing for disasters, so we strive to implement these principles into our business processes. Per ICS, during disaster response operations, our structure includes an incident commander and section chiefs for operations, logistics, action planning, and finance and administration. We establish twice daily calls using Microsoft Teams with the incident command team and section chiefs to establish our incident action plan, identify resources needs, and plan for any deficiencies. We have a dedicated health and safety officer who oversees the operation and coordinates with health and safety personnel at each project location.

Staffing Numbers

Tetra Tech will comply with the Town's staffing requirements and coordinate with the Town and 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 removal contractor release the next day's schedule by 5 p.m. so that our project manager can dispatch the appropriate number of field monitors.

Staff Resumes

Tetra Tech has provided abbreviated resumes for proposed staff on the following pages.

TETRA TECH

Chuck McLendon

Principal in Charge

31+ YEARS OF EXPERIENCE

100M CYS OF DEBRIS

$2.5B FEMA PA REIMBURSEMENT

Areas of Expertise

- Solid and Hazardous Waste Management
- Disaster Debris Monitoring
- Solid Waste Routing and Efficiency
- Private Property Debris Removal
- Cost of Service Evaluations
- Emergency Management
- Damage Assessment
- Utility Engineering/Consulting
- Program Management
- Public Outreach/ Communications
- Procurement (2CFR)
- Environmental Permitting
- Grant Management

Disasters

- DR4564FL, Hurricane Sally
- DR-4559LA, Hurricane Laura
- DR-4393NC, Hurricane Florence
- DR 4337FL, Hurricane Irma
- DR-4283FL, Hurricane Matthew
- DR-4241SC, Severe Flooding
- DR-4138FL, Severe Flooding
- DR-1971AL, Tornado Outbreak
- DR-4024VA, Hurricane Irene
- DR-1603LA, Hurricane Katrina
- BP Deepwater Horizon Oil Spill

Education

Florida State University
Bachelor of Science, Business Marketing, 1991

EXPERIENCE SUMMARY

Mr. McLendon has been providing consulting engineering services to federal, state, and local governments across the U.S. for more than 30 years. His background in solid and hazardous waste management has led him to become one of the leading experts in the country on the implementation of large-scale post-disaster debris removal programs. He has routinely assembled large teams to support major infrastructure and emergency response efforts. Career highlights include:

- Experienced Executive Program Manager with over 29 years of experience working with federal, state, and local government agencies on the finance, design, permitting, procurement, construction, and operations of major infrastructure projects.
- Served as Principal in Charge for upwards of 30 major disaster activations including projects totaling more than 100 million cubic yards of debris and upwards of $2.5 billion in FEMA PA reimbursement.
- Major experience in the legal substantiation and implementation of complex debris removal programs including PPDR, waterways, beaches, selective salvage, etc.
- In depth knowledge of the FEMA Public Assistance program including a strong understanding of Federal Register 2 CFR Part 200 (“the Super Circular”)

RELEVANT EXPERIENCE

Surfside Condominium Collapse (2021)

Miami-Dade County, Florida

The collapse of the twelve story Champlain Towers South condominium was a high-profile, catastrophic event. Mr. McLendon served as Principal in Charge for Tetra Tech to Miami-Dade County following the collapse on June 24, 2021. Mr. McLendon was on the ground at the collapse site within hours of the building collapse and County activation in order to assess the resources needed to assist the County with emergency debris removal. Over the next several days, he assisted the County with contractor procurement efforts in addition to developing and executing a plan to monitor debris removal both from a FEMA reimbursement and evidentiary debris removal perspective.

Hurricane Sally (2020)

City of Pensacola, FL and Okaloosa County, FL

The City of Pensacola and Okaloosa County, FL have been long-standing clients of Mr. McLendon. Following the impact of Hurricane Sally, Mr. McLendon provided senior advisory services to include explanations of the FEMA Category A program as well as procurement assistance. Chuck has also provided senior level oversight to ensure that our response crews are meeting client expectations.

Hurricane Laura (2020)

Calcasieu Parish, LA

Mr. McLendon mobilized immediately to the Lake Charles, LA area in the aftermath of Category 4 Hurricane Laura. He facilitated the initial kick-off meeting with the Parish

and debris contractor and developed an immediate staffing and logistics plan for the Parish. He worked closely with our on-site project manager and senior staff from the debris contractor to ensure that emergency roadway clearance (push) crews were dispatched with their work times and locations tracked. Mr. McLendon worked throughout the project with Tetra Tech project management staff to ensure that all of the parish's needs met.

Hurricane Florence (2018)

Boiling Spring Lakes, NC and Briarcliff Acres, SC

Following Hurricane Florence, Mr. McLendon provided disaster debris monitoring and FEMA grant management related services to the City of Boiling Spring Lakes, NC and the Town of Briarcliffe Acres, SC (through a contract with the Horry County Solid Waste Authority). Monitoring work including debris management site permitting, right of way collection, hazardous tree removal, and household hazardous waste collection.

Hurricane Irma (2017)

Numerous Central Florida Jurisdictions

Following Hurricane Irma in September of 2017, Mr. McLendon provided senior oversight of debris monitoring operations across seven counties – including Seminole, Lake, and Volusia counties in Central Florida. Chuck was responsible for assembling project management and support teams to include policy and field operations expertise. In total, he oversaw a team of over 1,000 personnel that accounted for nearly 6 million cubic yards of debris removal. This work included implementation and tracking of Private Property Debris Removal (PPDR) programs within each of the seven counties managed.

Severe Flooding (2017)

South Carolina Emergency Management Division

Mr. McLendon was retained by the SCEMD to serve as a Senior FEMA PA Policy Advisor in support of project worksheet formulation for the October 2015 flooding event that impacted much of central South Carolina. Mr. McLendon oversaw a team of Project Specialists in drafting and versioning project worksheets.

Hurricane Matthew (2016)

St. Johns and Flagler Counties, Florida

Mr. McLendon served as Principal in Charge for the debris monitoring mission in St. Johns County and Flagler County, Florida following Hurricane Matthew. Chuck oversaw the removal of more than 1.1 million cubic yards of debris from public and private roads as well as debris removal efforts along nearly 27 miles of county-maintained beach. In addition to providing daily oversight of the debris removal mission, Mr. McLendon was regularly relied upon by County staff for policy guidance related to the County's overall recovery effort.

Severe Flooding (2015)

Clarendon County, South Carolina

Mr. McLendon provided on-site technical assistance to Clarendon County following a catastrophic flooding event in 2015. Chuck assisted the County with coordination and communications with the South Carolina National Guard in the repair of County-maintained roadways. Mr. McLendon also assisted with various procurements associated with temporary and permanent repairs while helping the County to develop a system to track materials used for roadway stabilization/repair.

Northern Alabama Tornados Debris Monitoring (2011)

U.S. Army Corps of Engineers

Mr. McLendon served as Principal in Charge in supporting a QC team activated to support the debris management mission in Tuscaloosa, AL following the 2011 northern Alabama tornado outbreak. Mr. McLendon was essential in ensuring that the project was properly staffed with trained individuals to support the USACE mission.

Hurricane Irene (2010)

Virginia Department of Transportation

Mr. McLendon served as Principal in Charge for recovery efforts on behalf of the Hampton Roads District of the Virginia Department of Transportation following Hurricane Irene. Mr. McLendon provided senior advisory services and oversight of a team to provide FEMA PA / FHWA ER reimbursement services for the District.

Tommy Webster

Senior Management Team

20+ YEARS OF EXPERIENCE

Areas of Expertise

- Project Management
- Debris Monitoring/Removal
- FEMA PA
- Construction Management
- Private Property Debris Removal
- Cost of Service Evaluations
- Emergency Management
- Damage Assessment
- Utility Engineering/Consulting
- Public Outreach/ Communications
- Procurement (2CFR)
- Grant Management

Training/Certifications

- DHS/FEMA/PIA-017 Federal Emergency Response Official. Effective date 9/4/2018 – 9/02/2024
- North Carolina General Contractor's License
- USACE Construction Quality Management for Contractors-Certified
- FEMA 325 Public Assistance Debris Management Guide
- FEMA E0202 Debris Management Planning Certified
- FEMA ICS-100 Incident Command System Certified
- FEMA ICS-200 Initial Action Incident Certified
- FEMA IS-800 National Response Framework Certified
- FEMA IS-700 National Incident Management System (NIMS)-Certified
- Qualified Technical Tree Safety Supervisor
- Electrical Hazard Awareness Training
- OSHA 40-Hour HAZWOPER
- OSHA 30-Hour
- First Aid / CPR

EXPERIENCE SUMMARY

Mr. Tommy Webster is an expert in responding to and assisting with recovery from disasters for offers knowledge from more than 20 years of experience in disaster response and debris management, including more than 10 years' experience with consulting monitoring firms. He has served in multiple functions regarding Emergency Response Project Management for a wide variety of emergency response and recovery projects, over a wide range of events across the nation including ice storms, hurricanes, flood events, wildfires, and environmental incidents.

Mr. Webster has worked in direct coordination with FEMA, local and state governments, public utilities, volunteer organizations, and the Departments of Transportation for North Carolina, Virginia, Florida, Texas, California, South Carolina, and Colorado. Mr. Webster is well versed in FEMA 325, FEMA Public Assistance Program and Policy Guide (PAPPG) regulations, applicable Code of Federal Regulations (CFR) guidelines, as well as being USACE Construction Quality Management for Contractors-certified.

Mr. Webster was chosen for this project due to his ability to interact with clients, governmental agencies, employees, and contractors and his strong leadership skills to negotiate contracts, train clients and employees, submit realistic schedules, motivate staff, and track results.

RECENT EXPERIENCE

Program Manager (May 2022 - Present)

Tetra Tech

Mr. Webster is responsible for the day-to-day operations of the engagement including field operations and contractual/business aspects. He is tasked with providing assistance to the Principal-in-Charge in the administration of contracts; enforcement of the provisions of the Client's contract with collection contractors; serving as the primary point of contact for Client staff, Contractors and FEMA representatives; maintaining appropriate staffing levels; implementing quality assurance and control measures; review of daily contractor activity; review and submittal of contractor invoices.

Program Manager (July 2014 – May 2022)

Phillips & Jordan

Mr. Webster was responsible for the following tasks:

- Reviewed all RFP solicitations, provide team with Go/No-Go assessment
- Created technical approach and project understanding elements on all submittals
- Initial deployment and operational project setup for natural and man-made disasters across the CONUS
- Subcontractor negotiation and management
- Claims Management
- Line-item project reviews and approvals with Project Managers and third-party representatives

- Liaison between operations and overhead departments, as well as municipalities and governmental agencies
- Customer training and satisfaction

Operations Manager (January 2012 – June 2014)

ATKINS Global

Daily responsibilites included:

- Initial deployment and operational project setup for natural and man-made disasters across the CONUS
- Managed & monitored debris removal operations
- Employee/Client training
- Contractor invoice reviews and approvals
- Liaison between operations and overhead departments, as well as municipalities and governmental agencies
- Customer maintenance and satisfaction

Project Manager (August 2010 – January 2012)

Andrew Consulting

Daily responsibilites included:

- Received and reviewed construction documents and contractor/vendor submittals
- Responsible for creating and implementing construction schedules
- Quality control management for all construction activity
- Oversight of over $285 Million in public and private commercial construction projects
- Periodic construction inspections

Project Manager (September 2008 – July 2010)

Beck Disaster Recovery

Daily responsibilites included:

- Initial deployment and operational project setup for natural and man-made disasters across the CONUS
- Manage ongoing project and employee activity
- Liaison between operations personnel and overhead departments, as well as municipalities and governmental agencies
- Employee/Client training
- Execute company policy and procedures

Project Manager (December 2002 - September 2008)

Beck Disaster Recovery

Daily responsibilites included:

- Initial deployment and operational project setup for natural and man-made disasters across the CONUS
- Manage ongoing project and employee activity
- Responsible for employee financial reimbursement and contractor invoice reviews and approvals
- Liaison between operations and overhead departments, as well as municipalities and governmental agencies

NOTABLE PROJECTS

2021 | Virginia Winter Ice Storm - *VDOT Richmond District, VA*

2018 | Hurricane Florence Debris Management - *Craven County, Cities of Boiling Spring Lakes and New Bern, Towns of River Bend and Trent Woods, North Carolina and City of Briarcliff Acres, South Carolina*

2017 | Hurricane Irma Debris Management - *Highlands, Hillsborough, Palm Beach and Volusia Counties; Cities of Coral Springs, Kenneth City, and Pinellas Park; and Town of Belleair, Florida*

2017 | Hurricane Harvey Land and Waterway Debris Management - *Harris County Flood Control District, Texas*

Allison McLeary, J.D.

Senior Management, Reimbursement Specialist

18 YEARS OF EXPERIENCE

Areas of Expertise

- Disaster Response & Recovery
- Grant Administration
- Stafford Act Compliance
- Alternative Procedures

Grant Experience

- FEMA Public Assistance
- CARES Act
- USDA Agriculture Recovery Block Grants
- HUD CDBG
- ARPA

Education

Auburn University, Bachelor of Arts, March 2000

Louisiana State University- Paul M. Hebert Law Center, Juris Doctorate, May 2004

Louisiana State University- Paul M. Hebert Law Center, Bachelor of Civil Law, May 2004

EXPERIENCE SUMMARY

Ms. Allison McLeary is an experienced emergency response and recovery executive with a demonstrated history of building meaningful relationships across all levels of government. As former Recovery Bureau Chief of the Florida Division of Emergency Management, she offers more than 3 years of direct experience administering grant programming throughout the State of Florida. She also served as **Recovery Counsel for the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP).** She is a steadfast advisor in planning for, responding to, and recovering from challenges and disasters.

RELEVANT EXPERIENCE

Director, Disaster Recovery Programs (March 2021 – Present)

Tetra Tech, Inc.

Ms. McLeary serves as Director of Disaster Recovery Programs, providing policy guidance and program support. Ms. McLeary is an expert in FEMA policies, building and maintaining relationships with FEMA representatives. She analyzes policy and provides policy guidance to clients. She supports the Tetra Tech team to build programs that align with federal expectations and comply with client/federal requirements. She maximizes operational efficiencies by analyzing individual projects with a holistic lens, leveraging best practices from Tetra Tech debris management operations throughout the Nation. Additionally, Ms. McLeary coordinates relationships with funding agencies and local partners to streamline project operations.

Recovery Bureau Chief (March 2020 – February 2021)
Compliance and Appeals Officer (December 2018 – February 2020)

Florida Division of Emergency Management

- Administered all FEMA Stafford Act programs for the State of Florida ($9.8+ Billion over 26 federally declared events under management)
- Validated and Paid through FDEM an unprecedented $4.1 Billion in Recovery funds in the period January 2019-February 2021, including $2.7 Billion in PA and over $300 Million in USDA Agriculture Recovery Block Grants
- Developed and implemented the State strategy for $1.275 Billion in CARES-Coronavirus Relief Fund payments to 55 medium and small counties. ($1.07 Billion validated and paid June 2020-February 2021)
- Served as Alternate Governor's Authorized Representative and Deputy State Coordinating Officer for all FEMA declared events in Florida
- Created a comprehensive FEMA PA Compliance program, including risk assessments, monitoring, and technical assistance and programmatic guidance tailored to address specific compliance risks

Recovery Legal Counsel (January 2017 – November 2018)

Louisiana Governor's Office of Homeland Security and Emergency Preparedness

- Served as Recovery counsel- advising on all matters of emergency management and whole community Recovery

  - Programs included FEMA/Stafford Act programs and HUD-Community Development Block Grants (CDBG-DR)
- Audit liaison to US Department of Homeland Security- Office of Inspector General and FEMA
- Developed and delivered a comprehensive outreach and education technical assistance strategy to grant subrecipients in Louisiana

FirstNet Program Manager (February 2015 – January 2017)

Louisiana Division of Administration, Office of Technology Services

- Oversaw a team effort to identify needs, preform gap analyses, and plan for the buildout of the State's portion of the Nationwide Broadband network, known as FirstNet.
- Identified the needs and expectations of the State's 62,000+ first responders and worked with the US Department of Commerce and the FirstNet Authority to include those inputs in the $7 Billion RFP for the buildout and operation of the FirstNet network.

State Police Legal Counsel (August 2003 – May 2013)

Louisiana Department of Public Safety and Corrections, Louisiana State Police, Office of Legal Affairs

- Counsel to State Police on matters of policy, operations, public records law, personnel management, emergency management/crisis response, and investigations
- Served as legislative liaison and helped draft numerous bills and testified in committee on several measures including revisions to the electronic surveillance framework and the regulation of private security, and the role of volunteers in emergency response.
- Represented the Louisiana Oil Spill Coordinator's Office and was assigned Attorney Supervisor throughout the response to the Deepwater Horizon event
  - Led a multi-agency team of in house, state agency lawyers in the early days of the disaster
  - Coordinated efforts among state agency counsel to ensure that necessary inputs needed for the response, damage assessment and claims under the Oil Pollution Act of 1990, Clean Water Act and other applicable federal and state laws were supported.

TETRA TECH

Bob Gresenz

Project Manager

8 YEARS OF EXPERIENCE

8 DISASTERS

7.2M+ CYS OF DEBRIS REMOVED

Areas of Expertise

- Disaster Debris Management
- Right-of-Way Debris Removal
- Disposal Operations
- FEMA Compliance Monitoring
- Supervision of Field Operations
- Operational Scheduling and Dispatch
- Private Property Programs
- Hazardous Tree Removal
- FEMA PA Category A documentation and eligibility Project Staffing

Disasters

- 4611 Hurricane Ida
- 4559 LA Hurricane Laura
- 4573 LA Hurricane Zeta
- 5224 CA Thomas Fire
- 4339 PR Hurricane Maria
- 4337 FL Hurricane Irma
- 4283 FL Hurricane Mathew
- 4286 SC Hurricane Matthew (3 Clients)

Key Training/Certifications

- FEMA ICS 100
- FEMA ICS 200
- FEMA ICS 800
- HAZWOPER

EXPERIENCE SUMMARY

Mr. Gresenz has been involved in all aspects of debris removal monitoring operations, including some of the largest and technically challenging projects in the history of the Federal Emergency Management Agency (FEMA) Public Assistance (PA) program. This includes the Beaufort County and Town of Hilton Head Island waterway and navigable canal debris removal efforts following Hurricane Mathew; multiple simultaneous recovery projects in Texas following Hurricane Harvey; and Florida following Hurricane Irma; and most recently our response to Hurricane Maria in Puerto Rico. He has extensive knowledge of FEMA 325 and 327 guidelines including implementation of right-of-way debris monitoring, debris site and tower monitoring, and hazardous tree removal. Mr. Gresenz is also one of Tetra Tech's designated staff trainers and is an expert in the operations of our automated debris management system (ADMS), where he has trained over 1,000 field staff on the interworking of the system and its reporting capabilities.

Mr. Gresenz was specifically selected for this project due to his prior experience managing the monitoring of disaster debris removal for numerous Tetra Tech clients.

RELEVANT EXPERIENCE

Project Management Oversight (September 2021 – Present)

Louisiana Region | Hurricane Ida

Mr. Gresenz provided senior level regional management in support of Tetra Tech's response to Hurricane Ida in Louisiana. Mr. Gresenz was instrumental in training and scheduling staff, leading debris hauler truck certification teams and establishing project infrastructure.

Project Manager (September – October 2020)

City of Alexandria, Louisiana | Hurricane Laura

In the immediate aftermath of Hurricane Laura, Mr. Gresenz mobilized to the City of Alexandria to initiate Tetra Tech's response under a pre-positioned contract. Under Mr. Gresenz leadership, Tetra Tech monitored to removal of more than 228,600 CYs of debris and 2,650 dangerous hanging limbs and leaning trees. In addition to successfully managing right-of-way debris removal monitoring, Mr. Gresenz also worked closely with City officials and the City's debris hauling contractor to execute a debris removal and monitoring plan for the City's parks and zoo. Perhaps Mr. Gresenz' most noteworthy accomplishment, however, was that he was successful in hiring over 50 City of Alexandria residents during one of most challenging labor markets in recent history. Thanks in large part to Mr. Gresenz' efforts, Tetra Tech was able to meet the monitoring requirement of the City every day of the project, thus never delaying the City's debris hauling contractor.

Project Manager (January – February 2020)

Ruston, Louisiana | Tornado

Mr. Gresenz responded to the City of Ruston, Louisiana in response to the powerful tornado that ripped through more than six miles of the City. Mr. Gresenz rapidly recruited, hired, and trained a team of local debris monitors to monitor and document

more than 30,500 CYs of debris. Mr. Gresenz was instrumental in handling the multiple project roles and positions to keep projects costs at a minimum.

Project Manager (December 2020 – May 2021)

Dallas County, Alabama | Hurricane Zeta

Following Hurricane Zeta, Tetra Tech was activated Dallas County, from a post-disaster procurement to provide disaster debris monitoring services for Dallas County. Tetra Tech hired and trained approximately 100 local field monitors to document the removal of a total of more than 220,000 CYs of debris, and 10,000 hanging trees and limbs. The projects also included monitoring debris removal from rural areas.

Operations Manager (January 2018 -Present)

Department of Transportation of Puerto Rico | Hurricane Maria

Mr. Gresenz is currently an operations manager as part of the management team deployed to the Territory of Puerto Rico following the devastating impact of Hurricane Maria. Mr. Gresenz is responsible for regional staff training, project scheduling, daily coordination with debris haulers and teaming partners and the overall integrity of Tetra Tech's documentation under challenging circumstances.

Project Manager (September 2017 - January 2018)

Pinellas County, Florida | Hurricane Irma

Mr. Gresenz served as project manager in Pinellas County, Florida following Hurricane Irma. Mr. Gresenz was crucial in coordinating debris removal efforts across multiple municipalities and unincorporated Pinellas County. Along with his primary responsibilities of project scheduling, staffing, Quality control, reporting and coordinated with multiple debris haulers, Mr. Gresenz also managed the arduous task of coordinating multiple debris haulers from multiple municipalities sharing the same disposal locations.

Operations Manager (September 2017 – November 2017)

Miami-Dade County, Florida | Hurricane Irma Debris Monitoring

Mr. Gresenz deployed to Miami-Dade County immediately after hurricane Irma struck. Mr. Gresenz trained over 800 employees in debris removal operations. This staff monitored the removal of over 3 million cubic yards of vegative debris in the first 45 days after hurricane Irma. Mr. Gresenz managed the logistics of monitoring over 1,200 trucks being used throughout the county for debris removal operations, and the supervision of 4 Debris Management Sites used to process the debris.

Operations Manager (October 2016-January 2017)

Town of Hilton Head Island, Beaufort County, Hampton County, South Carolina | Hurricane Matthew Disaster Debris Program Management

Mr. Gresenz has been lead operations manager for some of the largest Hurricane Matthew debris removal projects in South Carolina. As part of our initial strike team, Mr. Gresenz' responsibilities included training over 300 debris monitors, executing Tetra Tech's Health and Safety protocols, overseeing truck certifications, field, and disposal operations, establishing staffing schedules, logistics and asset management and project oversight on multiple projects. To date Mr. Gresenz has overseen the successful removal and documentation of nearly 3.5 million cubic yards of Hurricane Matthew generated debris.

Operations Manager (February 2014–May 2014)

Hampton County, SC, Barnwell County, SC | Winter Storm Pax Disaster Debris Program Management

Following Winter Storm Pax, Mr. Gresenz was deployed to manage the monitoring of nearly 40 debris removal trucks collecting over 200,000 cubic yards of vegetative debris in a four week period. As the projects continued, Mr. Gresenz worked with the debris hauler to ensure appropriate crew numbers to meet the aggressive timeline set fourth by the clients. Mr. Gresenz worked closely with data managers and ADMS specialists to document and track operations as well as deliver expedient and accurate reporting to key stakeholders.

TETRA TECH

Hal Helterhoff

Operations Manager

4 YEARS OF EXPERIENCE

Areas of Expertise

- Project Management
- Scheduling and routing
- Disaster Debris Management
- Right-of-Entry
- Monitor Training
- Monitor Dispatch
- Right-of-Way Debris Removal
- Disposal Operations
- Field Operations
- Quality Assurance/Quality Control
- Demolition Operations

Key Training/Certifications

- 40-Hour HAZWOPER

EXPERIENCE SUMMARY

Mr. Helterhoff is an experienced disaster recovery professional and has served as a project manager, operations manager, and field supervisor for multiple hurricanes and various other projects for Tetra Tech. Mr. Helterhoff has been a key member of some of Tetra Tech's largest fire and hurricane response teams in recent history, serving in the field for the Camp Fire response as a Task Force Leader and Division Supervisor for debris removal and asbestos abatement teams. He also assisted with environmental soil sampling during the Camp Fire response. In addition to his field work, Mr. Helterhoff has also worked for Tetra Tech as a project manager, public liaison, and site inspector during our Rebuild Florida housing engagement. For our Puerto Rico Department of Housing grant program, he serves as the project manager for the damage assessment team, and assists the environmental team with routing and scheduling of the inspections. Mr. Helterhoff has also traveled to Houston, TX to train local staff on how to perform damage assessments and environmental inspections for the TX Community Development Block Grant (CDBG) Disaster Recovery program. He also provides ongoing support for our management, recruiting, and operations teams with various project needs.

RELEVANT EXPERIENCE

Project Manager (February 2020 - Present)

Puerto Rico Department of Housing | CDBG - Hurricanes Irma and Maria

In February of 2020, Mr. Helterhoff was deployed to Puerto Rico as the project manager for our damage assessment inspections for our grant program assistance after Hurricanes Irma and Maria. His responsibilities include staff training and scheduling, routing and scheduling of inspections, performing inspections, quality control (QC) of daily inspections, management of project data, and ensuring that project staff adhered to Tetra Tech's project specific health and safety plan. Mr. Helterhoff continues to support the environmental project manager with routing and scheduling, and management of project data.

Field Supervisor (May 2020)

Chattanooga, TN | April Severe Storms, Tornadoes

Mr. Helterhoff was deployed to Tennessee to support our response to the tornadoes that devastated the areas in and around Chattanooga, TN. He served in the position of field supervisor where he oversaw staff training, disposal site operations, debris removal staff, and field data quality control.

Project Manager (August 2019 – Present)

Lakeland, FL | Rebuild Florida CDBG – Hurricane Irma

Mr. Helterhoff returned to Florida to support our inspection effort for the Rebuild Florida grant program, performing damage assessments and environmental inspections. He was promoted to serve as the project manager for our inspection work for the Rebuild Florida CDBG program. His responsibilities include oversight, scheduling, training, QC of daily work, maintaining supply levels to meet inspector's needs, management of staff, and data management and reporting. He oversees staff including damage assessment and environmental inspectors, and lead paint

assessors. He is also responsible for contacting all property owners to schedule inspections.

Division Supervisor (January 2019 - August 2019)

Paradise, CA | CalRecycle - Camp Fire Incident

Mr. Helterhoff was deployed to Paradise, CA in our response to the devastating Camp Fire in Butte County, CA. Mr. Helterhoff served as a task force leader over debris removal crews, chimney tipping crews, asbestos abatement teams, and also assisted our truck certification team. He also worked as a member of our environmental soil sampling teams. He was promoted so serve as a division supervisor, which included management of task force leaders that were assigned to monitor and document debris removal efforts. He was responsible for field oversight, upward reporting, Quality Assurance (QA)/QC, health and safety, and field documentation.

Project Manager (September 2018 – December 2018)

North Topsail Beach, NC | Hurricane Florence

In September of 2018, Mr. Helterhoff was activated to support our response in North Carolina to Hurricane Florence. In North Topsail Beach, he initially served as the operations manager. Then after a couple of weeks as project manager, where he oversaw staff training, disposal site operations, debris removal staff, field data QC, and scheduling of staff. As project manager, he was responsible for coordination of debris removal efforts with the contractor's representative, and served as the Tetra Tech liaison with the town government representatives.

Field Supervisor (September 2017- January 2018)

City of Tampa, Florida | Hurricane Irma

Mr. Helterhoff joined Tetra Tech during our engagement with the City of Tampa following the impact of Hurricane Irma on the Florida Gulf Coast. Mr. Helterhoff quickly became a valued member of our team and was rapidly promoted to the position of field supervisor, where he oversaw staff training, disposal site operations, debris removal staff, and field data QC.

TETRA TECH

Paris Atkinson

Data Manager

15 YEARS OF EXPERIENCE

Areas of Expertise

- FEMA Reimbursement and Audit Support
- Reimbursement Policies and Procedures
- RecoveryTrac™ ADMS
- Data Management
- Debris Monitoring Compliance
- Invoice Reconciliation
- Geospatial Analysis

Disasters

- 4337 Hurricane Irma
- 4332 Hurricane Harvey
- 4283 Hurricane Matthew
- Collier County FL Severe Storms
- 4269 TX Flooding
- 4240 CA Valley Fire
- 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

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.

RELEVANT EXPERIENCE

Project Management Oversight (September 2021 – Present)

Louisiana Region | Hurricane Ida

Mr. Gresenz provided senior level regional management in support of Tetra Tech's response to Hurricane Ida in Louisiana. Mr. Gresenz was instrumental in training and scheduling staff, leading debris hauler truck certification teams and establishing project infrastructure.s.

Finance & Administration Chief (March 2019 – Present)

Camp Wildfire (Butte County) | CalRecycle

The Camp Wildfire was the most destructive fire in California history. As Finance and Administration Chief, Ms. Atkinson provides guidance and management on all of the financial and cost analysis and cost efficiency aspects of the tree removal operations. She is responsible for reviewing auditing invoices to ensure that they are accurate, defendable, and reimbursable by the state and federal (if applicable) agencies supplying disaster relief funding. In total, Ms. Atkinson has managed the data associated with over 1.5 million tickets.

Regional Project Manager (November 2018 – Present)

State of Georgia – United States Army Corps of Engineers (USACE)

Ms. Atkinson is currently serving as the overall regional data manager for the USACE mission to remove debris that was a result of Hurricane Michael in the State of Georgia. She oversees the regional data manager from the northern, central, and southern regions and provide senior leadership and oversight.

Data Assessment Manager (September 2018-December 2018)

Carr Fire – CalRecycle

Ms. Atkinson served as a data manager on the Carr Fire recovery program in Shasta County, CA. Ms. Atkinson was responsible for supporting the electronic management and tracking of site documentation and quality assurance and quality control on the project database used for tracking debris removal costs and daily reconciliation.

Debris Subject Matter Expert

Montgomery County, Pennsylvania | Multi-Jurisdictional DDMP

Ms. Atkinson served as a debris subject matter expert and supported Montgomery County in establishing and implementing a multi-jurisdictional debris management planning program. Ms. Atkinson and the project team developed a debris

management strategy based on the assessment of the County's existing resources, landfill and disposal capacity, and debris management site options. Ms. Atkinson also assisted in the development of multiple debris forecast models to estimate the resulting debris volumes following a disaster as well as the County's capacity to address debris using internal equipment and resources.

Regional Data Manager (September 2017-August 2018)

State of Florida | Hurricane Irma | Disaster Debris Program Management

Hurricane Irma impacted almost the entire state of Florida. As such, Tetra Tech managed numerous program management and monitoring projects throughout the state. Ms. Atkinson served as a regional data manager and oversaw daily data and invoice reconciliation operations of projects throughout Florida including Hillsborough County, Polk County, Miami-Dade County and Orange County. Ms. Atkinson provided senior level leadership and guidance to field data managers including FEMA compliance management, QA/QC of collection data, and the management and documentation of specialized programs such as hazardous tree and hanger removal. Ms. Atkinson also managed a team of invoice reconcilers who reviewed and submitted reconciled hauler invoices to clients.

Regional Data Manager (August 2017-June 2018)

State of Texas | Hurricane Harvey | Disaster Debris Program Management

Mr. Atkinson served as a regional data manager following the aftermath of Hurricane Harvey. She provided senior level leadership and guidance to field project managers. Ms. Atkinson verified field data managers followed standard operating procedures to manage and report debris collection statistics and progress. Ms. Atkinson also managed a team of invoice reconcilers that reviewed and submitted reconciled hauler invoices to Tetra Tech's Texas clients.

Regional Data Manager (September 2016-June 2017)

State of Florida | Hurricane Matthew | Disaster Debris Program Management

Ms. Atkinson served as a regional data manager and provided senior level leadership and guidance to field project managers. Hurricane Matthew primarily impacted Florida's east coast communities such as Volusia, Flagler, and St. John's County. Ms. Atkinson also performed quality assurance checks on field data managers to verify proper project reporting and data management. Ms. Atkinson also led a team of reconcilers to review and process debris hauler invoices for submission to Tetra Tech's Florida clients.

Senior Data Manager (October 2015–August 2016)

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.

TETRA TECH

Casey Ogden

GIS Specialist

20 YEARS OF EXPERIENCE

Areas of Expertise

- GIS Programming
- ESRI Enterprise Geodatabase and Services
- GNSS Survey Grade Data Collection
- ArcGIS Pro / ArcMap Operation and Support
- ArcGIS Server and AGOL Administration

Training/Certification

- GISP - URISA

Education

Florida State University
Master of Science, Geography, 2004

Louisiana State University
Bachelor of Science, Geography, 1999

EXPERIENCE SUMMARY

Mr. Casey Ogden has more than 20 years of experience in Geographic Information Systems, with experience with the ESRI suite of products. He holds a Master's degree from Florida State University with a Certificate of Emergency Management, as well as, a Bachelor's Degree from Louisiana State University in the field of Geography. As the Geospatial Applications Manager, Mr. Ogden manages a team of five GIS personnel and is responsible for developing GIS applications that are efficient, accurate and cutting edge.

RELEVANT EXPERIENCE

Program Manager (April 2022 – Present)

CA, Office of Emergency Services

Mr. Ogden is responsible for the creation of the toolset for boundary maps that aid in wildfire management for the Office of Emergency Services in California. This includes functions that calculate tree hazard status, provide buffer analysis and generate parcel boundary maps.

GIS Applications Manager (April 2022 – Present)

Harris County

Mr. Ogden is responsible for automating Day/Night Noise Level reporting to include measurements to nearest roadways, railroads, airports and managing map book production for debris zone map books.

GIS Developer (June 2021–May 2022)

NASA (Genex Systems)

Mr. Ogden created an ArcGIS Web Appbuilder site that links data submitted for personnel to the reserved parking dataset by applying immediate calculation attribute rules developed using Arcade expressions in ArcGIS Pro. This application also incorporates validation attribute rules and smart editor rules to restrict editing capability and manage data content. This JSC Parking Application includes an Editor, Security Viewer and Viewer site and replaces the existing parking management system.

Assistant CTO and GIS Team Lead (Jan 2017–May 2017)

Mr. Ogden automated Coastal Risk Rapid Assessment / Risk Footprint reports by utilizing ArcGIS Modelbuilder and Python scripts, turning a 3-hour process into a 1 minute runtime and allowing the user the ability to enter an address and receive a comprehensive flood report for any address in the United States. Established various property specific tools that determine flood vulnerability by analyzing Parcels, Light Detection and Ranging (LIDAR), Tidal Gauges, Flood Zones (NFHL), and Storm Surge models (SLOSH). Product outputs include graphs, tables, and maps in a variety of formats, csv, excel, pdf, and images.

GIS Manager (Nov 2015–Sept 2016)

NAVY, NRJ (Capstone Corporation)

Mr. Ogden assisted Navy Region Japan's Emergency Management Division by maintaining the 'One Clear Picture' GIS web application. Duties included providing

training to military personnel on techniques to broadcast Emergency Incidents to the region and establishing links/feeds from Disaster Monitoring Agencies.

GIS Specialist (Oct 2014–Oct 2015)

NOAA, (Cyberdata Technologies)

Mr. Ogden created and fully automated GIS tools that parse ASCII files to display Tropical Cyclone Rainfall and Hurricane Best Track operational products. The mapping product that he developed and is now in production is the Arrival of Tropical Storm Force Winds.

GIS/Mobile Data Collection Manager (August 2012–June 2014)

Cablevision Systems

As GIS Lead, Mr. Ogden managed contracts related to LIDAR and high-resolution aerial imagery in South Florida, Los Angeles and New York. With this technology, he performed Equivalent Power Flux Density (EPFD) analysis of potential service towers and directed site survey efforts to determine possible interference with alternative Direct Broadcast Satellite (DBS) providers. Additionally, he was responsible for identifying serviceable homes based on Line of Sight/Diffraction Analysis and Parcel/Tax Roll databases, which were the drivers for site selection, sales territory development and the mapping application utilized by door-to-door sales team. Developed process to automate publishing of ArcGIS Server web services to report Wi-Fi antenna performance changes, as well as, co-developed Wi-Fi coverage prediction tool to measure dB loss from Access Point to potential customer residences.

Christina R. Hendrick, MPA, PMP

Grant/Reimbursement Manager

14+ YEARS OF EXPERIENCE

77 DISASTERS

$6b GRANT FUNDING

Areas of Expertise

Program Design / Implementation

Grant Administration

Business Planning

Project Budgeting & Accountability

Reimbursement Maximization

Process Engineering

State and Federal Regulations/Policies

Process Improvement

Resource Management

Grant Experience

FEMA PA AND FEMA HMGP

CDBG

CARES Act

Key Training/Certifications

Project Management Professional (PMP)

Education

Louisiana State University
Masters of Public Administration, 2011

Louisiana Tech University Bachelor of Liberal Arts, Political Science/Pre-Law and English, 2006

EXPERIENCE SUMMARY

Christina Hendrick is a seasoned grant manager with more than 14 years of experience. She has overseen more than **$4 billion** of Federal Emergency Management Agency (FEMA) and U.S. Department of Housing and Urban Development (HUD) grant funding under FEMA Public Assistance (PA), FEMA Hazard Mitigation Grant Program (HMGP), COVID-19, and Community Development Block Grant (CDBG) programs.

In her current role as a Deputy Director for financial recovery services, Ms. Hendrick has maintained oversight of Tetra Tech's most critical PA and CDBG recovery projects across **7 FEMA regions**, as well as multiple COVID-19 recovery projects utilizing PA, CARES Act and other grant funding. She has served as a business management expert, strategic planner, and business planning leader for clients such as the City of Houston and Harris County, Texas; City of Philadelphia, Pennsylvania; Palm Beach County, Florida; Barnwell County, South Carolina; Dougherty County, Georgia; Richland County, South Carolina; Hamilton County, Tennessee; and states such as Louisiana and Massachusetts.

Ms. Hendrick specializes in the technical intricacies of grant management – from budgeting and quality control to finance planning and staffing – and excels in clear communication and reporting to deliver client satisfaction.

RELEVANT EXPERIENCE

Tetra Tech, August 2017 – Current

Deputy Director of Financial Recovery Services

- Directly manages program managers spanning 7 FEMA regions, providing guidance and direction on PA, Individual Assistance, HGMP, CDBG, 404, 406 and 428 mitigation programs from Alaska to Puerto Rico.
- Maintains oversight of project operations across financial recovery practice nationwide, including management of budget, contracts, task orders, staffing, implementation, and compliance.
- Create Standard Operating Procedures and process improvements for all projects across the practice.
- Management and oversight of approximately 50 projects from small recovery operations to $35 million budget operations.
- Ensure adherence to project accountability and revenue recognition as well as verifying the audit process.
- Maintain expert knowledge of state and federal regulations to provide feedback and improvement suggestions to governing entities, such as FEMA, HUD, U.S. Treasury, and other grant funding agencies.
- Create and foster long-term client relationships.

Disaster Recovery Management Consultant – City of Houston, Texas

- Oversaw the technical team completing project worksheets (PWs) for estimated expenditures associated with Categories A and B totaling $360 million.
- Created standard operating procedures for site inspection, project formulation, grant management, and closeout processes.

- Oversaw technical teams conducting site inspections for infrastructure projects.
- Managed and tracked federal funds and activities through the New Delivery Model to submit up to $2.1 billion in infrastructure funds.
- Oversaw day-to-day operations, subcontractor staff, and subject matter experts, implementing the program and interpreting rules and guidelines for the best remedy in place for each situation.
- Led project teams responsible for collecting data from City of Houston departments in the project formulation process for the recovery project.
- Ensured adherence to project accountability and revenue recognition as well as verified the audit process.
- Led financial tracking of all project activities to remain in compliance with Federal and contractual requirements.

Program Manager (CRF-Treasury and FEMA Grant Management) – City of Philadelphia, Pennsylvania

- Provides consulting services to the City in response to the COVID-19 emergency regarding current and future available funding and cost recovery sources from state and federal agencies.
- Reviews investment justifications and Scopes of Work for projects requested by City of Philadelphia departments for inclusion in the COVID-19 Spend Plan.
- Provides procurement support to the City for active and future COVID-19 related procurements by reviewing applicable documentation for compliance with Federal, State, and Local requirements specific to the Grant/Fund selected for the project.
- Liaises with City leadership to collect and review COVID-19 costs and relevant documentation submitted by departments and review/reconcile relevant project documentation for compliance with selected Grant/Fund source and submit Compliance Memorandum deliverables outlining potential reimbursement pitfalls and corrective action.
- Oversees auditing of cost data (time sheets, project specific costs, outgoing payments to funding recipients (residents, businesses) to ensure all activities have been performed to follow City project SOPs and guidelines to avoid fraud, waste and abuse of funds.

Deputy Director, Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) | Multiple Disasters – Baton Rouge, Louisiana

- Disaster Recovery Program Management consultant leading PA Recovery for multiple Disasters declared within the state of Louisiana.
- Direct and manage project team, providing guidance and direction on PA, performing cost analysis determinations for completed work, insurance review and reconciliation as well as eligibility reviews for management cost associated with implementing approved projects.

Deepwater Horizon Economic and Property Damages Settlement Program, August 2012 - August 2017

Federally-appointed Senior Executive in charge of the Subsistence Program and Program Manager of IT Vendors for the Deepwater Horizon Economic and Property Damages Settlement Agreement, the largest class action settlement of its type in history.

- Director of Subsistence Programs (Economic and Property Damage Claims), New Orleans, LA
- Program Manager of IT Vendors, New Orleans, LA

D. Manning Level Statement

With more than 21,000 employees working from 450 offices worldwide, our capacity encompasses more than 80 disciplines with sufficient engineers, scientists, and support staff to fulfill a contract in any of its five service areas: water, infrastructure, the environment, energy, and natural resources. For those disciplines outside of Tetra Tech's capacity, the firm maintains excellent relationships with an extensive network of subcontractors. **At the time of this proposal, there are 1,866 Tetra Tech Disaster Recovery employees in the United States. Of those 1,866 employees, 218 are full-time and 1,648 are part-time employees.**

E. Technical Approach

Project Understanding

The Town of Kiawah Island is located along the Atlantic coast in South Carolina near Charleston. and covers 15 square miles. The Town is known for its luxurious private beach and golf resort. In addition to the pristine sand at the beach, there are numerous activities that attract tourists, such as parks, fishing, and walking/hiking trails.

Risk Factors and Unique Challenges

Due to its geography, the Town may face unique challenges including:

- Beach Erosion
- Inland Waterway Disruption
- Hazardous Tree Removal
- Private Property Debris Removal

Our Understanding of the Services Required by Town

Tetra Tech has carefully reviewed the scope of work requested in the request for proposal (RFP) and can assure the Town that we have the experience, understanding, and knowledge to successfully perform all aspects of the scope of work including execution of the following tasks:

- Emergency Push Documentation (Pg. 26)
- Debris Site Permitting (Pg. 30)
- ROW Debris Monitoring (Pg. 31)
- Reporting and Data Management (Pg. 35)
- Closeout and Appeals Support (Pg. 41)

Our team has worked with numerous communities similar to the Town, and offers broad experience performing the above listed services and additional services that may be required by the Town to recover from disaster events.

Tetra Tech's capabilities and methodology to drive a successful project for the Town include:

Continuous Coordination and Communication with Town Officials and Stakeholders: A dedicated project management team will be appointed to coordinate with Town's throughout the year, not just during times of activation.

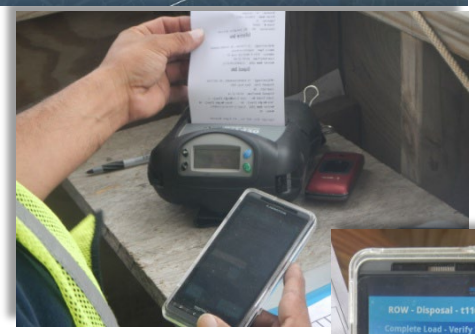
Immediate Response Capabilities: Tetra Tech has disaster recovery personnel and 2 offices throughout the state and utilizes an immediate response staffing and logistics plan that follows the Incident Command System (ICS) structure, allowing Town to return to the business of running day-to-day operations.

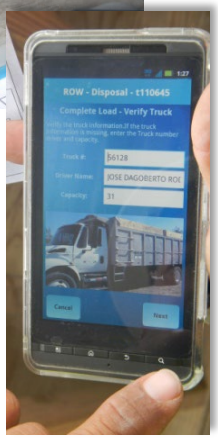
Focus on Hiring Locally: Tetra Tech focuses on hiring and training local residents, benefiting the local economy, and reducing mobilization and transportation costs.

Project Transparency and Real-time Reporting: Our proprietary *RecoveryTrac*™ automated debris management system (ADMS) technology, provides detailed reporting systems and mapping capabilities that are available in real-time to the Town and tailored to the Town's data needs.

Maximum Reimbursement for the Town: Tetra Tech's stringent quality assurance program and adherence to reimbursement agency requirements for eligibility, documentation, and reimbursement that will help Town receive and retain the maximum reimbursement allowed following a disaster.

RecoveryTrac™ Automated Debris Management System





Our team has spent years on research and development 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*™ ADMS is the result of these efforts. *RecoveryTrac*™ ADMS is a scalable and fully featured disaster management application designed to address the operational challenges faced during a disaster recovery project.

Our proprietary *RecoveryTrac*™ ADMS technology is 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 implemented *RecoveryTrac*™ ADMS technology on our last 200 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.

Tetra Tech's *RecoveryTrac*™ ADMS system is regarded as the #1 debris tracking system in the industry for the following reasons:

- **Most Broadly Tested ADMS in the Industry –** *RecoveryTrac*™ ADMS is a proven system that has been used to execute the largest USACE activations involving ADMS technology, including the State of California NORCAL Fire response and the State of Georgia Hurricane Michael statewide activations. During simultaneous response to Hurricanes Harvey and Irma in 2017, Tetra Tech deployed approximately 6,000 ADMS devices to collect and manage data for over 100 projects. **No other system has tracked and documented as much debris as *RecoveryTrac*™.**
- **Stable and Secure ADMS System –** *RecoveryTrac*™ ADMS is the industry leader in secure data systems. The *RecoveryTrac*™ system is securely hosted in the Microsoft Azure Government high-availability, cloud-based data center with restricted access and transaction-level auditing. The database is continually backed up and immediately replicated to an off-site location. The database is geospatially based and is maintained and synchronized with the reporting database in near real-time to maximize system performance, availability, and security.
- **Unmatched Flexibility to Meet the Needs of Any Client –** The system is designed to be fully customizable and allows for multiple data collection methods to streamline the debris collection documentation process with a focus on minimizing the cost to our clients and improving the visibility and transparency of debris project operations.
- **Unrestricted by Hardware –** Because *RecoveryTrac*™ ADMS utilizes readily available hardware, there are no restrictions to the amount of ADMS units our team can provide. Our team stocks thousands of units and can expand to fit any client's needs, including multiple simultaneous activations.

Benefits of *RecoveryTrac*™ ADMS

Ability to Respond. Combined with the on-hand inventory of thousands of handheld devices and the ability to rapidly procure additional equipment through preferred vendor relationships, the Town 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).

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*™ ADMS 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*™ ADMS 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*™ ADMS 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.

RecoveryTrac™ ADMS Key Facts

- Owned and operated by Tetra Tech
- Thousands of 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 Town 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

Truck Tracking. Our system is capable of providing with real-time location data for debris hauler assets. This translates into the ability to manage assets to those hardest hit locations or distribute assets more evenly based on issues such as first-pass completion, traffic patterns, and hot spots.

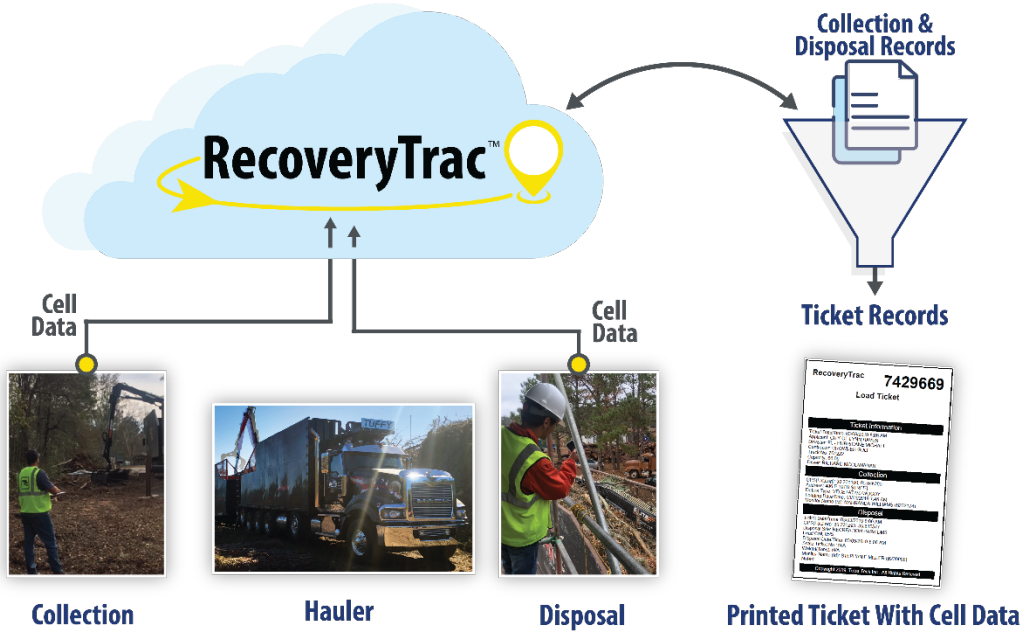
Real-Time, Customized Reporting. The key to successful management of a debris project is the timely availability of relevant information needed to make sound decisions and respond to anomalies before they become issues. Our powerful reporting engine allows the user to monitor contractor performance, 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.

The *RecoveryTrac*™ Process

The steps of the *RecoveryTrac*™ ADMS process are as follows:

STEP 01	The process begins with debris hauler truck certification using the handheld devices. Handheld devices are provisioned and assigned to both field and debris site/tower monitors.
STEP 02	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).
STEP 03	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 device as the truck is loaded.
STEP 04	When the truck is full, the field monitor selects the debris type and scans the control ticket to assign the load a unique number.
STEP 05	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 device before the truck arrives.
STEP 06	The control ticket is provided to the driver and taken to the DMS, where it is scanned by a debris site/tower monitor.
STEP 07	The debris site/tower monitor confirms the truck and debris type and enters the load call.
STEP 08	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 handheld devices 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 device automatically uploads the stored ticket data.



RecoveryTrac™ ADMS Features

Tetra Tech brings significant experience and understanding in the design and build of disaster debris removal data management systems that offer data collection, storage, sharing, analysis, and reporting.

Because of our previous experience, we have several ready-to-use components already built and ready to deploy. These components can be quickly repurposed saving time and cost while ensuring field work starts quickly. Some examples of these existing capabilities and tools include:

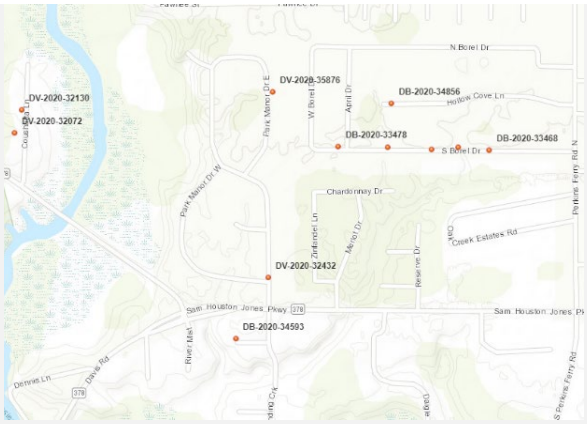
Our operational and data experience with disaster debris monitoring, combined with the best GIS and data professionals in the industry, results in **top-shelf solutions to the most complicated data and tracking needs.**

Industry-standard **ArcGIS Feature** Services delivers *RecoveryTrac*™ ADMS data and serves as foundational building block for the applications.

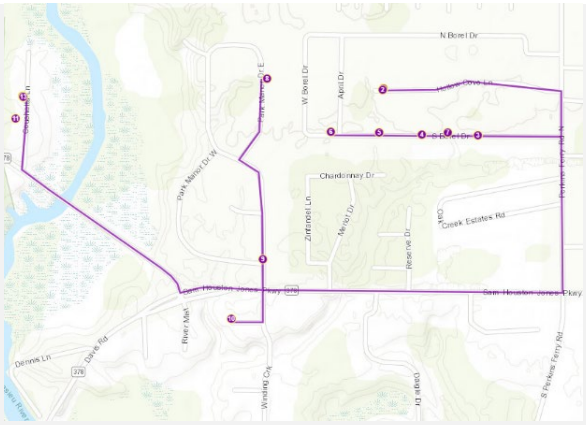
Services:

- RT/RecoveryTrac_DebrisAuditData_RT2020 (FeatureServer)
- RT/RecoveryTrac_DebrisAuditData_RT2020 (MapServer)
- RT/RecoveryTrac_DebrisRemovalData_RT2020 (FeatureServer)
- RT/RecoveryTrac_DebrisRemovalData_RT2020 (MapServer)
- RT/RecoveryTrac_MonitorLocations_v1 (MapServer)
- RT/RT2018_ProjectBoundaryData_v1 (FeatureServer)
- RT/RT2018_ProjectBoundaryData_v1 (MapServer)
- RT/RT2018_ProjectZoneData_v1 (FeatureServer)
- RT/RT2018_ProjectZoneData_v1 (MapServer)
- RT/RT2018_SiteObservationsIncidentData_v1 (FeatureServer)
- RT/RT2018_SiteObservationsIncidentData_v1 (MapServer)
- RT/RT2020_ProjectZoneData_v1 (FeatureServer)
- RT/RT2020_ProjectZoneData_v1 (MapServer)

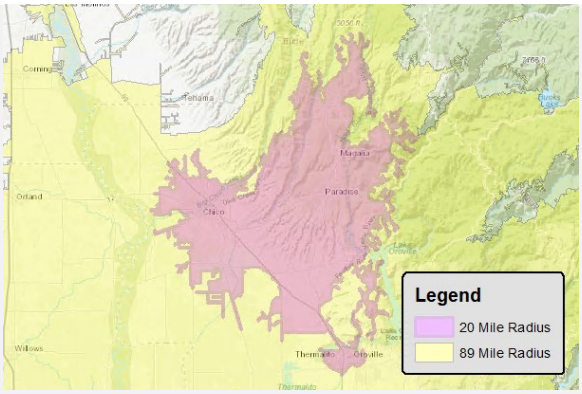
Initial Work Surveys document results of initial surveys to quickly collect, display, and summarize data into actionable operations planning. This data, including photographs, can be used to organize and deploy resources to improve speed and efficiency of the operation.



Work lists and **optimized routes** can be generated by the *RecoveryTrac*™ system. As the routes are completed, the locations are marked complete.

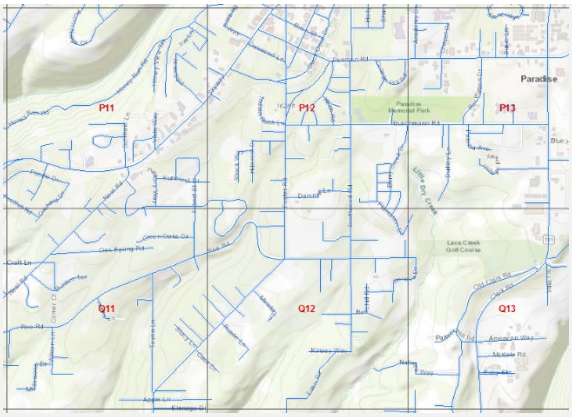


The **Driving Distance Analysis** tool is used to calculate estimated distance and drive time based on the existing road network. This planning tool is used as a parameter to design the shortest route, work list planning, and other operational factors.

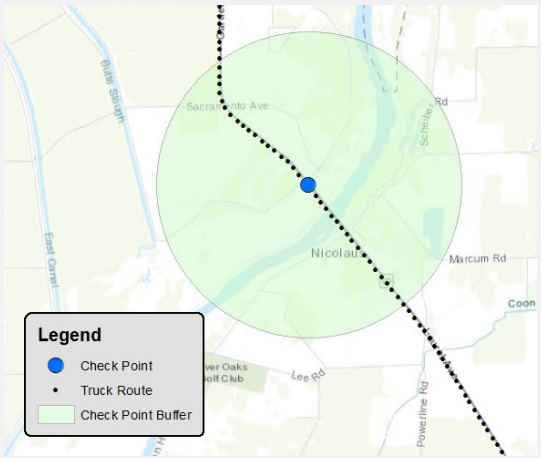


The **Standardized ROW Grid Index** layout is available in several formats, including GIS Mapping applications, mobile data collection apps, and hard copy maps.

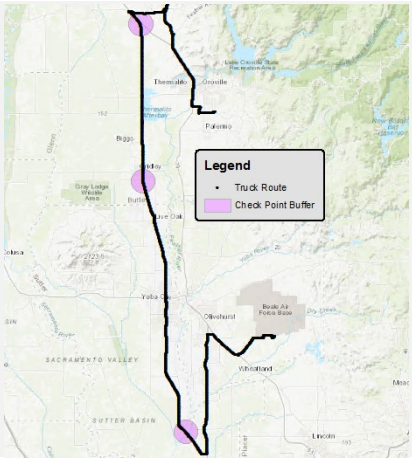
Map segment areas are configurable for size and allow attribute modification for tasks, including contractor, quality, and safety review tasks.



An **automation tool** built to validate routes taken to TDSRS/DMS. When a vehicle enters a checkpoint buffer area, the position record is annotated as passing the checkpoint. Route maps can be created, along with custom reporting as specified by operational requirements.



Fleet tracking data provides complete route information. The data can be made available to show live tracking or view route history. Transportation analysis services are available, or data exports can be provided for Town requests.



Emergency Push

During the emergency push period, debris removal contractors coordinate with Town crews to clear blocked roadways for emergency vehicle passage. Tetra Tech can support the Town with emergency push efforts. Tetra Tech services may include the following:

- Coordination with the Town to conduct preliminary damage assessments and road closures
- Document blocked roads that require immediate clearance
- Help staff maintain maps or databases to track road clearance progress and other essential tasks, as requested
- Administer the sign-in and sign-out of labor and equipment to track time and materials (T&M) charges
- Maintain reimbursement documentation of emergency push work
- Establish public information protocols to respond to concerns and comments

Debris Estimate Methodology

It is critical to understand estimated quantities of debris to adequately plan for project operations and mobilization. Tetra Tech has found that rather than relying on a single approach, a combination of debris-estimating methodologies generally produces a more accurate estimate. Tetra Tech uses the following debris-estimating methodologies:

- **Data-driven debris-estimating model.** Tetra Tech has developed a data-driven debris-estimating model that takes into consideration factors such as hurricane strength category, estimated storm surge, coastal households, amount of vegetative cover, dockage, and other unique factors to develop debris estimates for a community.
- **Field survey.** "Boots on the ground" Tetra Tech staff will also work to estimate the expected volume of debris. Tetra Tech's experienced field staff complete windshield surveys, and the information collected is aggregated by an experienced project manager to generate field survey-based debris estimates.
- **Aerial surveys.** Finally, Tetra Tech can develop debris estimates using Unmanned Aircraft Systems (UAS, or more commonly drones) to estimate debris quantities from inaccessible areas. Tetra Tech drones can capture topographic survey data, including orthophoto, contour, digital terrain, and dense point cloud data to develop estimated volumes of debris within an impacted community.

Surveying Affected Areas for Special Situations or Emergencies

Tetra Tech will customize the *RecoveryTrac*™ ADMS system to meet the data capture needs of the special situation or emergency surveys outlined in the RFP (including identifying tree stumps, root balls and associated cavities, hazardous trees, construction and demolition debris, or other potentially hazardous situations). Benefits of using digital data capture and custom electronic forms include:

- **Integration with applications:** The *RecoveryTrac*™ survey tool can be integrated into Survey123, iForms, Collector, and other standard geospatial survey tools typically used for surveying affected areas.
- **Implementation of required fields:** Tetra Tech will designate required fields that must be completed on forms before the user can move on to the next data capture event. This avoids incidents of failure to capture key information in the field due to user error.
- **Standardized data entry:** Tetra Tech will use drop-down menus and pick lists whenever practical to standardize data capture. This approach avoids use of synonyms and personalized nomenclature that can hinder data analysis and cause confusion during data interpretation.

- **Direct correlation with project-specific database:** Tetra Tech's electronic forms and custom database are developed in concert, allowing for direct mapping between data fields captured in electronic forms and those used within the database. These tools facilitate rapid and accurate upload and storage of data, without requiring manipulation of data.

After surveying and logging findings of special situation or emergency surveys, Tetra Tech maintains a list of potentially hazardous locations and situations. The *RecoveryTrac*™ database is used to coordinate and track the appropriate dispatch of staff and equipment to remediate the hazard, as well as reporting to the Town on the status of the hazard, actions taken, and post-event status.

Integrated Mapping Solutions – Unmanned Aircraft Systems

Tetra Tech provides integrated mapping solutions using state-of-the-art mapping software, airborne and mobile sensors and camera systems, and a robust information technology infrastructure. Our clients receive accurate, innovative geospatial and mapping solutions for commercial, governmental, and defense applications.

Evidence of this innovation in action is our disaster response team's utilization of Unmanned Aircraft Systems (UAS or more commonly, "drones") in a variety of applications to enhance our documentation and provide our clients with increased visibility into project scope and operations.

Our team has used UAS technology to help conduct damage assessments in communities affected by disasters. Data and imagery provided via UAS not only provides a more complete visual than photos alone, but also allow our team to survey areas that may be inaccessible after an incident. We can leverage this technology to reduce time spent accumulating ground survey data for large areas, to collect higher resolution data, and to provide real-time data capture to our clients. In addition to damage assessments, the technology is used in a similar fashion to provide increased visibility into debris removal operations and is particularly helpful for documenting parcel demolition and site remediation to better illustrate work progression throughout the course of a project. Our project teams have also used aerial imagery obtained from UAS to illustrate the progression of debris processing and removal at DMS locations.

UAS technology is especially useful in monitoring waterway disaster debris removal projects. Oftentimes, ease of accessibility can be an issue when working the length of some waterbodies. By using the data provided by UAS, our project team can assess the area and develop smart workplans. Furthermore, aerial images provided by UAS can demonstrate work progression on waterways where visibility from the shore is obscured.

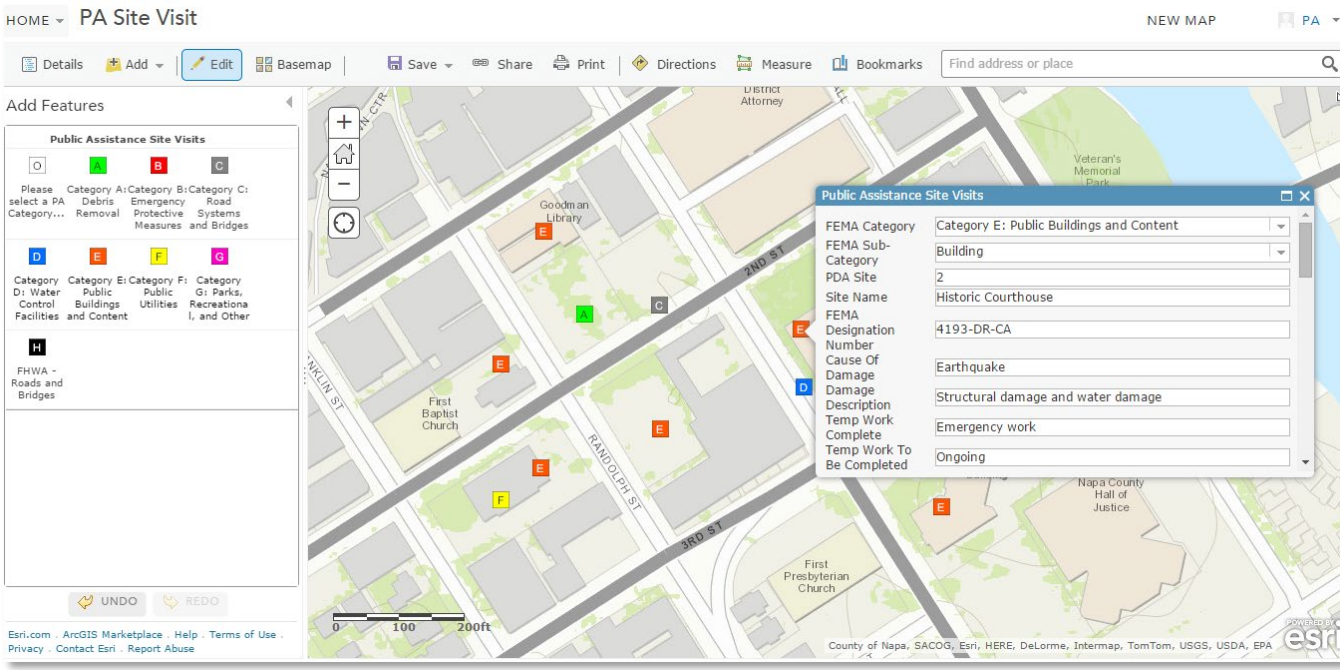
Our ASPRS-certified photogrammetrists, FAA-certified UAS pilots, certified geographic information systems professionals, LiDAR analysts, and remote sensing and survey professionals work together to provide the latest tools and technologies to support our clients' goals and objectives. Tetra Tech's geomatic technologies professionals support our clients with a full suite of services—from air, land, water, and desktop.

Damage Reporting

Following a disaster, the Town will need to evaluate damages and identify priorities. Preliminary damage assessments are a critical component to the Town receiving a disaster declaration following a major debris-generating event. If tasked, Tetra Tech is prepared to supplement Town staff and assist in conducting electronic damage assessments. Tetra Tech's *RecoveryTrac*™ ADMS technology 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 Hurricane Harvey in Texas and Hurricane Maria in Puerto Rico. A sample image of Tetra Tech's web-based damage assessment report is provided below.

Damage Assessment Report



Vehicle Certification

Tetra Tech uses the *RecoveryTrac*™ system to electronically certify all trucks used in an activation. Our team follows a proven vehicle certification procedure that complies with FEMA guidelines and results in maximum reimbursement. Our certification includes:

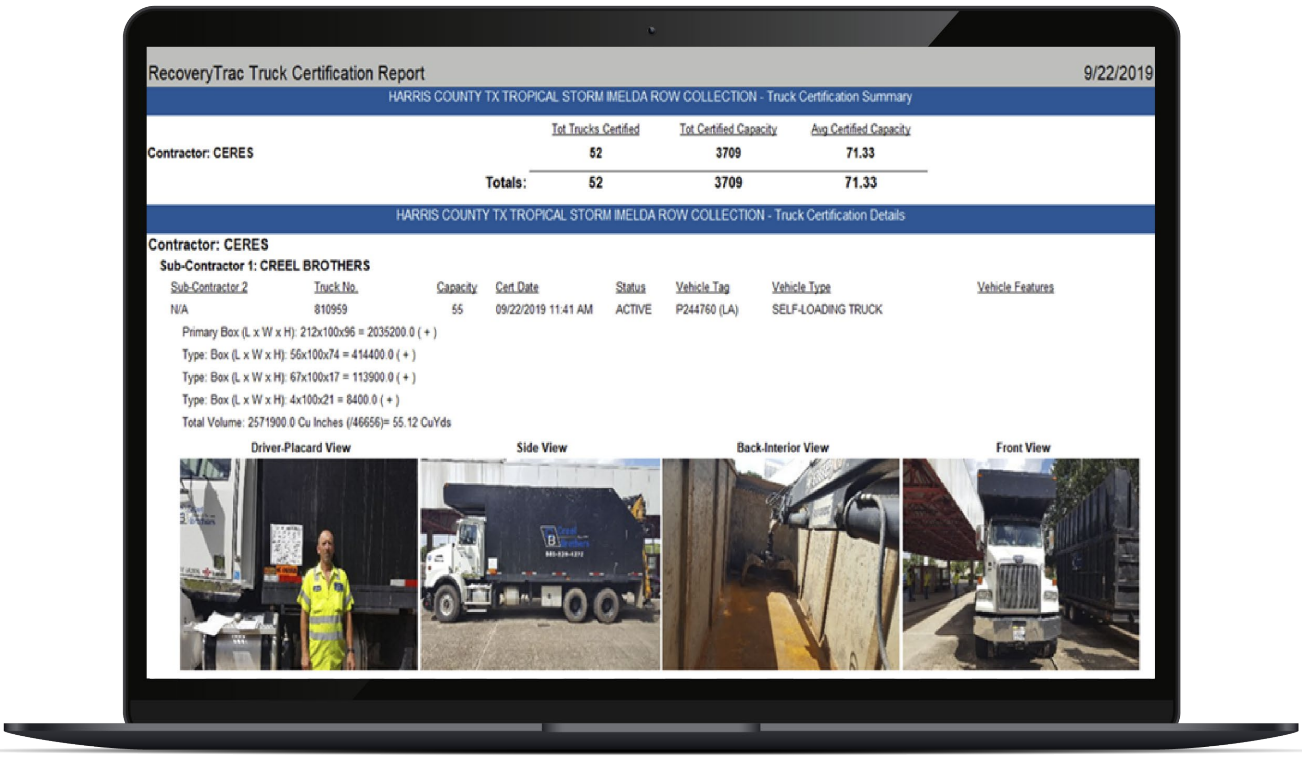
- Unique truck numbers for contractor crews and equipment
- Automated truck certification form, including:
  - FEMA guidelines on truck certification documentation and volume calculations
  - Barcode for automated ticket scanning
- Vehicle notations on the truck certification form and vehicle placard, informing tower monitors of sideboards, tailgates, or other modifications
- Photographs of vehicles, vehicle cavities, and drivers
- Periodic spot checks and recertification of trucks to identify trucks altered after initial certification

Benefits of using Tetra Tech's mobile truck certification application include:

- Electronic volume calculations
- Instantaneous upload to the *RecoveryTrac*™ database
- Immediate QA/QC checks to verify the truck certification calculations
- Automated photo-matching of truck and driver photographs

The truck certification application allows us to complete truck certifications in **30% less time than with a paper-based system.**

Truck Certification Report



RecoveryTrac Truck Certification Report 9/22/2019

HARRIS COUNTY TX TROPICAL STORM IMELDA ROW COLLECTION - Truck Certification Summary

	Tot Trucks Certified	Tot Certified Capacity	Avg Certified Capacity
Contractor: CERES	52	3709	71.33
Totals:	52	3709	71.33

HARRIS COUNTY TX TROPICAL STORM IMELDA ROW COLLECTION - Truck Certification Details

Contractor: CERES

Sub-Contractor 1: CREEL BROTHERS

Sub-Contractor 2	Truck No.	Capacity	Cert Date	Status	Vehicle Tag	Vehicle Type	Vehicle Features
N/A	810959	55	09/22/2019 11:41 AM	ACTIVE	P244760 (LA)	SELF-LOADING TRUCK	

Primary Box (L x W x H): 212x100x96 = 2035200.0 (+)
Type: Box (L x W x H): 56x100x74 = 414400.0 (+)
Type: Box (L x W x H): 67x100x17 = 113900.0 (+)
Type: Box (L x W x H): 4x100x21 = 8400.0 (+)
Total Volume: 2571900.0 Cu Inches (/46656)= 55.12 CuYds

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

Field Operations

The Tetra Tech debris monitoring program includes the following:

Tetra Tech Daily Field Operations

1. Work Scheduling

Tetra Tech will coordinate with the debris removal contractor's project manager to estimate required staffing numbers 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.

2. Check-In

Field monitors report to a staging location prior to the commencement of daily operations for a briefing by the project manager or field supervisors and for the distribution of safety gear, map books, and ADMS handheld devices to document debris removal operations.

3. 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).

4. 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. Tetra Tech utilized National Incident Management System supervisor ratios for span of control and efficiency of operations.

5. Field Documentation

Field monitors will verify proper loading of debris and will document that contractors and their subcontractors adhere to local, state, and federal regulations and safety guidelines. Debris removal procedure discrepancies are reported to the supervisor. If a field monitor feels a justifiable need to stop operations, the monitor will refrain from issuing a ticket until the debris hauler supervisor and a Tetra Tech supervisor determine an appropriate action.

6. Daily Closeout

At the close of operations each day, all field monitors will report to the staging area to clock out, turn in their ADMS handheld device, and receive a debrief from field supervisors.

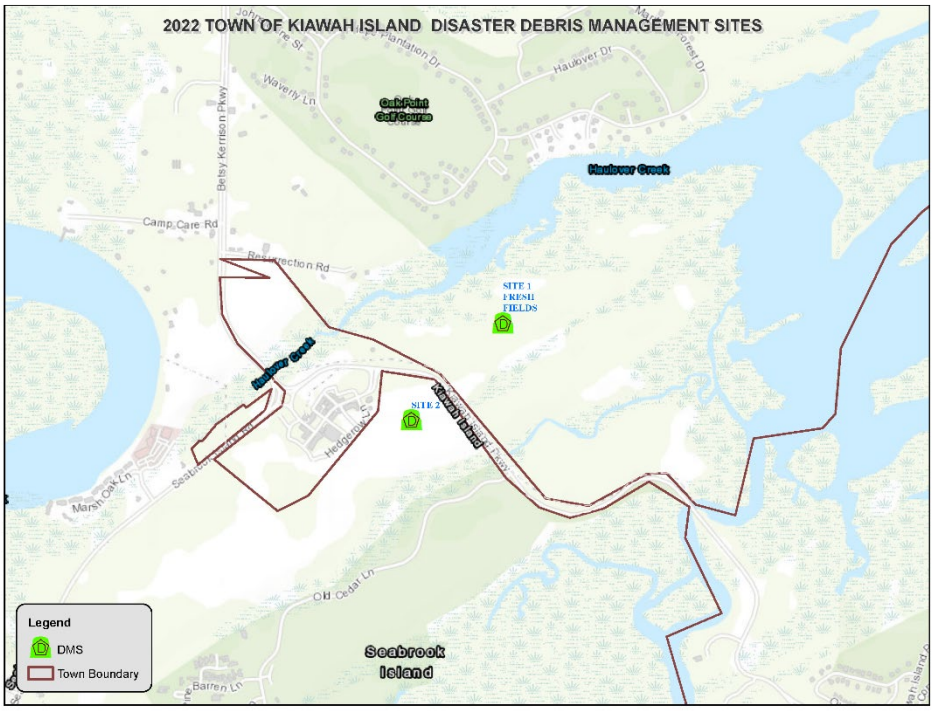
Potential Delay	Tetra Tech Strategy
Inability of a debris contractor to respond with sufficient equipment	Tetra Tech will provide burn rate analysis to verify the proper equipment is being provided. This will be adjusted as more accurate debris estimates are available.
Leapfrogging by the contractor (cherry picking work being performed)	Leapfrogging can be detrimental to the efficiency of operations and will be reported by Tetra Tech.
Delayed invoices by the contractor	Tetra Tech will work to make the contractors aware of an appropriate timeframe for invoicing and will communicate with the Town if deadlines are not being met.
Not adjusting deadlines for collecting debris and work schedule that is based on an update-to-date estimated work to be completed	As damage estimates become more accurate (as is typical throughout the process), Tetra Tech will work with Town officials to adjust the timeline to appropriately reflect the changing estimates.

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

Debris Management Site Monitoring

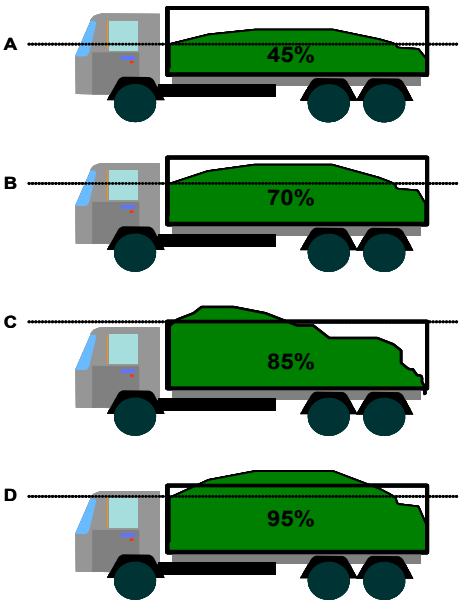
Tetra Tech has industry-leading experience assisting local and state governments with locating and permitting DMS before a disaster event as well as post-disaster. Based on State environmental agency guidelines, DMS typically require baseline soil testing before use. Following the completion of work at the DMS, the baseline soil testing is used to verify site remediation is complete.

As DMS are activated, Tetra Tech will provide a minimum of two disposal monitors per site, which may scale depending on site layout and operational needs. The disposal monitors will verify that the debris contractor passes through the DMS and will verify accurate and complete documentation. Several daily audits will be performed by project managers and supervisors to verify that load call data is consistent and accurate. Documentation kept by Tetra Tech DMS disposal monitors includes:



- **Load Ticket.** Documents that debris removal complies with all FEMA requirements.
- **Disposal Monitor Log.** Used as backup documentation as required by FEMA.
- **Scale Manifest Tickets.** For weight-based debris hauling contracts, Tetra Tech will digitize and catalog scale tickets.
- **Incident Report.** Tetra Tech will document property damage, arguments, unsafe practices, and injuries.
- **Photographic Documentation.** Tetra Tech disposal supervisors will photograph a DMS frequently to create a visual timeline of the site.
- **QA/QC of Field Tickets.** Disposal monitors review and verify collection monitors' work in the field.

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

Residential drop-off sites can be beneficial by allowing residents to address disaster debris on their property. However, to be eligible by FEMA, the Town must verify that only their residents are using the drop-off site and prevent commercial debris contractors from disposing of debris at the residential drop-off site. Tetra Tech can assist the Town in monitoring residential drop-off sites and verifying Town residence before a resident unloads debris at the site.

Right-of-Way Collection Reporting

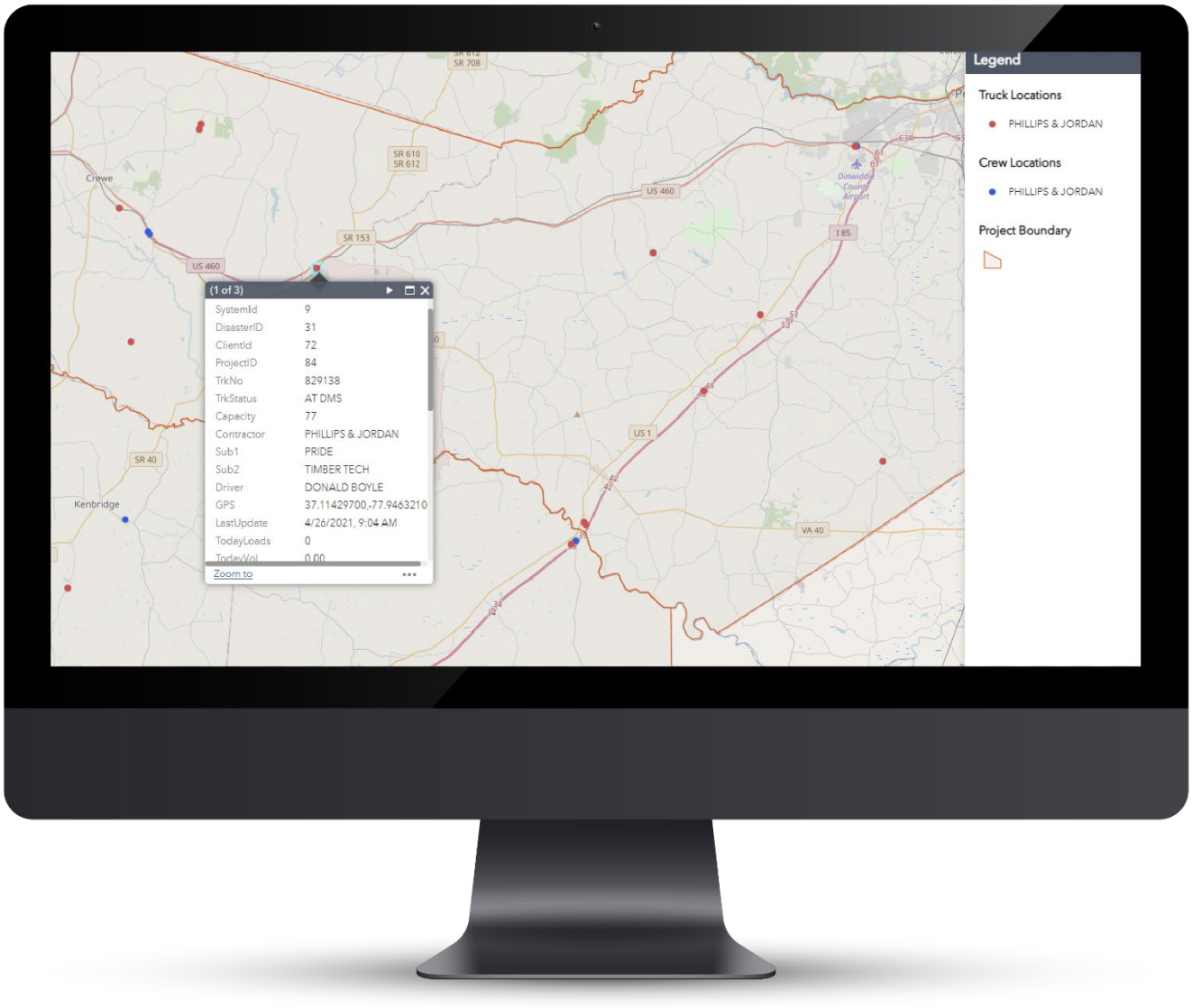
Our *RecoveryTrac*™ ADMS technology allows the Town to view debris collection points, truck locations, monitor locations, damage, incidents, and daily metrics at any given time. The additional geospatial reporting capabilities are made possible through the Tetra Tech approach to field monitoring.

At each debris collection point, the field collection monitor marks the waypoint or location of the debris pile to collect GPS coordinates. The map on the following page 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.

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 below.

Truck Locations

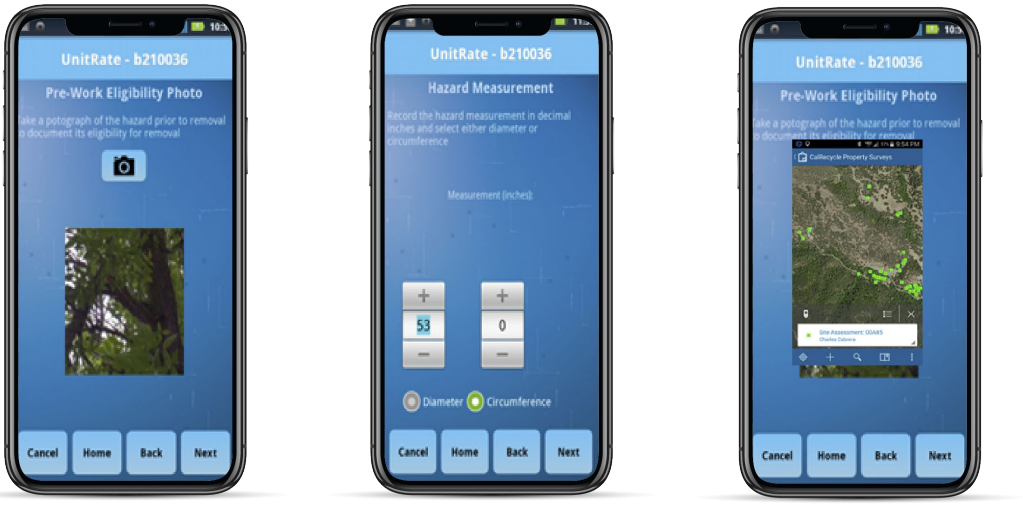


Stumps and Leaners/Hangers

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 utilizes 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 Town's contractual agreement with the contractor.

Hazardous Tree Mobile Suite

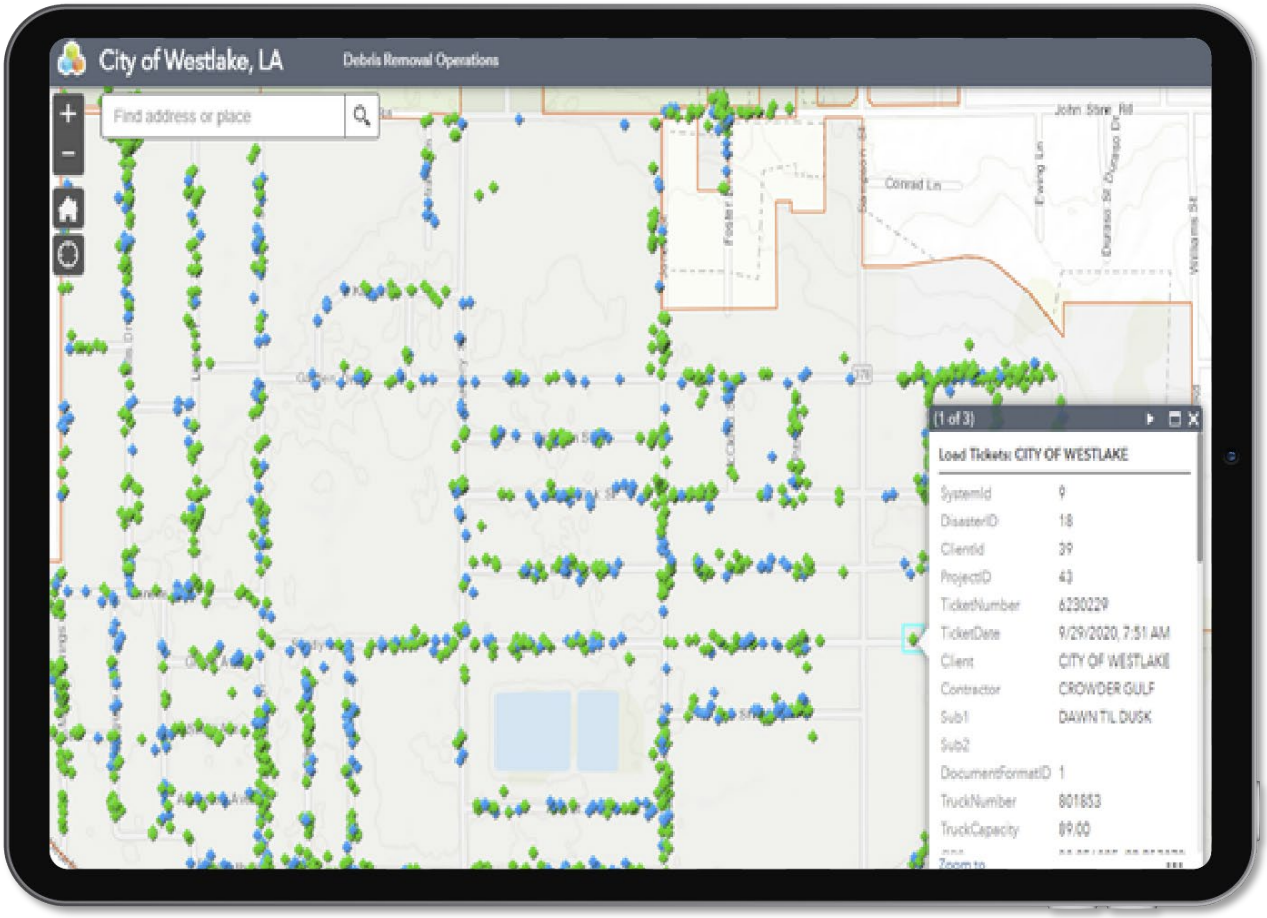


Real-Time Ticket Report

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.

Unit Rate Ticket Map



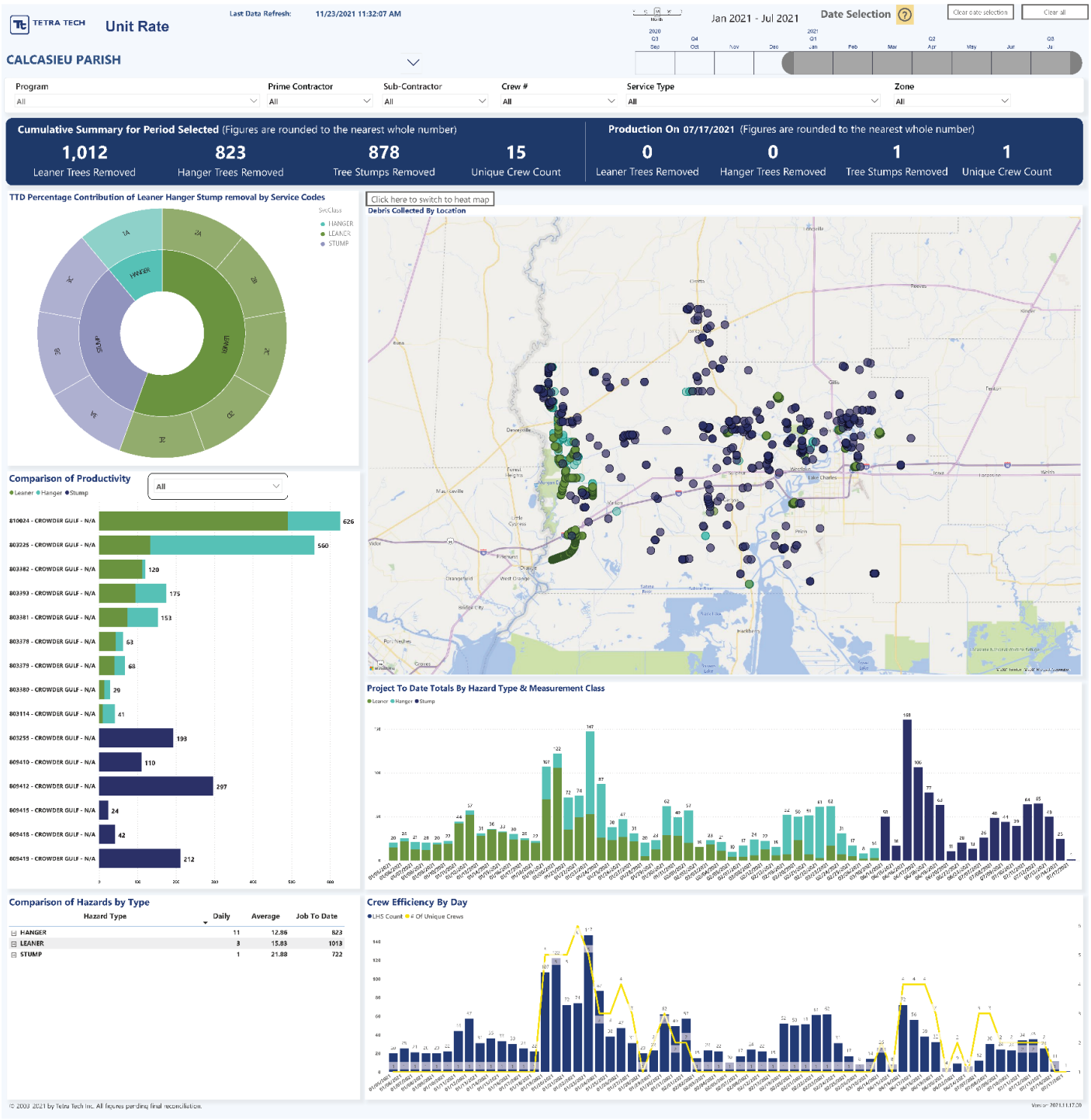
Reporting

Tetra Tech has extensive experience in collecting, managing, and tracking financial and project data. Our firm has a full suite of existing reports to allow for custom reporting on all metrics requested from our clients. Tetra Tech has years of experience tracking invoice amounts and payments, budget forecasting, change order and work order attributable costs, etc. We understand the importance of accurate data and cost tracking and have developed several reports over the years to enhance visibility into essential project aspects. A sample of the variety of reports we are able to issue are summarized on the following pages.

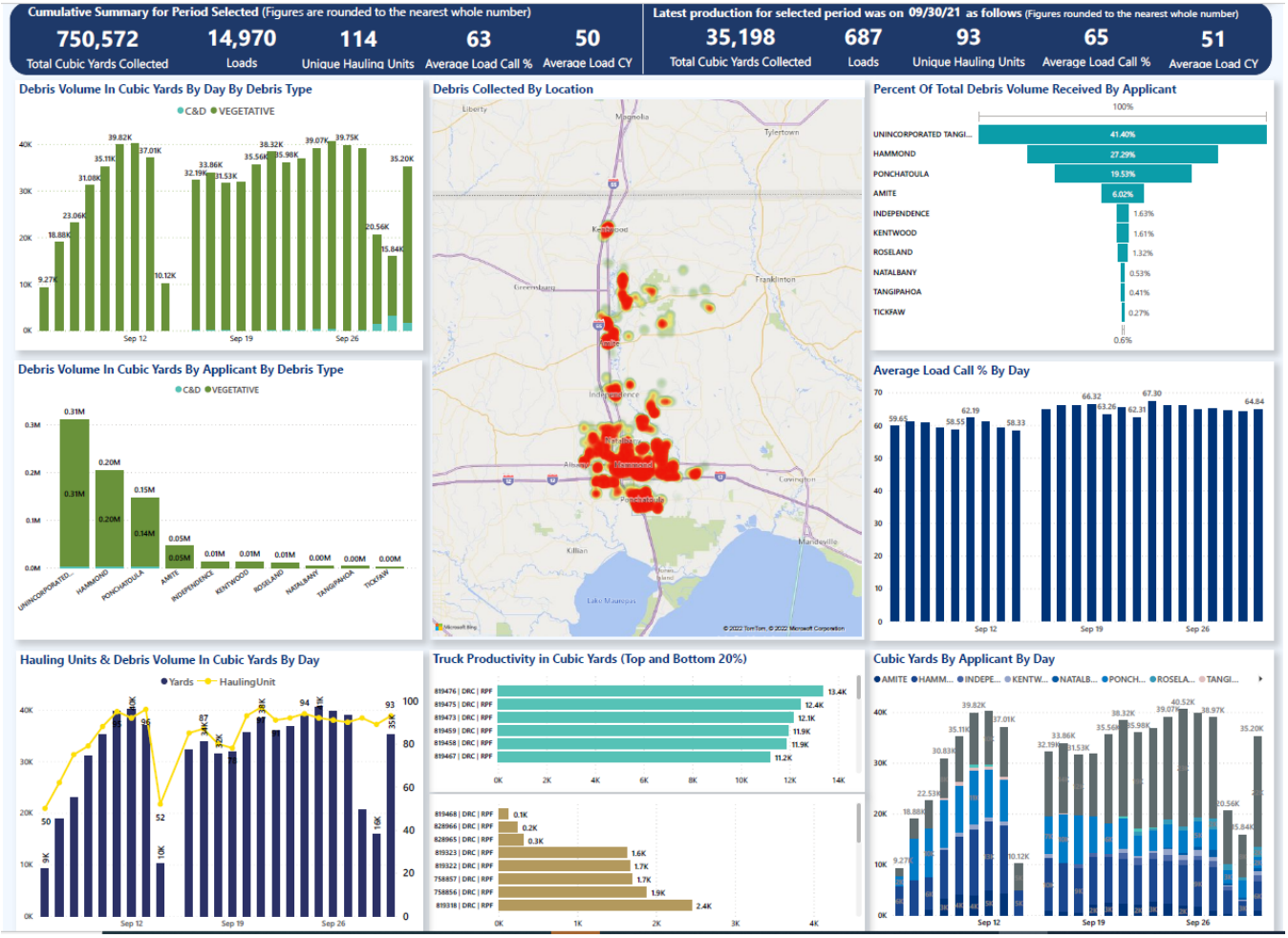
Daily Report

Tetra Tech has a suite of reports that are automated from *RecoveryTrac*™ ADMS and available in real-time via PC, tablet, or smart phone. Although the reports are available at any time to the Town, 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 provided reports tailored to any metrics not captured in the generic reports.

Sample Custom Report Developed



Sample Custom Report – Debris Volumes by Municipality



Daily Budget Status Reports

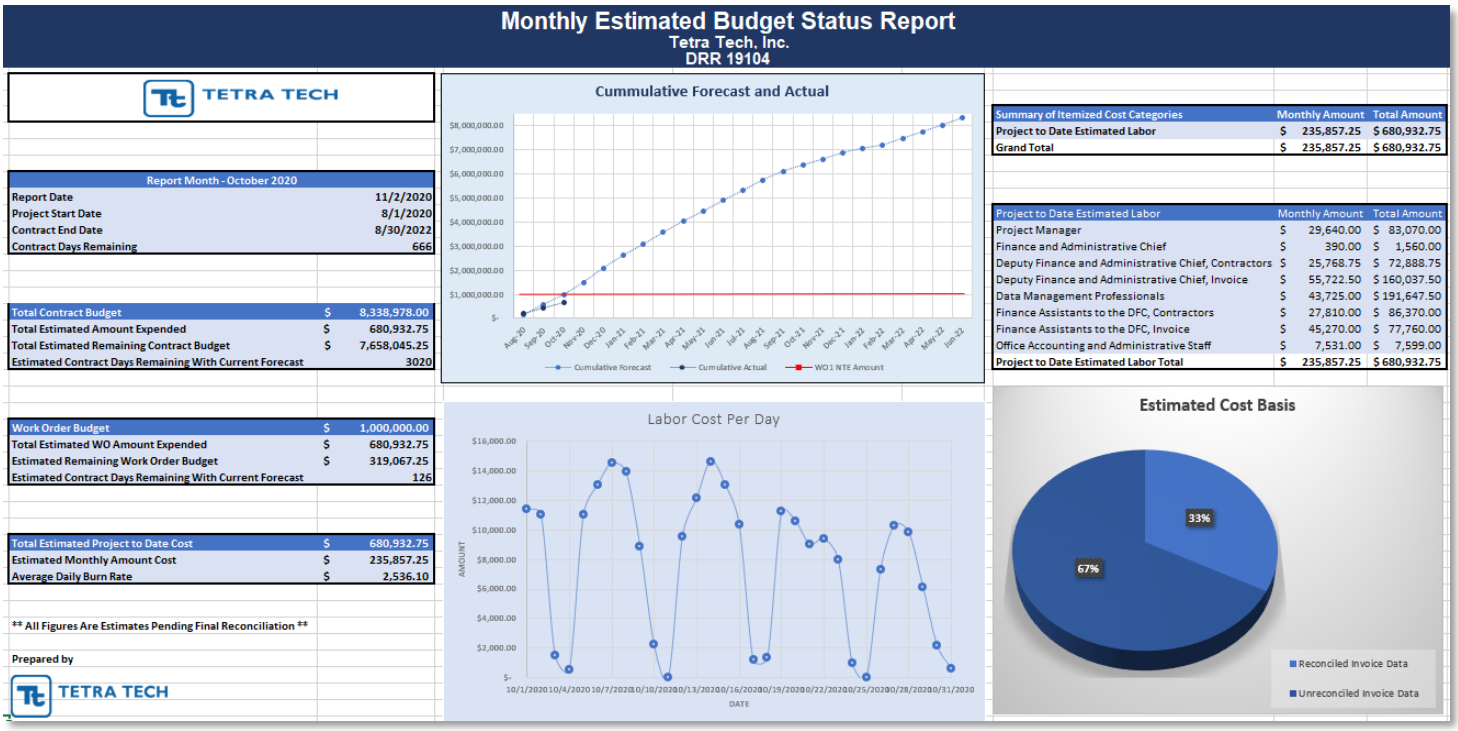
Tetra Tech provides a variety of daily reports that capture costs incurred, invoicing statuses, projections of work, debris totals, task force productivity, evaluation of integrity controls, recommendations, budget forecasting, and other metrics, as requested. Some specific examples of daily reports issued for prior projects include:

- **Finance Daily Budget Status Report:** This report's focus is on invoice reconciliation statuses, budget forecasting, and daily burn rates, contract service expenditure, work order and change order not-to-exceed tracking, and client recommendations based on analyses.
- **Contractor Daily Production:** This report graphs debris type tonnages on a per debris removal team basis by day. This graph also utilizes a slicer to restrict data displayed in the graph to a particular task force and also a timeline to allow for a specific day or range of dates to be shown.
- **Debris Removal Team Daily Production:** This report displays the ticket data summarizing the CYs or tonnage associated with tickets from properties assigned to the contractor. This graph also utilizes a slicer to restrict data displayed in the graph to a particular task force and also a timeline to allow for a specific day or range of dates.
- **Daily Report Contractor Expenditure:** Displays the services included in the project for the contractor. Also shows the quantity and cost amount of each service per day as well as the project to date total of all services. This report also calculates the average daily cost estimate based on the average daily cost for the previous five days.

Monthly Budget Completion Status

Tetra Tech's monthly budget completion status report summarizes financial data collected during the month for all contractors. Additionally, a robust forecast is incorporated along with a summary of recommendations based on the project's operations during the previous month.

Monthly Budget Status Report



On-Demand Budget Reports

Tetra Tech is able to provide budget reports on demand facilitated by superior cost and quantity tracking in the *RecoveryTrac*™ database. Previous custom on-demand budget reports include a combination summary of debris quantity data combined with financial metrics.

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 Town, 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 Town 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 Town. Additionally, the incident map developed from the collection information is essential to quickly identify unresolved contractor damages before the completion of the program.

Incident Report

RecoveryTrac Incident Summary Report

Project Incident Summary: CITY OF WESTLAKE HURRICANE LAURA ROW COLLECTION

Incident Type	Total	Active	Closed	Pct Compl	Avg Day Out	Hi Pri	Emp Invl	Contr Invl	Own Invl
DAMAGE TO PROPERTY	2	2	0	0.0	61	0	0	1	0
Totals	**2**	**2**	**0**	**0.0**	**61.0**	**0**	**0**	**1**	**0**

Project Incident Details: CITY OF WESTLAKE HURRICANE LAURA ROW COLLECTION

DAMAGE TO PROPERTY (Count: 2)

PRIVATE PROPERTY-MAILBOX (Count: 1)

Incident No.	Status	Priority	Date	Emp Invl	Cont Invl	Own Invl	Location	ReportingMonitor
DP-2020-30961	Active	Normal	9/9/2020 5:26:00 PM	NO	NO	NO	1313 GREENROAD STREET (30.250231,-93.257046)	DARE ADEYANJU (586714)

MAILBOX DOWN BEFORE THE ARRIVAL OF THE DEBRIS TRUCK.

Sample Report: Incident reports are available in real-time and can be accessed at any moment.

Final Report

Tetra Tech has extensive experience completing final reports for disaster debris removal projects. The Final Report will summarize the pre-debris removal, pre-tree removal, and post-debris and post-tree removal conditions. The Final Report typically includes the initial and final assessments, ROE, summary of quantities of materials removed, environmental sampling information, pre and post-work photographs, and final sign off.

In addition, data can be downloaded directly from the *RecoveryTrac*™ system using ESRI's ArcGIS feature services. These feature services allow location base selection and download of the data contained within the selected area. *RecoveryTrac*™ Fleet history, including individual route history can be downloaded and is available over the life of the project.

Upon project closeout, geospatial data will be provided in an ESRI File Geodatabase (FGDB). Non-geospatial data would be provided in Microsoft Excel format, as directed by the Town. The data formats provided do not require a *RecoveryTrac*™ license.

Contractor Reconciliation

The *RecoveryTrac*™ system 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. Prior to the start of debris removal operations, Tetra Tech will meet with the debris contractor(s) to review:

- The invoicing processes
- Contract services established in our database
- Tetra Tech data tools available for their use
- Any other accounting needs as tasked by the Town

During this meeting, the typical components of the Tetra Tech payment recommendation will be reviewed, the process for adjustment reconciliation will be explained, and the debris contractor(s) will be trained on how to access Tetra Tech's suite of debris hauler reconciliation data reports (including reconciled transactional and live ticket data).

If *RecoveryTrac*™ ADMS will be used to document the debris contractor's work, Tetra Tech will review the automated reports generated by the system to verify that the dataset is sufficient to reconcile with that contractor's subcontractors, and to generate invoices for payment by the Town. If another cost tracking system will be used to document the debris contractor's work, Tetra Tech will review the work that has to be documented to verify that our staff will be able to capture the information needed for accounting and invoice review.

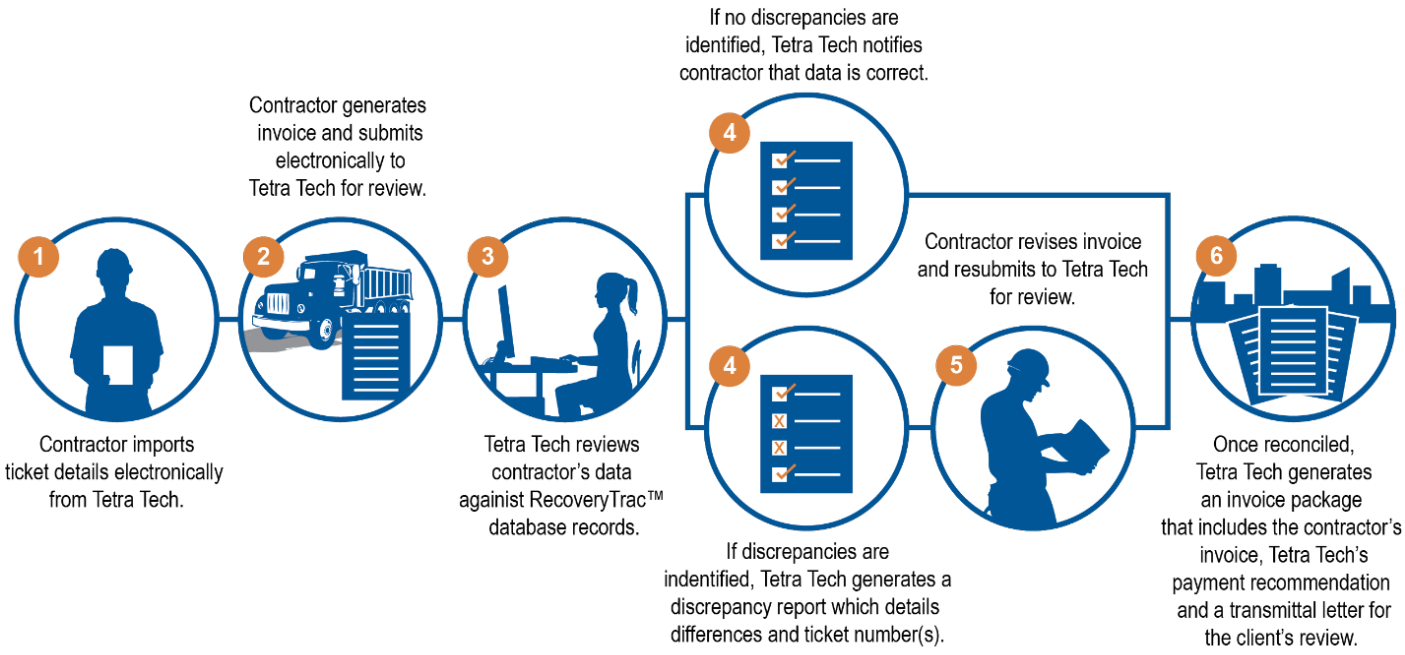
Our invoicing process includes several real-time QA/QC checks throughout the day, and a final daily comprehensive data analysis is performed at the close of operations. A final QA/QC check is completed when the debris contractor sends the invoice dataset to Tetra Tech for reconciliation. Incongruencies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

Whether using *RecoveryTrac*™ ADMS or paper logs, Tetra Tech will use our *RecoveryTrac*™ database to store and review data generated in the field documenting debris contractor work. Several QA and QC checks of data will occur before the dataset is ready for reconciliation with the contractor. Services related to debris contractor work order or change order charges are also tracked within the system.

Tetra Tech will submit invoices within the timeframes determined by the Town. The process for contractor invoice reconciliation is as follows:

1. Debris contractor manually enters ticket detail into a contractor database or imports ticket data based on debris contractor reports.
2. Debris contractor generates an invoice for a specified period and submits the invoice and electronic backup to Tetra Tech for review.
3. Tetra Tech reviews the contractor data against *RecoveryTrac*™ database records:
    a. If no discrepancies are identified, Tetra Tech notifies the debris contractor of no discrepancies in the data set.
    b. If discrepancies are identified, Tetra Tech generates a discrepancy report noting ticket numbers and differences between the two data sets.
4. If applicable, Tetra Tech will also perform a full reconciliation of end use/disposal facility data corresponding to debris contractor disposed debris.
5. Tetra Tech submits the discrepancy report for the debris contractor's review. The debris contractor revises its invoice based on the discrepancies and resubmits to Tetra Tech for review.
6. Once a debris contractor's invoice has been reconciled, Tetra Tech generates a payment recommendation and transmittal letter for each invoice and submits the invoice package for review by the Town. Tetra Tech's invoice package includes the following:
    a. Contractor invoice
    b. Tetra Tech transmittal letter and payment recommendation
    c. Cost allocation data, if applicable
7. Electronic copies of supporting documentation (i.e., load tickets, unit rate tickets, or time and material logs).

Summary of Contractor Invoice Reconciliation Process



Tetra Tech's Payment Recommendation Reports provide summarized and reconciled totals for contractor invoices.

Payment Recommendation Report

Friday, July 10, 2015

Invoice Cover Information

Applicant:	**CITY OF HOUSTON**	**Invoice Number:**	**1002-15-009**
Contractor:	**DRC**	**Date Of Invoice:**	07/09/2015
Disaster:	**TX-SEVERE STORMS AND FLOODING**	**Gross Amount per Invoice:**	**$325,381.75**
Invoiced Date Range:	FROM 06/15/2015 TO 06/21/2015	**Amount Held In Retainage:**	**$0.00**
		Net Amount Invoiced for Payment:	**$325,381.75**

Supporting Electronic Backup Summary

Code	Matching Service Description	Invoiced Qty	Invoiced Rate	Invoiced Total
50A	VEG ROW DEBRIS REMOVAL 0-15MI TO DISPOSAL	26,455.10	$7.22	$191,005.82
50B	VEG ROW DEBRIS REMOVAL 16-30MI TO DISPOSAL	554.25	$9.41	$5,215.49
51A	C&D ROW DEBRIS REMOVAL 0-15MI TO DISPOSAL	16,222.35	$7.60	$123,289.86
51B	C&D ROW DEBRIS REMOVAL 16-30MI TO DISPOSAL	546.10	$10.75	$5,870.58
	Total Amount of Supporting Electronic Backup Data (This amount pending reconciliation):			**$325,381.75**
	Amount Adjusted (Deducted) from Gross Invoice Total (Backup Difference):			**$0.00**

100% Payable Transactions:

Ticket Item	Invoiced Qty	Invoiced Rate	Invoiced	Tetra Tech Match	Resolved Date	Resolved Qty	Rate	Resolved Value	Adjustment	Reason
4036115-1	42.40	$7.60	$322.24	4036115	06/15/2015	42.40	$7.60	$322.24	$0.00	Verified and Approved
4036116-1	36.80	$7.60	$279.68	4036116	06/15/2015	36.80	$7.60	$279.68	$0.00	Verified and Approved
4036117-1	34.45	$7.60	$261.82	4036117	06/15/2015	34.45	$7.60	$261.82	$0.00	Verified and Approved
4036118-1	27.60	$7.60	$209.76	4036118	06/15/2015	27.60	$7.60	$209.76	$0.00	Verified and Approved
4036119-1	31.80	$7.60	$241.68	4036119	06/15/2015	31.80	$7.60	$241.68	$0.00	Verified and Approved
4036176-1	53.20	$7.22	$384.10	4036176	06/15/2015	53.20	$7.22	$384.10	$0.00	Verified and Approved
4036177-1	37.70	$7.22	$272.19	4036177	06/15/2015	37.70	$7.22	$272.19	$0.00	Verified and Approved
4036178-1	45.60	$7.22	$329.23	4036178	06/15/2015	45.60	$7.22	$329.23	$0.00	Verified and Approved
4036179-1	43.50	$7.22	$314.07	4036179	06/15/2015	43.50	$7.22	$314.07	$0.00	Verified and Approved
4105960-1	33.80	$7.60	$256.88	4105960	06/15/2015	33.80	$7.60	$256.88	$0.00	Verified and Approved
4105961-1	54.00	$7.60	$410.40	4105961	06/16/2015	54.00	$7.60	$410.40	$0.00	Verified and Approved
4105962-1	34.30	$7.60	$260.68	4105962	06/16/2015	34.30	$7.60	$260.68	$0.00	Verified and Approved

Continued, see additional data through page 2

Project Controls

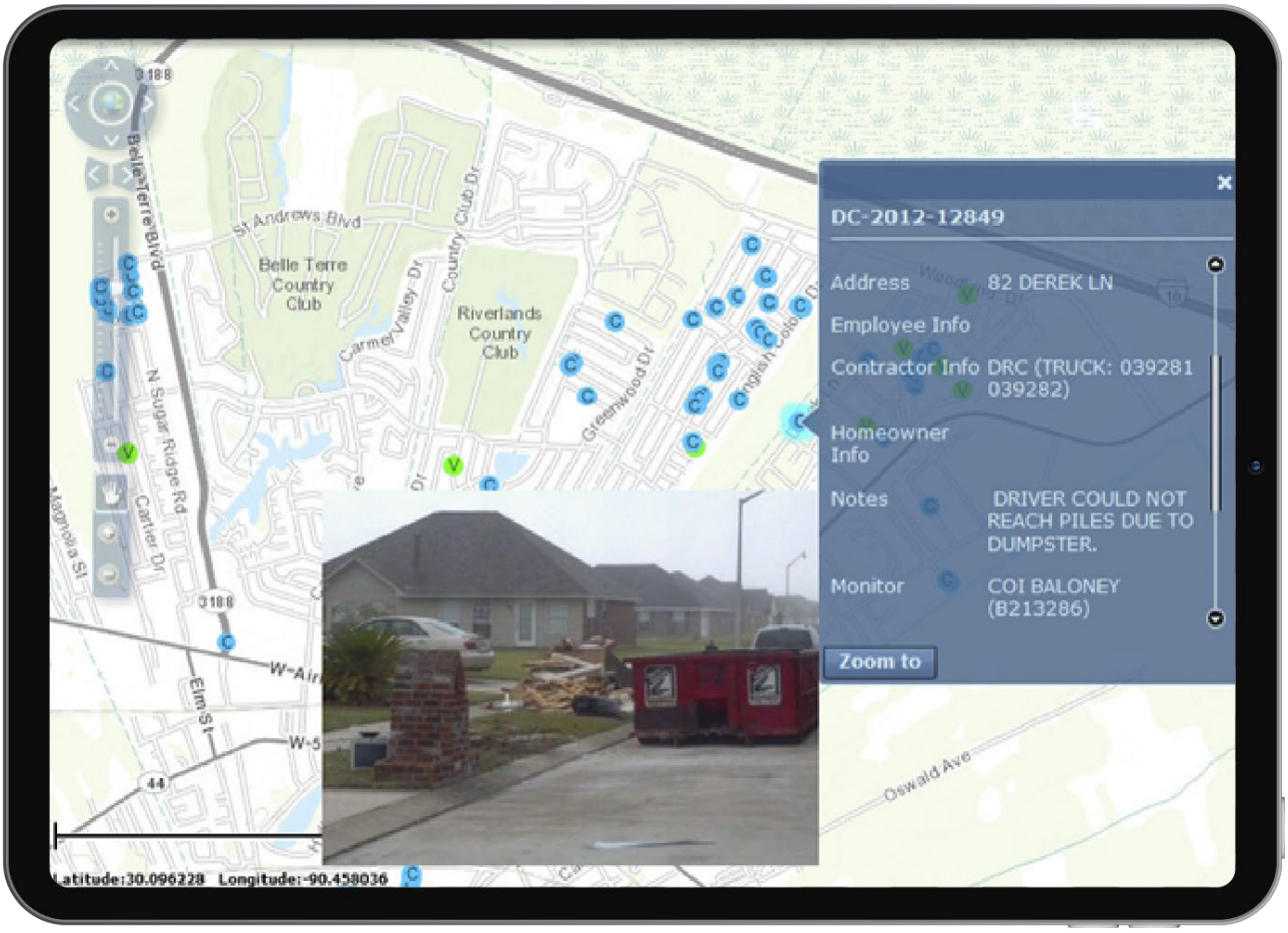
Quality Assurance

Implementing comprehensive QA/QC protocols and technologies is critical to a debris monitoring effort. Proper QA/QC protocols reduce the amount of work associated with back-end data management, reduce invoice reconciliation timeframes, prevent fraud, and establish a sound dataset for future audits. Throughout years of experience assisting local governments with recovering from disasters and the subsequent audits, Tetra Tech has developed industry-leading QA/QC standards and protocols. The use of our ADMS technology expedites the QA/QC process and drastically reduces 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 because this is logged automatically.

Our ADMS technology expedites the QA/QC process and **drastically reduces ticket errors** that can result from traditional manual (paper and pen) debris monitoring operations.

Due to the real-time information collected by our ADMS technology, Tetra Tech can establish a virtual command center to audit project information during the collection process and correct issues as they appear. For example, our ADMS technology provides reporting and tracking on any missed debris piles. This allows Tetra Tech to improve our responsiveness to resident complaints and provide real-time tracking tools to manage removal of these missed piles to the Town.

Missed Piles Tracking



Fraud Prevention

Several practices are used to prevent debris haulers from committing fraud both in the field and remotely by real-time data monitoring. At DMS locations, Tetra Tech disposal monitors or supervisors will randomly recertify a previously certified truck. Recalculating the truck hauling capacity helps verify that the original work was accurate and that nothing has been altered since certification. Additionally, ADMS technology displays a photo of the truck as a ticket is scanned by the disposal monitor. This makes it nearly impossible for a debris hauler to switch truck certifications between trucks or alter their truck configuration (i.e., remove sideboards).

Fraud prevention reports are run daily to identify 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 report and unit rate daily ticket report determine if monitors are issuing an excessive number of tickets in relation to the average number of tickets per day. The *RecoveryTrac*™ system includes built-in project controls that 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 pick-up location and arrival of a truck at the DMS is tracked. A time that is too short may indicate that the debris hauler is not filling the vehicle to capacity.
- **Out-of-Bounds.** The municipality boundaries are programmed geospatially to confirm that debris pick-up remains within the eligible bounds of the Town.
- **Debris Type.** Discrepancies between the debris type noted by the collection monitor and the debris type noted by the disposal monitor are flagged for review.

Training

In disaster response and recovery, training is not one-size-fits-all. Tetra Tech customizes formal trainings to the duties of each new employee, and hosts trainings in the Hiring Center with a Tetra Tech certified trainer. These trainings include modules specific to each client's needs and requirements, complete with information to ensure accurate field monitoring and ADMS implementation. By using interactive qualifying tools throughout training modules, Tetra Tech helps trainees better retain information while also screening and selecting the most qualified personnel as field monitors.

To properly instruct newly hired employees, Tetra Tech has developed a training program that includes modules specific to the Town. These modules are complete with the information required to facilitate accurate field monitoring and ADMS implementation. 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.

Safety and Health Standards

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

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

Industry Metrics for 2021 Health and Safety Performance		
0.74 US Experience Modification Rate (EMR) **29% better than average industry workers' compensation claims**	**0.35** 2019 Enterprise-Wide Total Recordable Injury Rate (TRIR) **Outperformed others in our industry by 43%**	**0.08** 2019 Enterprise-Wide Lost Workday Incident Rate (LWDIR) **Outperformed others in our industry by 45%**

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 (OSHA) 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.

Tetra Tech has incorporated **COVID-19 awareness and safety procedures** into all project Health and Safety Plans since the start of the pandemic. These protocols will be incorporated into the project Health and Safety protocols to support the Town in slowing the spread of COVID-19.

F. Work Plan

General Response Timeline

Based on Tetra Tech's understanding of the Town 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 Town to adjust the timing of the specific elements below to meet the Town's needs.

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

Operational Response Timeline for Debris-Generating Events

Time	Task	Deliverables/Milestones
Pre-Event Planning		
Pre-event (normal conditions)	**Meet with the Town to review plans and documents**	• Conduct annual pre-event meeting with the Town and debris contractor • Review the Town's disaster recovery contracts for FEMA compliance • Update critical documents and files, including any GIS files
H-96	**Review capabilities and resources**	• Contact the Town and initiate daily conference call • Determine resource requirements from debris model • Review the Town's emergency policies and contracts • Establish contact with the Town's debris hauler and ensure Tetra Tech has the most up to date copy of the debris hauler contract
Incident Planning		

Time	Task	Deliverables/Milestones
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 debris management site (DMS) locations and follow up with the State on permitting procedures • Estimate equipment requirements and DMS capacity to haul and stage debris • Prepare ADMS technology for mobilization • Conduct regular meetings with Town staff as requested • Confirm staging location and begin mobilization of resources
H-48	**Monitor storm track and continue preparations**	• Mobilize project assets and begin base camp coordination and logistics (food, water, housing, etc.) with the Town and Tetra Tech headquarters (if necessary) • Review list of priority roads and the operational plan • Obtain GIS files for municipalities that the Town will assist with debris removal • Continue to update and gather updates from the Town's debris hauler • Save all critical documents and files to the network drive, USB drive, and laptop hard drive
H-24	**Prepare final reports**	• Certify emergency road clearance equipment (in coordination with the Town's debris hauler) • Determine emergency road clearance priorities
H-0	**ARRIVAL OF NOTICE EVENT/INITIATE RESPONSE TO NO-NOTICE EVENT**	
Execution		
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 Town 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 DMS locations • Follow up with State-level environmental regulations on debris permits (if required) • Work with the Town 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 Town staff and debris hauler • Implement QA/QC procedures
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 Town, 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*™ ADMS • Initiate weekly reconciliation

Time	Task	Deliverables/Milestones
Week 1+	**Reimbursement support/grant administration (FEMA, NRCS)**	• Initial payment recommendations with retainage • Prepare damage/cost estimates • Compile supporting documentation (debris permits, debris contracts, etc.) • Liaise with local FEMA region officers, state-level emergency management representatives, U.S. Army Corps of Engineers (USACE), etc.
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 Closeout		
Project completion	**Document turnover/closeout**	• Final reconciliation • Retainage release • Release hard copy files • Provide electronic database • Assist with PW development • Assist the Town with long-term reimbursement • Audit assistance • Appeal support if necessary

Tornado/Severe Storm Immediate Response Timeline

Based on Tetra Tech's understanding of the Town 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 Town to adjust the timing of the specific elements below to meet the Town's needs.

Operational Response Timeline for Debris-Generating Events

Time	Task	Deliverables/Milestones
Impact (I)		
I +12	**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 DMS locations and follow up with the State on permitting procedures • Estimate equipment requirements and DMS capacity to haul and stage debris • Prepare ADMS technology for mobilization • Conduct regular meetings with Town staff as requested
I +12	**Monitor storm track and continue preparations**	• Confirm staging location and begin mobilization of resources • Mobilize project assets and begin base camp coordination and logistics (food, water, housing, etc.) with the Town and Tetra Tech headquarters (if necessary) • Review list of priority roads and the operational plan • Obtain GIS files for municipalities that the Town will assist with debris removal • Continue to update and gather updates from the Town's debris hauler
I +12-24	**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 Town's debris hauler)

Time	Task	Deliverables/Milestones
		• Determine emergency road clearance priorities
Execution		
I +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 Town 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 DMS locations • Follow up with State-level environmental regulations on debris permits (if required) • Work with the Town to establish public information protocols to respond to concerns and comments
I +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
I +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
I +96	**Begin debris collection monitoring**	• Assign monitors to trucks • Assign supervisors to monitors • Hold morning and afternoon meeting with Town staff and debris hauler • Implement QA/QC procedures
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 Town, 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*™ ADMS • 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 local FEMA region officers, state-level emergency management representatives, U.S. Army Corps of Engineers (USACE), etc.
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 Closeout		

Time	Task	Deliverables/Milestones
Project completion	**Document turnover/closeout**	• Final reconciliation • Retainage release • Release hard copy files • Provide electronic database • Assist with Project Worksheet (PW) development • Assist the Town with long-term reimbursement • Audit assistance • Appeal support if necessary

Additional Services

Tetra Tech has access to the full range of personnel with key expertise in relevant topic areas across the disaster recovery continuum. Our team offers services in all areas of security, disaster preparedness, and emergency response and recovery. The following pages review our additional service offerings, including:

- Emergency Management Consulting
- Debris Program Management Consulting Services
- Grant Administration and Disaster Recovery Management Services
- Long-term Recovery Planning and Economic Development
- Vulnerability/Hazard Identification/Risk Assessment Services
- Environmental Services
- COVID-19 Recovery Services

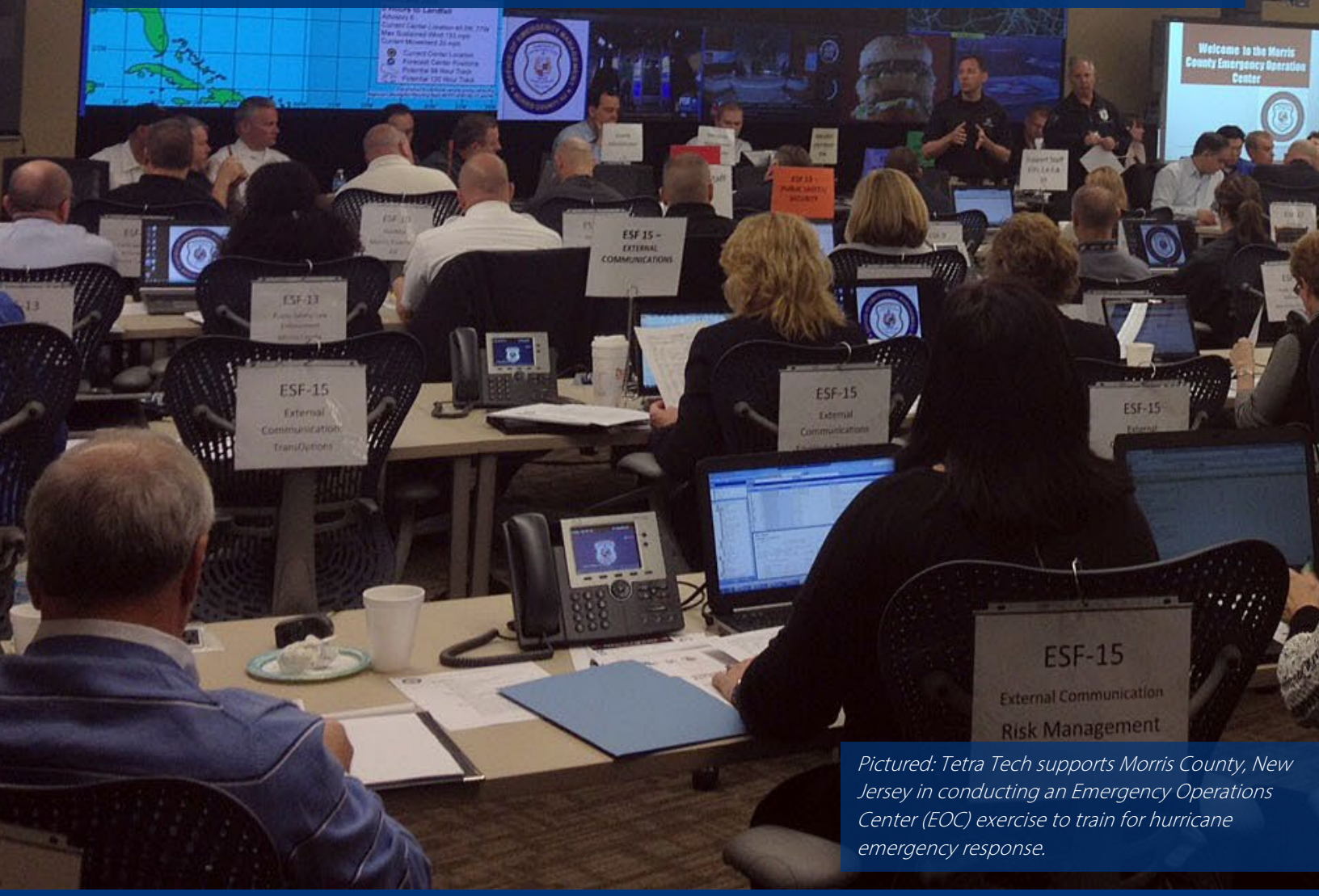
Emergency Management Consulting

Unlike many emergency management firms that focus on planning, Tetra Tech is a full-service firm that works in all phases of emergency management.

When a major incident occurs, the impact sends shockwaves around the globe. All eyes are on the incident and the level of scrutiny is overwhelming. As an experienced leader in the emergency management industry, Tetra Tech knows what it takes to respond effectively and to initiate recovery activities almost simultaneously, while maintaining transparency for the public and elected officials.

We are better planners because of our active involvement in response and recovery efforts. We develop realistic plans that can be effectively implemented during a response.

Tetra Tech works with organizations across the country in jurisdictions that face a variety of threats and hazards, from dense urban areas susceptible to security threats to coastal communities prone to hurricanes. For that reason, Tetra Tech maintains a multidisciplinary staff with backgrounds and experience in emergency management, hazardous materials (HAZMAT) response and recovery, public health and healthcare planning, transportation and evacuation, all-hazards mitigation, disaster resiliency and readiness planning, and response and recovery, among other fields. The breadth and depth of our expertise distinguishes Tetra Tech from other firms and allows us to provide the full range of planning and program execution services.



Pictured: Tetra Tech supports Morris County, New Jersey in conducting an Emergency Operations Center (EOC) exercise to train for hurricane emergency response.

Emergency Management Consulting Services

Service Offering	Description
Hazard Mitigation Planning	Tetra Tech provides hazard mitigation plan development for clients to establish mitigation goals and objectives, and to identify projects that enable the jurisdiction to prepare for and reduce the impacts of a disaster in a Federal Emergency Management Agency (FEMA)-compliant format.
Emergency Operations Planning	Tetra Tech provides our clients with emergency operations planning consisting of a basic plan, emergency support functions (ESFs) annexes, and incident-specific appendices that address direction and control, communications, public warning, emergency public information, evacuation, mass care, health and medical, resource management, etc.
Continuity of Operations (COOP) Planning	Tetra Tech develops COOP plans for our clients, so they are prepared to provide mission essential functions across a wide range of emergencies. A COOP plan is designed to plan for denial of access to a facility, denial of service due to equipment or systems failure, and denial of service due to a reduced workforce.
Continuity of Government (COG) Planning	Tetra Tech provides COG planning to our client to ensure continued leadership, authorities, direction and control, and preservation of records to maintain a viable system of government.
Emergency Support Function (ESF) Planning	Tetra Tech provides ESF planning to assign roles and responsibilities of supporting agencies as either a stand-alone planning effort or part of an EOP. ESFs provide a structure for managing response efforts that involve multiple agencies at the local, state, and/or regional level.
Departmental Emergency Response Planning	Tetra Tech assists department-level clients within a larger organization with primary or secondary support roles under the ESFs to develop specific emergency plans. Departmental emergency response planning is the effort used to develop standard operating guides and/or standard operating procedures for departments with primary or support responsibilities.
Evacuation Planning	Tetra Tech provides evacuation planning support to our clients, including the development of: • Clear agency roles/responsibilities for small- and large-scale and point source evacuation scenarios • Effective situational awareness communication protocols to determine evacuation areas and evacuation participation rates • Development of consistent and effective warning order evacuation/shelter-in-place terminology designed to motivate citizens and tourists to evacuate with a sense of urgency and along advocated routes or to shelter in place if they are outside the impact zone • Tailored time-phased protective action measures (such as staging and mutual aid activation) to ensure that populations at risk can be effectively and efficiently moved out of harm's way and sheltered as needed • Identification of vulnerable special needs populations, transportation-dependent communities, large animal and pet considerations, additional behavioral assumptions, critical traffic control points, and available intelligent traffic monitoring systems • Easily defined evacuation zones coupled with a public awareness strategy • Zonal evacuation clearance times and/or shelter-in-place guidance designed for a range of possible point source, no-notice, and terrorist phased approach

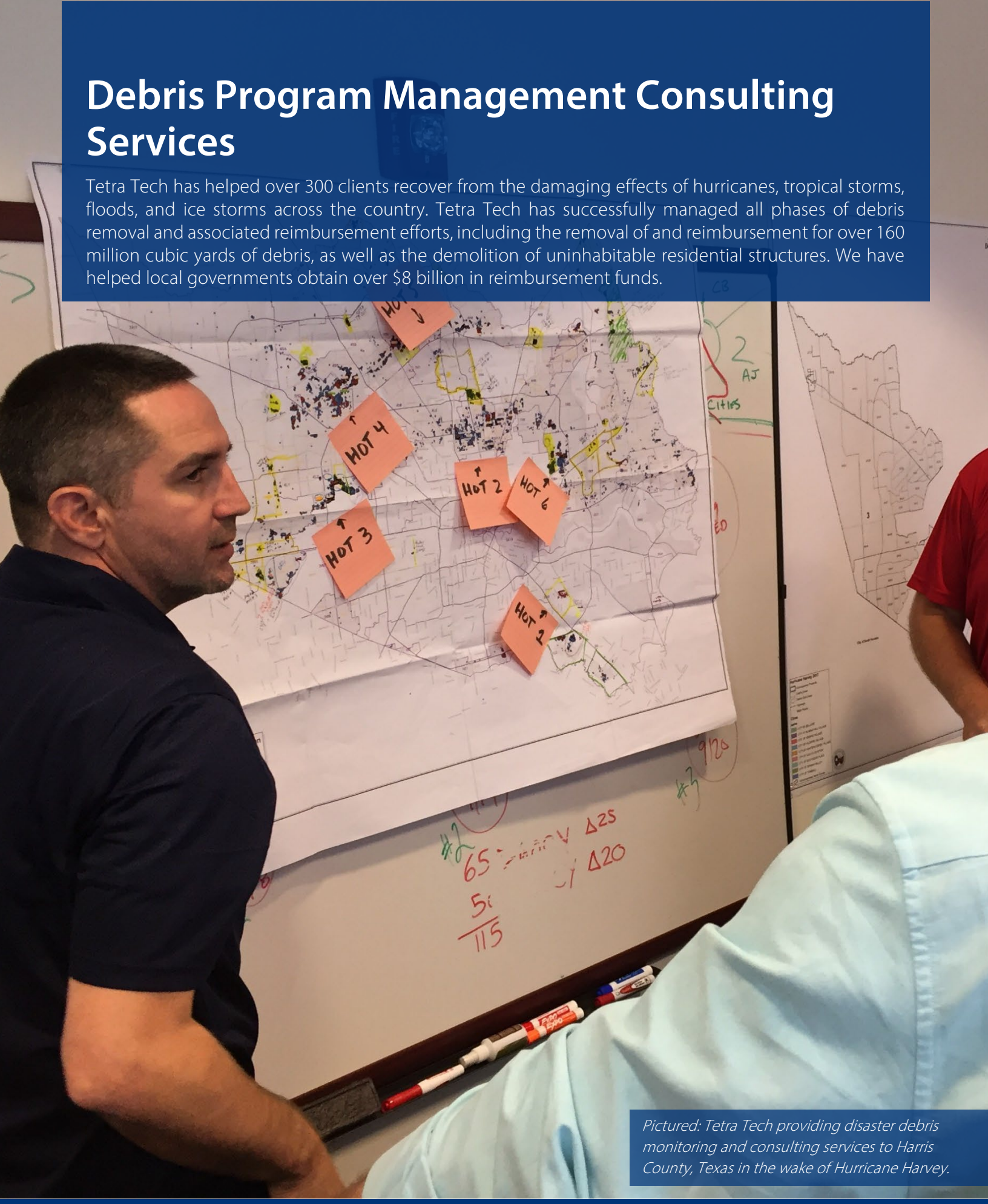
Service Offering	Description
Regional Catastrophic Planning	Tetra Tech provides regional catastrophic planning services designed to promote regional coordination and communications between multiple jurisdictions to help them prepare and respond to an incident effectively as a region, and to initiate recovery activities almost simultaneously, while maintaining transparency for the public and elected officials.
Mass Care/Surge Capacity Planning	Using a worst-case scenario, Tetra Tech provides mass care/surge capacity planning services to identify a client's strategy and current capabilities for mass evacuation and sheltering. The evacuation strategy is designed to take a phased approach, emphasizing special needs groups in hospitals and nursing homes and residents without access to transportation.
Metropolitan Medical Response System (MMRS) Planning	Tetra Tech provides MMRS planning for clients designed to support the local jurisdiction in enhancing and maintaining its all-hazards response capabilities to mass casualty incidents. MMRS planning is intended for use during the early hours critical to life-saving and population protection during terrorist acts using weapons of mass destruction; chemical, biological, nuclear, radiological, and/or explosive (CBRNE) weapons; large-scale HAZMAT incidents; epidemic disease outbreaks; and/or natural disasters.
Volunteer Management Planning	Working closely with a lead volunteer agency for this effort, Tetra Tech develops volunteer management plans for client to be used to document the volunteer programs, training strategies, and available resources already defined under the Community Emergency Response Team (CERT) through its Citizen Corps.
Family Assistance Center (FAC) and Reunification Planning	Tetra Tech provides FAC and reunification planning to support displaced families in locating and reuniting with their loved ones following a crisis. It also serves to prevent confusion and disorder by ensuring the delivery of a single, concise message to the community and the media.
Emergency Management Accreditation Program (EMAP) Accreditation Support	Tetra Tech provides EMAP accreditation support to clients interested in becoming accredited in the program. This involves assessing a jurisdiction's emergency management program against the 64 EMAP standards to identify potential gaps and deficiencies. This allows the jurisdiction to remedy gaps in preparation for an assessment by an EMAP accreditation team.
Strategic Planning	Tetra Tech provides emergency management organizations with strategic planning to set the course and direction of a jurisdiction or agency. It defines the vision, mission, and long-term goals, objectives, and milestones of the jurisdiction.
Disaster Debris Management Planning	Tetra Tech provides comprehensive disaster debris management planning services to organizations inclusive of developing the jurisdictional structure, guidance, and standardized procedures for the clearance, removal, and disposal of debris caused by a major debris-generating event in the most cost-effective and efficient manner.
Information Technology Disaster Recovery (ITDR) Planning	Tetra Tech provides ITDR planning involving a systematic inventory and prioritization of communications systems, including telephones, voicemail, facsimile, data lines, network access, Internet access, wireless communications and PDAs, and application software and hardware.
Crisis Communication/Public Information Planning	Tetra Tech provides crisis communication/public information planning to media relations groups or organizations, through the establishment of the joint information center, to develop templates for public information and to create a public information guide.

Service Offering	Description
HAZMAT Commodity Flow Studies and Local Emergency Planning Committee (LEPC)	Tetra Tech provides HAZMAT commodity flow studies and develops LEPCs, which involves a risk assessment of the types and amounts of hazardous materials being transported in and through a jurisdiction via highway and rail corridors and fixed facilities located within a jurisdiction.
Crisis Planning for Higher Education	Tetra Tech provides crisis planning for colleges and universities to assess risk, set priorities, and develop an actionable plan that can be readily executed in the event of an emergency in order to protect a school's students, faculty, facilities, and research, which form the backbone of the institution.
Training, Testing, and Exercise Planning	Tetra Tech assists clients with training, testing, and exercise planning for emergency management scenarios and topics. This involves a systematic approach to train, test, and exercise a jurisdiction's emergency management program and response capabilities in a non-threatening environment, and to identify the work that needs to be done to comply with FEMA, Homeland Security Exercise and Evaluation Program (HSEEP), and other regulatory guidelines.
Integrated Planning and Management System	Tetra Tech provides Integrated Planning and Management System (IPMS) for clients to include developing baseline, scheduling, risk management, cost estimating, funds and financial management, performance analysis and monthly reports, and what-if analyses.
Internet/Computer-Based Training (IBT/CBT)	Tetra Tech prepares stand-alone computer-based training for individual client's needs and Internet-based training to meet the needs of on-demand and geographically diverse training requirements.
Asset Management	Tetra Tech's asset management solutions help clients integrate planning, scheduling, and tracking of maintenance requirements, enterprise resource planning, supply chain management, inventory management, procurement, Radio Frequency Identification (RFID)/Unique Identification (UID) execution, reference management, and training management. Our customized solutions integrate external financial and resource management systems.
Operations Center Services	Tetra Tech provides emergency operations center support services for local, regional, and state organizations. These services include 24/7/365 support, C4I and situational awareness, custom emergency management system, and classified environments.
Shared/Integrated Digital Environments (SDEs/IDEs)	Tetra Tech develops a range of customizable SDEs/IDEs to provide portals to our project/program teams that are web-accessible and managed to provide authorized users access to all relevant materials/data in a user-friendly environment. In addition to being a knowledge base of programmatic information, these tools often provide configuration data, task order management, action tracking, user forums, deliverable tracking, financial management, asset information, etc., in support of the program requirements.
Occupational Health and Safety (OHS) Planning	Tetra Tech's OHS planning services include conducting worker risk assessments, identifying appropriate methods for worker protection, developing written health and safety programs, conducting training needs assessments, and developing instructor-led and computer-based training programs.
Ebola and Other Special Emerging Pathogens (SEPATH) Planning	Tetra Tech's Ebola and SEPATH planning services include community partners across the healthcare continuum to work together to develop strategies for managing and caring for individuals who are known or suspected to be infected with a SEPATH. This includes planning for isolation and quarantine,

Service Offering	Description
	transportation of persons under investigation (PUIs), worker protection, infectious waste management, and decedent handling.
Mass Fatality Planning	Our team's mass fatality planning services involve working with coroners, emergency medical services, funeral directors, public health departments and other partners to assess a jurisdiction's ability to handle mass casualty incidents and developing strategies for strengthening this capability.
Responder and Disaster Worker Health and Safety	To help ensure the safety of first responders and disaster workers, Tetra Tech provides worker risk assessments, activity hazard analysis, and just-in-time health and safety training, including Hazardous Waste Operations and Emergency Response (HAZWOPER) training. Tetra Tech provides field operations safety monitoring, air monitoring and sampling support, and fit testing. We can also serve as site safety officers and provide safety staff support services.
Community Rating System (CRS) Assessment	Tetra Tech assists clients with conducting baseline assessments for communities interested in obtaining or improving their CRS rating. A programmatic baseline assessment looks at a community's floodplain management program prior to a Community Assistance Visit (CAV) to identify issues that may render a community out of compliance under the National Flood Insurance Program (NFIP).
CRS Application	Tetra Tech assists clients with compiling the appropriate documentation for submitting an application to the CRS program. This may include interface with FEMA's Insurance Services Office (ISO) and meeting with NFIP or FEMA during CAVs.
Repetitive Loss Area Analysis	Tetra Tech assists clients with developing a Repetitive Loss Area Analysis (RLAA) as a systematic approach to analyzing the causes of repetitive flooding, structures impacted, and possible mitigation solutions by using the FEMA-identified RL properties as geographic locator for the issue.

Debris Program Management Consulting Services

Tetra Tech has helped over 300 clients recover from the damaging effects of hurricanes, tropical storms, floods, and ice storms across the country. Tetra Tech has successfully managed all phases of debris removal and associated reimbursement efforts, including the removal of and reimbursement for over 160 million cubic yards of debris, as well as the demolition of uninhabitable residential structures. We have helped local governments obtain over $8 billion in reimbursement funds.



Pictured: Tetra Tech providing disaster debris monitoring and consulting services to Harris County, Texas in the wake of Hurricane Harvey.

Debris Program Management Consulting Services

Service Offering	Description
Comprehensive Program Management	Tetra Tech's comprehensive program management involves providing the resources, personnel, and experience to manage all aspects of a disaster recovery project, including post-event reconstruction and demolition field services.
Disaster Debris Removal Procurement and Negotiations	Our services include assisting clients with disaster debris removal procurement and negotiations involves helping communities to develop the procurement process and contract documents to retain debris and construction contractors, and to negotiate terms and conditions to put enforceable agreements in place.
Collection Monitoring	Tetra Tech provides clients with staff to conduct collection monitoring involving the oversight of the debris collection process, including truck certification, route development, ticket preparation and documentation for FEMA-reimbursable loads. This service has the option of utilizing our Automated Debris Management System (ADMS) RecoveryTrac™.
Disposal Monitoring	Tetra Tech provides disposal monitoring involving the oversight of debris disposal operations, including providing the volumetric measurement of incoming loads, authorizing tickets, and completing the documentation required for FEMA-reimbursable loads. This service has the option of utilizing our ADMS RecoveryTrac™.
Hazardous Waste Collection, Disposal, and Monitoring	Tetra Tech provides hazardous waste collection, disposal, and monitoring, which involves designing hazardous waste removal programs that efficiently address specific emergencies, including animal carcass removal, asbestos-laden building material removal, Freon unit removal, and paint and chemical segregation and removal. This service has the option of utilizing our ADMS RecoveryTrac™.
Leaner/Hanger/Stump Removal Monitoring	Tetra Tech provides leaner/hanger/stump removal monitoring involving surveying, documenting, and monitoring the removal of leaning trees, hanging limbs, and stumps. This service has the option of utilizing our ADMS RecoveryTrac™.
Debris Management Site (DMS) Environmental Support	After disasters, Tetra Tech's team provides DMS environmental support to clients for obtaining documentation and assisting in the performance of all required testing by federal, state, and local agencies to support the establishment of DMS locations.
Beach Remediation/Restoration	Tetra Tech provides beach remediation/restoration monitoring services for work associated with sand screening, sand recovery, beach reconstruction, and dredging operations to restore natural beaches.
Private Property Debris Removal (PPDR) Program Administration	Tetra Tech's PPDR program administration services for clients involves reviewing ordinances and laws to ensure that the proper steps are taken and documented in removing debris from private property. This includes eligibility reviews, property surveys, monitoring, and providing public information.
Waterway Debris Removal Monitoring	Tetra Tech provides waterway debris removal monitoring and documentation for debris removed from navigable and other inland waterways.
Field Data Collection/ Management/Billing/Invoicing	Tetra Tech can augment our client staff tasked with data collection and management as well as billing and invoicing. This service includes developing and maintaining databases to document all field operations to ensure proper contractor payment, maximum reimbursement, and proper purchase order management.

Service Offering	Description
Data Management	Tetra Tech's web-enabled data management systems provide cradle-to-grave life cycle data management for a program or specific disaster. Designed to meet all industry standards for relational databases, our systems enable users to easily find the right data in real time for our clients.
Customer Information/Citizen Hotline/Community Relations	Tetra Tech provides customer information/citizen hotline/community relations for clients after a disaster. This includes advising the public about important information regarding procedures associated with debris collection and removal and providing updates about the operational progress being made to restore the community.
Emergency Responder Website Services	Our local information technology (IT) services within Tetra Tech supports our client's full IT life cycle and content management needs. This includes content on many FEMA emergency responder websites, such as the Responder Knowledge Base (RKB), System Assessment and Validation for Emergency Responders (SAVER), and the Lessons Learned Information Sharing (LLIS).
Data Collection	Tetra Tech has a proven track record in data acquisition from systems and sensors and the ability to present this data in a well-defined manner through a host of application types and architectures. Once the data is acquired and housed in a relational database, Tetra Tech provides the analysis and trending capabilities that often accompany the federal grant requirements for our clients.

Grant Administration and Disaster Recovery Management Services

Tetra Tech's team of grant administration and disaster recovery management services was established to provide grant funding consultation before and after a disaster. With a keen understanding of Office of Management and Budget (OMB) regulations, this team seeks to establish accounting systems and internal controls for its clients to minimize the instance of fraud, waste, abuse, and mismanagement of grant funds. We offer a staff of experts, with advanced degrees in business, administration, economics, and finance, as well as hands-on experience in the field. Funding sources include the FEMA Public Assistance (PA) Program, Individual Assistance (IA) Program, Hazard Mitigation Grant Program (HMGP, U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Program (CDBG), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS); and many others. We guide our clients through the complexities of program procedures and requirements, which often are not consistently interpreted by local, state, and federal government agencies.

Pictured: The Tetra Tech team completing a damage assessment at the City of Houston City Hall building.

Grant Administration and Management Services

Service Offering	Description
FEMA Reimbursement Technical Assistance Consulting	Tetra Tech's FEMA reimbursement technical assistance consulting services involve providing guidance and technical assistance for project applications and programs for disaster reimbursement related to response and recovery efforts on behalf of our clients.
FEMA Compliance Monitoring and Audit Oversight	Tetra Tech's grant administrators document eligible work in the field and organize such documentation in an audit-ready format for future review. This includes OMB, FEMA and HUD guidance requiring that grantees or subgrantees monitor the expenditure of funds and document such expenditures in a manner that will satisfy regulatory audits in the future. This includes Section 3, Fair Housing, 2 CFR 200, and other Federal grant requirements.
IA Services	Tetra Tech assists clients with application intake, case management, grant administration, staffing at Disaster Recovery Centers, expenditure monitoring, and other programmatic needs associated with the IA declaration.
PA Services	Tetra Tech's team of PA consultants assists our clients with documenting and accounting for such costs on project worksheets. This includes providing technical assistance on FEMA's rules, practices, and procedures covering reimbursement for temporary and permanent work in eligible FEMA categories.
Grant Application Development and Administration (CDBG, HMGP, FHWA, NRCS, FTA, FEMA PA, and FEMA IA)	Tetra Tech provides grant application development and administration involves providing grant program specialists to assist with the time-consuming process of gathering data and information required to develop grant applications to various agencies and programs.
HUD CDGB-DR Services	Tetra Tech provides knowledge, experience, and technical competence in the planning, administration, and implementation of eligible CDBG activities as identified at 24 CFR 570 and modified or waived under the Federal Register allocation of the CDBG-DR funds.
Unmet Needs Assessment	Tetra Tech assists clients with developing unmet needs assessments that identify type and location of the community's disaster recovery needs especially in the three core aspects of recovery: housing, infrastructure, and economic recovery.
Policies and Procedures Manual Development	Tetra Tech assists client's Project Management and Operations including the ability to develop policies and procedures for implementing all CDBG-DR funded programs and activities, including contractor, subcontractor, and sub-recipient oversight and monitoring.
Damage Assessment	Tetra Tech assists clients with damage assessment activities involving deploying a team of experienced staff to document damage sustained during a disaster in a format that is acceptable for requesting FEMA PA funds.
Substantial Damage Estimation	Our teams of estimators perform residential substantial damage estimation on behalf of our clients after floods. These services include GIS-based evaluation and visual inspections of impacted properties using FEMA's SDE 2.0 software.
Eligibility Consultation	Tetra Tech provides eligibility consultation involves providing grant recipients with an understanding of funding options and preferences for repairs as they relate to various grant program eligibility considerations.
Environmental Review Records (ERRs)	Tetra Tech provides ERR services as they relate to projects proposed for funding under the CDBG-DR program funding.

Service Offering	Description
Project Ranking	Tetra Tech assists clients with ranking potential projects for future consideration through federal grants. This includes providing grant recipient constituents with a prioritized plan of action for reconstruction and mitigation projects to achieve recovery objectives.
Financial Advisory	Tetra Tech provides financial advisory services involving the development of program budgets to provide transparency to grant recipients relating to the local cost share, the financial burden, and obligations for program participation.
Cash Flow Management	Tetra Tech provides financial departments within an organization with cash flow management associated with the disbursement of federal grants. This includes developing program budgets to allow grant recipients to meet current obligations with minimum reliance upon bridge financing.
Procurement Assistance	Tetra Tech provides procurement assistance to our client's including providing procurement experts to provide disaster contracting guidance to review scopes, adherence to grant funding requirements and 2 CFR 200, and satisfactory project completion.
Benefit Cost Analysis	Tetra Tech develops benefit cost analysis involving a formalized schedule of anticipated project costs to projected future benefits to establish a quantifiable means for understanding project value.
Feasibility and Effectiveness Studies	Tetra Tech provides feasibility and effectiveness studies involving the documentation of projects being considered are financially sound, reasonable to implement, and effective at mitigating future damage. This includes alternate projects, improved projects, or 406 mitigation proposals to include hydrological and hydraulic (H&H) feasibility studies, cost estimating and conceptual project designs. This may include engineering and architectural services.
Floodplain Feasibility Modeling	Tetra Tech can provide clients with modeling of natural or manmade above ground waterways is used to determine where to place critical facilities including roads, bridges, and emergency operations centers. Readily applicable models such as HEC-RAS (FEMA standard flood modeling) provide quick answers to what if scenarios. This may include basic modeling using spreadsheets or software program or more in-depth modeling utilizing GIS tools. This may also include assistance with FEMA's Letter of Map Amendment (LOMA) and Letter of Map Revisions (LOMAR).
Floodplain Management Support	Tetra Tech can support Floodplain Management offices that are overwhelmed after disasters. These services include staff support, substantial damage estimation appeals support, Community Assistance Visit (CAV) audits, and case management for impacted individuals.
Advanced Feasibility Modeling	Tetra Tech can provide clients with advanced modeling is typically used to answer challenging questions that involve complex flooding, erosion, scour and debris. 2-D and 3-D hydrodynamic and water quality models for rivers, streams, lakes, and estuaries help to determine permitting approaches that meet project time frames and guide the project path around pitfalls.
Site Survey and Legal Description Review	Tetra Tech provides site survey and legal description review to clients by providing grant recipients with assurances that private property access is carried out legally without exposing it to unnecessary liability.
Owners Representative Services	For projects in the construction phase, Tetra Tech provides Owner's Representative advising services to our clients. These tasks may include projects interface with federal and state officials, PW versioning, and providing

Service Offering	Description
	oversight to the construction firm. This may include engineering and architectural services.
Appraisal and Valuation Services	Our team can assist clients with appraisal and valuation services utilizing industry best practices to develop property appraisal and valuation documentation for acquisition programs.
Title Due Diligence	Tetra Tech's title due diligence services for our clients involves ensuring that only the legal property owner is consulted for program acquisition program participation.
Public Outreach Program	Tetra Tech provides public outreach programs that provides citizens with an outlet to ask questions, state concerns, and apply for program participation without burdening grant recipient staff and facilities.
Public Meeting Facilitation	Tetra Tech provides public meeting facilitation services including documenting meeting notices, fostering public participation, facilitating discussions with stakeholders in order to obtain relevant information/data and obtain consensus on priorities and projects, and communicating the message of our clients.
Homeowner Consultation	Tetra Tech's homeowner consultation involves providing a high level of service to citizens without burdening grant recipient staff with after-hours and weekend meetings for programs involving acquisition/demolition, relocation, elevations or small repairs after disasters.
Relocation Assistance	Tetra Tech provides relocation assistance associated with acquisition or relocation programs. This includes engaging participants by providing relocation assistance conforming to Uniform Relocation Act (URA) rules and regulations.
Property Management	Tetra Tech provides property management services to clients who are grant recipients following disasters. This service includes program management to ensure that properties do not degrade to cause blight during the interim purpose phase.
Negotiations	Tetra Tech provides negotiation services in systematic, third-party approach for reaching amicable terms between citizens and the grant recipient.
Closing	Tetra Tech provides closing involving dedicating consultant resources to ensure a timely and efficient closing process during a buyout program.
Data & Documentation Management	Tetra Tech provides data and documentation management by storing grant-related data in a manner that provides efficient recall and review during closeout and auditing.
Hazard Mitigation Proposals	Tetra Tech develops of 406 Hazard Mitigation proposal associated with a written Project Worksheet after disasters to those entities participating in the FEMA PA program.
Contractor Invoice Reconciliation	Tetra Tech assists clients' with contractor invoice reconciliation involves ensuring accurate payment to contractors and assigning incurred costs to funding sources to minimize local cost share.
Regulatory Compliance Monitoring	Tetra Tech provides regulatory compliance monitoring by documenting proper regulatory compliance to ensure maximum reimbursement and to avoid fines and site shutdowns, which slow the recovery process.
Project Scoping	Tetra Tech's grant reimbursement team can create scoping documents that involve developing scopes of work for grant funding projects, using key terminology, and highlighting awareness of historical precedence, which maximizes grant funding opportunity.

Service Offering	Description
Insurance Adjusting/Subrogation	Tetra Tech provides insurance adjusting/subrogation to clients to proactively resolve insurance issues prior to a grant de-obligation.
Eligibility Appeals	Tetra Tech assists clients with eligibility appeals involve assisting clients with developing strategies and documentation to overturn a de-obligation ruling during first or second appeals.
Grant Closeout	Tetra Tech assists client's years after a disaster by providing closeout services to a grant recipient. This includes developing a closeout package that is organized to satisfy grant closeout and auditing.
HUD Action Plan Development	Tetra Tech assists clients with the development and submission of HUD required Action Plan for Disaster Recovery grant. These tasks may include the development of Action Plan amendments or waivers that may be required.
Unmet Needs Analysis	Tetra Tech develops unmet funding needs analysis to document the need for CDBG-DR funding and to form the basis of program design for the use of CDBG-DR funds.
Emergency Operations Center Staff Augmentation	Tetra Tech can support our client's needs upon activation of a EOC by providing staff trained in incident management system (ICS) as section chiefs or operational staff.

Long-Term Recovery Planning and Economic Development

As part of or in addition to CDBG-DR funded recovery, communities, businesses, counties, states, and regions may engage in long-term recovery planning and economic development to rebuild but also to foster growth from the "new norm" following an economic downturn. Tetra Tech planners, economic development professionals, financial and budget analysts, and funding strategists can conduct this planning and implementation. These staff also assist communities in the long-term planning for their economic growth through the planning and prioritization process.

Pictured: Unmanned aircraft system (UAS, or "drone") footage in Houston captured by Tetra Tech as part of a strategy to mitigate repetitive loss structures.

Long-Term Recovery Planning and Economic Development

Service Offering	Description
Long-Term Recovery Planning	Tetra Tech prepares a long-term recovery plan that strategically defines the magnitude of the disaster, identifies both recovery and resiliency projects, involves the public, creates a process for prioritizing the projects, and defines an implementation strategy for projects. This multi-year strategic plan will be used by the community to attract financial assistance to implement their recovery efforts and will be focused on the recovery from an existing disaster. Tetra Tech also prepares pre-disaster recovery plans. These plans involve the pre-planning for a community, county, or state. These plans identify and put into place the necessary steps that should be taken during the transition from disaster response to disaster recovery. These plans focus on internal steps and policies with the public sector entity as well as engagement with external stakeholders such as NGOs, chambers of commerce, businesses, and other key stakeholders.
Economic Development	Tetra Tech assists clients with all aspects of economic development including the planning at the municipal or regional level to focusing on one or more specific sites. The broader municipal/regional plans would focus on obtaining both qualitative and quantitate data and information from the public, key stakeholders and reputable data sources. The data sources will include data related to the economy in order to perform a market analysis and economic analysis. All of this data and information will allow our team to work with the client to define goals and objectives, identify and prioritize projects, and define the necessary implementation steps for success. In regard to one or more sites, our team can assist with developing a concept for the development of the site(s) for its highest and best uses and then define the necessary steps for successfully implementing the plan.
General Planning	Projects offered to Tetra Tech under this arena include: • Comprehensive Planning/Master Plans – Tetra Tech assists communities with the preparation of communitywide or neighborhood-wide plans that are all-encompassing and integrate all components of a community. This may include economic development, housing, natural and cultural resources, infrastructure, hazard mitigation, and community facilities. • Sustainable/Resilience Community Plans – Tetra Tech assists communities with the preparation of plans to integrate resilience into a community in order to wither prevent or lessen the damages and loss of life from a disaster. • Urban Reinvestment and Redevelopment – Tetra Tech assists with developing plans focused on the redevelopment of a property or a series of properties with the result of strengthening the community's economy. • Sustainable Development Tools – Tetra Tech focuses on creating different types of tools (policy, ordinances, and/or regulations) that will make a community more resilient • CDBG Consolidated Plans – Tetra Tech assists entities that received CDBG funds with the preparation of their required Consolidated Plans. • U.S. HUD Fair Housing Analysis - Tetra Tech assists entities with the preparation of the analysis of fair housing and the preparation of the required plan.

Vulnerability/Hazard Identification/ Risk Assessment Services

Tetra Tech has a multidisciplinary team of toxicologists, chemists, ecologists, biologists, geologists, modelers, data managers, and environmental scientists that provide environmental risk expertise to the public and private sectors. Many of our scientists have graduate-level degrees and contribute to the scientific community by publishing in peer-reviewed journals and participating in presentations at national conferences of technical and professional organizations.

Pictured: Tetra Tech field inspectors review construction plans for the Lackland Corridor Gateway Project in San Antonio, Texas.

Vulnerability/Hazard Identification/Risk Assessment Services

Service Offering	Description
Hazardous Identification and Incident Response	Tetra Tech provides turnkey planning, design, construction interface, and training for infrastructure security enhancement projects. Initiating the security solution is an objective VAs against industry and government standards, incorporating threat assessment, facility prioritization, consequence determination, systems effectiveness, risk reduction and mitigation, and limitations.
Ecological Risk Assessments	Tetra Tech provides risk assessment staff to conduct retrospective and predictive ecological risk assessments (ERAs) for commercial clients in aquatic and terrestrial environments. These ERAs span the range of desktop screening-level evaluations versus baseline ERAs that incorporate site-specific biological data.
Comprehensive Environmental Response, Compensation & Liability Act of 1980 (CERCLA) and Resource Conservation and Recovery Act (RCRA) Evaluations	In addition, Tetra Tech provides CERCLA risk assessments and RCRA Tier 2 and 3 risk-based evaluations to support contaminant characterization and cleanup efforts. This includes conducted risk assessments to evaluate chemical and radiological exposures to humans and to various aquatic and terrestrial species of fauna and flora. Tasks would include statistical analysis, development of conceptual site models, risk calculations, modeling, and derivation of site-specific cleanup objectives for soil, groundwater, air, surface water, and sediment.
Vulnerability Assessments (VAs)	Tetra Tech has completed municipal water system VAs that utilize a pair-wise comparison approach to identify critical facilities and critical assets needed to maintain safe drinking water supplies. Tetra Tech also has implemented security enhancements that reduce the likelihood that a water system could be severely compromised as a result of a malevolent act. The terrorist response scenarios developed during VAs can be incorporated into the emergency contingency plan for incident response using a "rip and run" philosophy for easy use.

Environmental Services

Tetra Tech is passionate about mitigating global climate change. Customers seek our deep domain expertise in subjects as diverse as environmental, solid waste, water resources and atmospheric sciences, policy analysis, IT, and energy-efficient design-build services.

Pictured: Tetra Tech environmental specialists complete wetland delineations in Huntsville, Alabama.

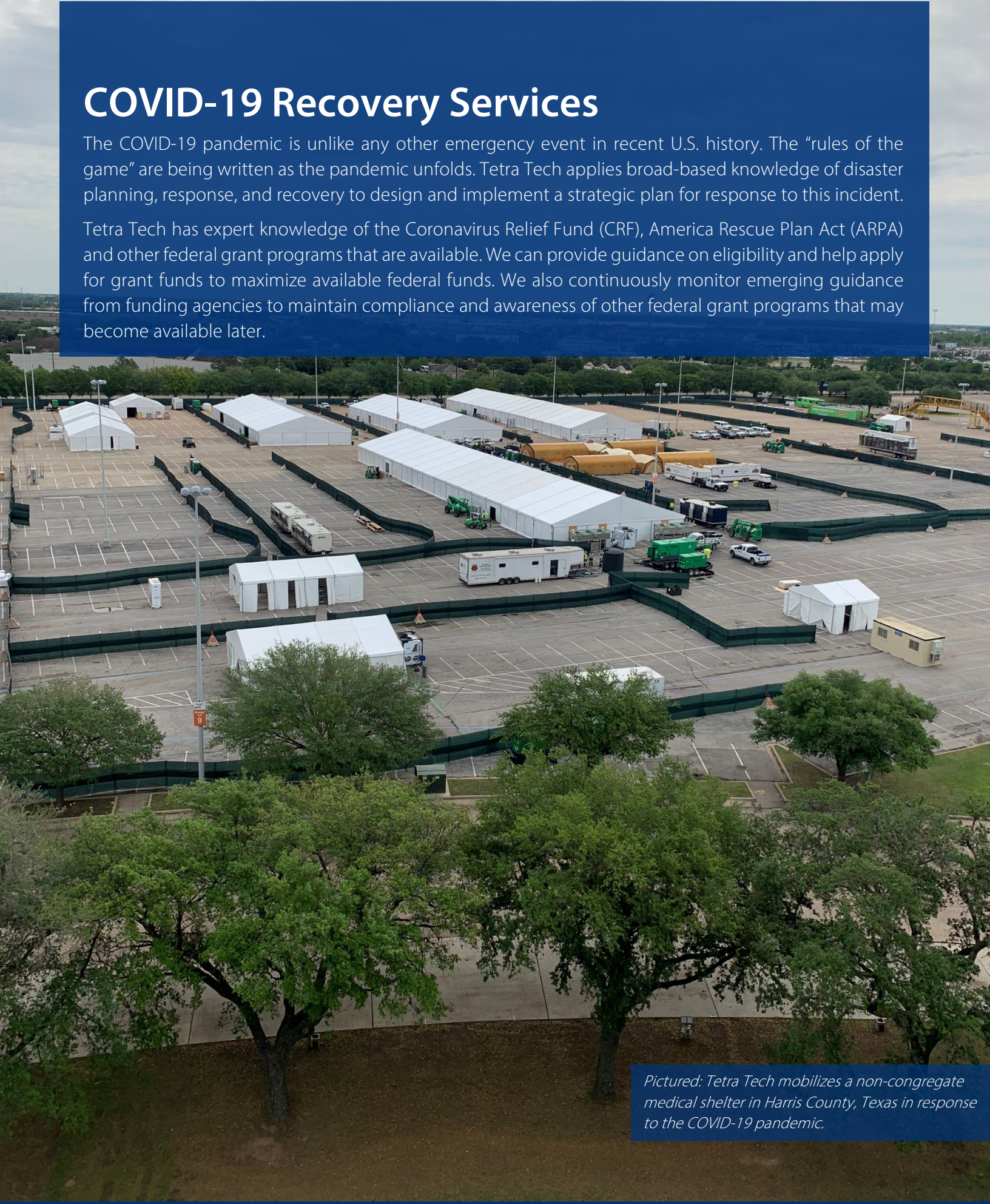
Environmental Services

Service Offering	Description
HUD/FEMA Environmental Reviews	Tetra Tech supports our clients of the wide range of disaster recovery, hazard mitigation, and other types of projects funded by HUD and FEMA, Tetra Tech provides comprehensive environmental and historic preservation review support. In addition to preparation of documents under the National Environmental Policy Act (NEPA), we assist in compliance with related laws, regulations, and Executive Orders.
Decontamination	Tetra Tech's also provides field services for clients facing decontamination projects throughout the nation. Tasks under this category include: Technical oversight, characterization and disposal of radioactive residues, radiation safety program management, documentation of site conditions, Radiological surveys, and internal dose assessment calculations to document the risk and dose to personnel from the contamination
Climate Change Adaptation	Tetra Tech provides climate change adaptation study services to reduce risk and vulnerabilities for our clients. This includes: • Development of climate action plans and sustainability strategies • General reporting and verification • Comprehensive climate change response • Technical guidelines on transportation emissions, industrial process emissions, and indirect emissions
Restoration and Remediation	Tetra Tech assists clients with a variety of restoration and remediation professional services prior to or after disasters, including: • Environmental site investigations • Risk assessment • Fate and transport modeling • Performance-based remediation • Radiological decontamination and decommissioning • Ecosystem restoration • Geographic information systems (GIS) • Site restoration and remediation • Due diligence assessments • Remedial system design/construction • Remedial process optimization • Construction management • Environmental compliance • Chemical/fuels and waste management • Regulatory support/expert witness services • Liability transfer model • Third-party review – remedial strategies • Geophysical services

COVID-19 Recovery Services

The COVID-19 pandemic is unlike any other emergency event in recent U.S. history. The "rules of the game" are being written as the pandemic unfolds. Tetra Tech applies broad-based knowledge of disaster planning, response, and recovery to design and implement a strategic plan for response to this incident.

Tetra Tech has expert knowledge of the Coronavirus Relief Fund (CRF), America Rescue Plan Act (ARPA) and other federal grant programs that are available. We can provide guidance on eligibility and help apply for grant funds to maximize available federal funds. We also continuously monitor emerging guidance from funding agencies to maintain compliance and awareness of other federal grant programs that may become available later.



Pictured: Tetra Tech mobilizes a non-congregate medical shelter in Harris County, Texas in response to the COVID-19 pandemic.

COVID-19 Recovery Services

Service Offering	Description
Coronavirus Relief Fund (CRF)/Emergency Rental Assistance Program (ERAP) Program Design	Tetra Tech works closely with clients to design and deliver CRF and ERAP programs that meet the federal requirements with proven processes and procedures for similar federal grant programs. Following the assessment of client needs, Tetra Tech works with client stakeholders to establish an Implementation Plan along with standard operating procedures (SOPs) for critical program elements, including application criteria, eligibility review standards, financial procedures, and compliance. These documents are published, shared, and made available via online collaboration spaces to ensure that all team members are aligned throughout project execution. As the program evolves and new program requirements and guidance are released, Tetra Tech modifies programmatic SOPs and other procedures to mitigate risk of noncompliance. Our team coordinates with client stakeholders to adequately track and monitor financial recording, disbursement, and reporting procedures.
American Rescue Plan Act (ARPA)	The American Rescue Plan Act (ARPA) is transformative legislation for state and local governments. The economic stimulus bill provides over $1.9 trillion in recovery funding across a variety of programs. ARPA represents once-in-a-generation funding, intended to deliver immediate and direct relief to families impacted by the COVID-19 Pandemic, address a multitude of socio-economic issues, and finance infrastructure and housing improvements across the United States. Tetra Tech can support clients with program design, compliance monitoring, technical assistance, program management and administration, engineering support and other related services.
Grant Administration for FEMA PA/CRF/CDBG-CV/ARPA	Tetra Tech employs a time-tested, four-step **CASE Management Approach** to federal programs. We treat every project as an individual "case", adopting the cross-cutting case management techniques we use across all of our projects. Whether it is for emergency protective measures, a CRF approved Town project, small business loans, or homeowner or renter assistance, each project is assigned, measured, and tracked within the construct of the overall program. We would anticipate that regardless of whether it is a project being brought forward by the Town or a subrecipient– the grant administration process would largely be the same. 1. **Project Eligibility Review –** Proposed projects would be reviewed for CRF and/or FEMA PA eligibility. Projects would be approved by an appropriate authority or committee based on their compliance with the Action Plan and corresponding eligibility input from the Tetra Tech team. Subrecipients (City or NGO) will be notified of whether their project has been approved as a CRF project or whether it should be submitted as a FEMA Public Assistance project. 2. **Requesting Additional Information and Training –** Applicants would be provided guidance on documentation requirements for approved projects. Tetra Tech will provide training and tools to Departments and subrecipients on appropriate documentation steps. 3. **RFR Processing –** Costs associated with departmental projects would be charged against appropriate purchase/task orders. Subrecipients will submit Request for Reimbursement (RFRs) to the client for reimbursement on approved projects. The Tetra Tech team will evaluate the documentation for compliance and issue a payment recommendation. 4. **Documentation for Federal Audit –** Whether its FEMA PA cost for a Town Department or a CRF expenditure for a subrecipient – a complete case file (along with appropriate federal forms, U.S. Treasury Interim Reports, FEMA PWs, etc.) would be assembled and prepared for submission. We would submit the project through the appropriate process.

Service Offering	Description
Federal Reporting (GrantsSolutions)	Tetra Tech understands that data and information are critical to response and recovery efforts associated with the COVID-19 pandemic, and has experience creating real-time electronic reporting systems, periodic reports, and final reports, in conjunction with our suite of technology tools. FEMA and Treasury each require highly granular data to support grant application and reimbursement. To support that requirement, the Tetra Tech team has implemented an integrated and comprehensive data collection, management, and reporting system by expanding and linking existing tools to a broader and more robust platform to harness the power of data throughout the project life cycle with the use of its RecoveryTrac™ system. The result is a networked and highly functional framework for collecting, managing, and using the flood of incoming data to visualize the progress of damage inventory collection and recovery in real time using dashboards. One example of a customizable dashboard includes Drill-down features allowing the review of detailed cost estimates for repairs to existing buildings and facilities. Another example is the download and analyzation data for the development of mitigation strategies that will reduce the risk of future loss, as well as scopes of work to use in completing repairs.
Cost Reconciliation	Tetra Tech has built a major business around understanding federal grant programs and appropriations and then building standard operating procedures, staffing, and software tools around those programs to achieve success for our clients. We are uniquely familiar with the procurement and documentation requirements that these federal programs require. Tetra Tech has standard SOPs, trained staff, and custom software applications that have been refined to capture, track, and report on expenditures in accordance with state and federal guidelines. Our staff understands the timelines that they are required to provide documentation, and conversely, the timelines that state and federal agencies are required to respond as well. We have already assisted several clients, including the City of Philadelphia, in completing interim reports as required by U.S. Treasury. Tetra Tech can assist in the collection and review of documentation, including: • The review and analysis of collected documentation to ensure that costs are reasonable and eligible • The review and analysis of collected documentation to ensure that the work and costs are adequately documented, are included in the approved scope of work, and are deemed eligible • The review and analysis of invoices and receipts by checking the dates and amounts to ensure the dates fall within the disaster event range and are reasonable for the purchase • The review and analysis of contract labor timesheets by checking dates and hours worked per employee to ensure the dates fall within the disaster event range and are recorded as direct labor against the disaster work • The review and analysis of force account labor timesheets, including special issues like exempt employees, benefits/policies in place, and 40-hour threshold issue; reconciliation of force account labor, equipment, and material data
Subrecipient Management	• Subrecipient management is a critical function when acting in a recipient role. This process will require a substantial infrastructure in and of itself. From training to project submission request forms to request for reimbursement, managing subrecipient projects and funding will be highly challenging. • Our extensive *RecoveryTrac™* case management technology can program manage large subrecipient allocations and to track and organize documents and expenditures. Our systems have proven effective in organizing such large efforts as well as eliminating or reducing waste, fraud, and abuse.

Service Offering	Description

	• Our capabilities include developing and implementing a fiscal management system sufficient to:
	  • Provide effective control over and accountability for all funds, property, and other assets.
	  • Identify the source and application of funds for Federally sponsored activities, including verification of the reasonableness and eligibility of costs and verification that the funds have not been used in violation of any of the restrictions or prohibitions that apply to this federal assistance.
	  • Permit the accurate, complete, and timely disclosure of financial results in accordance with the reporting requirements of all agencies.
	  • Minimize the time elapsing between the transfer of funds from the U.S. Treasury and disbursement to the subrecipient.

PNP/NGO Coordination	• NGOs typically have a vital mission in emergency response and disaster recovery. The Tetra Tech team routinely works with NGOs on these broad missions. Specific activities may include food banks, PPE distribution, rental payment assistance, and other mission-critical tasks. We can assist with the following activities associated with NGOs:
	  • Develop a roster of potential NGOs along with their core missions
	  • Conduct due diligence on the capabilities of the NGO to deliver on proposed mission
	  • Conduct routine inspections and follow-up on how well the NGOs are delivering on their selected mission
	  • Verify quantities and process payments

Compliance Monitoring	• Given their role to protect public health and safety, local governments generally spend large amounts in short order in responding to emergency events – often with less than a full understanding of available guidance. As such, it is critical to have strong partners that are advising them on issues that can put the client at risk of funding clawbacks or non-reimbursement. Tetra Tech staff and our subcontractors are well versed in the latest Q&A guidance from U.S. Treasury, FEMA, and other federal and state organizations involved in the COVID-19 response. • Upon activation, we can work with the Town at both the senior leadership level to provide advice on strategic issues as well as at the departmental level to implement controls and standard operating procedures to ensure compliance, including review of cost tracking; internal controls; and fraud, waste, and abuse.
Training	• **Disinfection Training:** Tetra Tech can support management of disinfection operations at critical governmental facilities, including public buildings, law enforcement vehicles, mass transit facilities, and mass transit vehicles (e.g., buses, rail cars). • **PPE Donning and Doffing:** Tetra Tech is prepared to assist with program management, scheduling, tracking, development materials and conducting training for employees on the donning and doffing of PPE and correct use of PAPR/N-95 respirator face masks (including fit testing). • **Mass Care and Shelter Planning:** The COVID-19 pandemic has resulted in many challenges for housing healthcare workers, long-term care residents, and even potentially hurricane evacuation victims. Our emergency management, logistics, and housing teams are skilled at finding solutions to complex situations and can assist with planning support for future COVID-19 activities, After Action Reports and staffing Planning Section Chiefs.
Technology	• **Case Management System:** Tetra Tech has the most extensive case

Service Offering	Description
	management system in the industry. Our RecoveryTrac™ Information Technology System provides cloud-based data management and analytics for intake management, processing, and disbursement solutions. RecoveryTrac™ can rapidly deploy grant funds for individual and businesses and provide real-time case management tracking and reporting, commodity tracing, and any other identified data need. • **Artificial Intelligence and Advanced Data Analytics:** Tetra Tech data scientists and artificial intelligence (AI) practitioners harness client data to provide efficient and effective solutions to business challenges related to COVID-19. We employ the latest advancements in data science, robotic process automation (RPA), AI, advanced analytics, machine learning, image recognition and classification, and predictive modeling.
Staff Augmentation	• **Emergency Operations Center Support:** The EOC plays a vital role in providing command and control during States of Emergency, such as the COVID-19 pandemic. However, the extended duration of the emergency can place a strain on EOC personnel. Tetra Tech experienced emergency managers are available to support the Town as section chiefs, administrators, or other critical support functions. • **Strike Team/Social Distancing Ambassadors:** Certain local governments have deployed social distance ambassadors into their communities in order to encourage residents and business owners to comply with social distancing and face mask orders. Tetra Tech is available to train and deploy social distance ambassadors if that program were deemed useful. • **Critical Functions:** Local governments provide critical functions – many of which are critical to public health – on a daily basis. From transportation systems to water and wastewater plants – these critical local government functions must operate. To the extent that the Town has staff vacancies associated with the COVID-19 pandemic, Tetra Tech may be available to support critical functions.
Public Health	• **Testing Centers:** Tetra Tech has capabilities to assist with infrastructure and staffing of testing centers. We could also provide staff augmentation to provide relief to existing staff. • **Call Centers**: Emergency events place tremendous stress on public information centers. Tetra Tech routinely provides call center operations to our clients following natural disaster events. We can deploy a remote call center with trained staff if needed. We are currently operating an ERAP call center in Maitland, Florida. • **Contact Tracing:** Contact tracing is critical to stopping the spread of COVID-19. Tetra Tech can hire and train contact tracing staff to assist with this critical function. • **Disinfection and Public Education**: The Tetra Tech can provide disinfection services for facilities and/or provide staff augmentation to regulatory agencies responsible for public health and safety functions. We are also available to provide public education to support disinfection, social distancing, and other public health measures. • **Environmental Testing/Surveillance Programs**: Tetra Tech has the largest environmental consulting and engineering practice of any firm in the United States. We have extensive capabilities with regard to air quality and water quality surveillance programs. COVID-19 has been found in wastewater even prior to victims showing symptoms. Tetra Tech could assist in implementing a weekly testing protocol at wastewater plants to demonstrate the prevalence of COVID-19 in the community.
Logistics – Supply and Delivery	• **Management and operational personnel** at (1) Points of Distribution (PODs) for necessary goods such as food, water, medical supplies; (2) warehouse and

Service Offering	Description
	shipping facilities • **Grocery/Meal and Prescription Deliveries:** A significant issue associated with the COVID-19 pandemic involves populations that are shut-in/home-bound due to either having contracted the COVID-19 virus and/or concerned about contracting the virus (due to risk factors). These populations may require food and/or prescription medicine deliveries. Tetra Tech can provide the staffing and logistics to provide this service. • **PPE Distribution**: Many communities are purchasing and distributing Personal Protective Equipment (PPE) to local businesses and other entities that may be in need. Tetra Tech can assist in managing the sourcing and distribution of PPE to the most-needed sectors.
Alternative Housing	• **Healthcare Workers/First Responders**: Many frontline health care workers and first responders are concerned about their potential exposure to COVID-19 and potentially exposing their family members. Alternative housing may be required for these frontline health care workers and first responders. Tetra Tech is prepared to assist with managing the alternative housing programs, including locating alternative housing and coordinating logistics to ensure that these essential workers have safe lodging while not exposing their families. • **Homeless Population**: Individuals experiencing homelessness tend to be particularly vulnerable due to underlying health conditions and often close congregate living arrangements. It is vital to separate members of the homeless community that may be positive from the general population; hence alternative housing may be required. Tetra Tech could play an active role in locating alternative housing and coordinating logistics to control the spread of COVID-19 among homeless populations.

G. References

Tetra Tech has included references for similar projects completed within the last 5 years on the following pages.

St. Johns County, Florida

PROJECT DESCRIPTION

Tetra Tech has been serving St. Johns County Public Works for nearly 15 years – including development of the County's disaster debris management plan and providing debris monitoring services for multiple disaster events.

Hurricane Matthew: Hurricane Matthew impacted St. Johns County on October 7, 2016 leaving a trail of wind and flooding destruction behind. Our team mobilized in the immediate aftermath of the storm's 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.

In addition to right-of-way (ROW) debris removal, our team assisted the County with private property debris removal (PPDR) and beach debris removal programs. The PPDR program was essential given that approximately 40% of the roadway lane miles in St. John's County are private roads. The beach debris removal program was equally as important as County-maintained beaches were littered with beach walk-over debris (treated lumber) and these beaches are a major tourism draw for the County. In total, the Tetra Tech team monitored the removal of **over 720,000 cubic yards of debris and over 800 hazardous hanging limbs and leaning trees**.

Hurricane Irma: In 2017, St. Johns County called on our team again when Hurricane Irma caused flooding, wind damage, and beach erosion. Our team mobilized to the County immediately following the storm and hired over 60 local monitors to conduct debris monitoring operations. Tetra Tech monitored the removal of **nearly 675,000 CYs** of disaster-generated debris from the public ROW. We also monitored and provided documentation for the removal of over 2,000 hazardous hanging limbs and leaning trees. In addition, Tetra Tech provided support to the County in preparing their packages for FEMA reimbursement through the Grants Portal system.

CLIENT

St. Johns County, Florida

DURATION

October 2016 – May 2018

PROJECT SIZE

Hurricane Matthew: 712,705

Hurricane Irma: 675,155

COST

Hurricane Matthew: $2,436,633

Hurricane Irma: $2,211,006

REFERENCE

Greg Caldwell, MPA

St. Johns County Public Works Department

Public Works Director

2740 Industry Center Rd. St. Augustine, FL 32084

Phone: (904) 209-0132

Mobile: (904) 669-5221

gcaldwell@sjcfl.us

City of Lake Charles, Louisiana

PROJECT DESCRIPTION

In September of 2005, Hurricane Rita impacted the City of Lake Charles, causing devastating wind damage. Rita was the most intense tropical cyclone on record in the Gulf of Mexico, and the fourth-most intense Atlantic hurricane ever recorded. Fifteen years later in 2020, Hurricanes Laura and Delta followed a near identical path to Rita and made a similar impact in terms of damage. Despite these similarities, the speed and efficiency of disaster response has vastly improved over the last 10+ years. With the advent of automated debris management systems, technology has dramatically changed project operations, and aided in quality control and data management.

Hurricane Laura caused devastating damage to the City of Lake Charles. Our team responded immediately to the City and began project ramp up within 24 hours of the storm's passing. After identifying 5 local debris management sites, our project management team hired and trained over 250 locally hired debris monitors, providing extensive safety training which included COVID-19 protocols. In total, our team has monitored the removal of **over 3 million cubic yards of debris and nearly 20,000 hangers and hazardous trees.**

Six weeks into their recovery from Hurricane Laura, Lake Charles was again subjected to additional damage with the impact of Hurricane Delta. Our team continues to assist in Lake Charles' ongoing recovery from these storms.

CLIENT

City of Lake Charles, Louisiana

DURATION

September 2020-Ongoing

PROJECT SIZE

3,064,811 CYs (ongoing)

COST

$6,775,784 (ongoing)

REFERENCE

Jeff Jones, Director of Public Works
4331 E Broad St
Lake Charles, LA 70615
P. (337) 491-1220
jjones@cityoflc.us

Craven County, North Carolina

PROJECT DESCRIPTION

Craven County is located in the coastal plain region of North Carolina and sits along the Neuse River. The County consists of 774 square miles of land, which includes 65 square miles of water. The County has a population of 104,147 and includes roughly 38,150 housing units.

In September of 2018, Hurricane Florence swept across Craven County causing significant damages throughout the County. Flooding, winds and heavy rain resulted in damage to over 4,500 residential structures and 300 commercial buildings, road closures, downed powerlines as well as disaster debris.

Within 48 hours of the storm's impact, Tetra Tech began gathering damage assessment information and mobilized our management team to begin the process of certifying (measuring) debris removal vehicles, hiring and training local staff, surveying debris management sites and implementing protocols and procedures to ensure maximum reimbursement for the County. Tetra Tech assisted the County in documenting not only the contracted debris hauler's production, but also the quantities brought to the County's seven residential drop off sites. Additionally, Tetra Tech assisted the County with tracking and segregating debris collected from County municipalities and brought to a shared County managed debris management site.

In addition to debris collection monitoring on public roads, Tetra Tech was also tasked with assisting in the administration of the County's FEMA approved private property debris removal program. Tetra Tech worked with private road owners and County staff to execute Right-of-Entry agreements and track debris separately from public road debris collection.

Tetra Tech monitored and documented all debris removal and disposal activities using *RecoveryTrac*™, our proprietary Automated Debris Management System (ADMS). All collection information, progress tracking, and supporting documentation (pictures, GPS coordinates) were made available to the County via unique portal in real time, allowing the County full transparency into recovery operations.

CLIENT

Craven County, NC

DURATION

September 2018 – January 2019

COST

$414,147

REFERENCE

Steven Aster
Public Works Department
406 Craven Street
New Bern, NC 28560
Phone: (252) 658-7179
saster@cravencountync.gov

City of New Bern, North Carolina

PROJECT DESCRIPTION

New Bern is a historic city in Craven County, North Carolina that sits on two tidal waterways, the Trent and Neuse rivers. The City covers over 29 square miles and has a population of 29,524.

Hurricane Florence hit the City of New Bern in September 2018. Heavy rainfall and storm surge caused the Trent and Neuse rivers to flood many homes and businesses, and left thousands of residents without power. Total damages reached approximately $100 million.

Tetra Tech staff was on the ground within 48 hours of impact and engaged in the immediate tasks of assisting with temporary site permitting, coordinating primary clearance routes with the City's debris haulers, forecasting debris removal operations, and training new staff.

Tetra Tech worked closely with City officials to certify and track mutual aid vehicles from neighboring cities that were summoned to assist with the arduous process of collecting construction and demolition debris generated by the event's storm surge. Tetra Tech accurately captured costs of debris removal performed by mutual aid and provided accurate and timely tracking information City of New Bern officials subsequently allowing them to pay for their share of the cost of mutual aid. **In total, Tetra Tech monitored the removal of 155,411 CYs of debris.**

Tetra Tech was subsequently appointed to monitor the City's Hurricane Florence Drainage Project, which consists of silt, sediment, and vegetative debris removal from multiple drainage basins, and also includes reshaping of ditches that were overtaken by the impact of Hurricane Florence. Tetra Tech coordinates with City officials, engineers, and multiple debris removal contractors to ensure that the project is being completed within the identified timeline, scope of services, and within reimbursement guidelines.

CLIENT

City of New Bern, NC

DURATION

September 2018 – January 2019

January 2021 – Present
(Drainage Project)

COST

$665,351.50

REFERENCE

David Cox
Solid Waste Superintendent
City of New Bern – Public Works
P.O. Box 1129,
New Bern, NC 28563
252-639-7521 office
252-636-1848 fax
coxd@newbernnc.gov

Town of Hilton Head Island, South Carolina

PROJECT DESCRIPTION

The Town of Hilton Head Island (Hilton Head) is a popular vacation destination, featuring 12 miles of beachfront on the Atlantic Ocean. Due to its location on the South Carolina coastline, Hilton Head is vulnerable to tropical storms and hurricanes during the summer and fall months. As a result, since 2009 Tetra Tech has held Hilton Head's disaster debris monitoring contract and has met with Hilton Head every year to discuss disaster recovery cleanup priorities, procedures, and requirements.

In October 2016, Hilton Head took a serious blow as the eye of Hurricane Matthew passed 20 miles to the east. Hurricane Matthew's heavy rains caused power outages, flooding, and extensive damage making parts of the island inaccessible by vehicle.

Within hours of the disaster, Tetra Tech's project manager was onsite to assess the damage and meet with Hilton Head officials. Upon notice to proceed, Tetra Tech mobilized a local team of debris monitors and established our automated debris management system for Hilton Head 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.**

CLIENT

Town of Hilton Head Island, SC

DURATION

October 2016 – June 2017

COST

$2,845,353

CUBIC YARDS

2,187,080

REFERENCE

Jeffrey S. Buckalew, PE
Town Engineer
Town of Hilton Head Island
1 Town Centre Court
Hilton Head Island, SC 29928
Phone: (843) 341-4772
Mobile: (843) 384-5142
Fax: (843) 842-8587
jeffb@hiltonheadislandsc.gov

H. Recent Contracts

In the table below, Tetra Tech has provided new pre-positioned contracts obtained within the past 2 years.

Contract Location	Services Provided
Barnwell County, SC	Disaster Debris Management and Financial Recovery Services
Barnwell School District 45, SC	Disaster Debris Management and Financial Recovery Services
Colleton County, SC	Debris Monitoring and Recovery Services
Dorchester County, SC	Disaster Debris Monitoring & Recovery Services
Seabrook Island, Town of, SC	On-Call Debris Monitoring Services

I. Experience with FEMA and SCDOT

Extensive Experience within South Carolina

Tetra Tech personnel have supported clients throughout South Carolina for over a decade, performing more than 30 disaster debris, grant management, and emergency preparedness projects. To date, Tetra Tech has monitored the removal of nearly 5 million CYs of disaster debris throughout South Carolina. Additionally, Tetra Tech maintains a database of local field staff, ready to deploy, in the event that a future debris-generating disaster should occur. The exhibit below illustrates Tetra Tech's South Carolina disaster debris monitoring experience.

Following Hurricane Matthew, Tetra Tech monitored the removal of nearly 5 million cubic yards of debris and over 200,000 hazardous trees and hangers.

Exhibit 3-7: South Carolina Project Experience

South Carolina
Debris Monitoring Experience

Tetra Tech has monitored the removal of nearly 5 million cubic yards of debris throughout South Carolina

2020 **Severe Storms & Torandoes**
Barnwell & Colleton Counties

2019 **Hurricane Dorian**
Colleton County, Dorchester County, and the Town of Summerville

2016 **Hurricane Matthew**
Beaufort County, Briarcliffe Acres, the City of Florence, Colleton County, the Town of Hilton Head Island, Myrtle Beach, and the Town of Summerville

2015 **1,000-Year Flood Disaster**
Richland County

2014 **Winter Storm Pax**
Nine communities across South Carolina

Financial Recovery and Disaster Grant Management. In addition to our disaster debris monitoring services, Tetra Tech has provided a wide variety of financial recovery and grant management services to South Carolina clients.

- **Richland County:** Tetra Tech is assisting the County with several disaster funding sources, including FEMA HMGP, FEMA PA, and CDBG-DR programs.
- **City of Sumter and Charleston:** Tetra Tech provided Financial Recovery Services and HMGP implementation services to the City of Sumter, which included the identification of over 100 qualifying properties and similar services in the City of Charleston.
- **Lexington County:** Tetra Tech assisted with Lexington County's CDBG-DR Implementation, Buyout, Acquisition & Demolition, Action Plan Assistance, and Section 106 Environmental Review Assistance.
- **Beaufort and Horry Counties:** Following Hurricane Matthew, our team assisted Horry and Beaufort Counties with disaster debris project worksheet consulting services and FEMA PA.

Emergency Management Planning and Training. Our team has provided emergency management planning and training services to various clients, including disaster debris management planning for Beaufort County, COOP Planning and Program Development for SC Emergency Management Division, COOP Planning and Disaster Readiness Assessment for Clemson University, and Industrial Accident (Chemical) and Terrorism (Radiological) Exercises under our EPA Region 4 START Contract. South Carolina Emergency Management Division selected Tetra Tech (formerly Beck Disaster Recovery) to guide, develop, and implement the division's continuity planning efforts. Our team was also tasked with developing a robust COOP for the division, Office of the Adjutant General (State), and its 20 emergency support functions.

Tetra Tech maintains regular communication with SCDOT and holds a standby debris monitoring contract with the agency.

J. Planning, Training, and Management

Planning

In compliance with the Town's request for proposals (RFP), we have provided the following management plan for each category of work describing what actions will be taken for a disaster generating debris in the amounts provided in the table below.

Disaster Generating Event Scenario

DEBRIS TYPE	SCENARIO 1	SCENARIO 2
ALL UNITS IN CUBIC YARDS	**VOLUME**	**VOLUME**
Vegetative	14,000	70,000
Construction and Demolition	4,800	24,000
Mixed	1,000	5,000
White Metals	100	500
Hazardous Waste	100	500
TOTAL	20,000	100,000

Scenario 1 – 20,000 Cubic Yard Event

Scenario one is a 20,000 Cubic Yard (CY) event with debris streams of vegetative, Construction and Demolition (C&D), mixed, white metals, and hazardous waste debris. When the number of debris collection hauling units needed to complete a project

is estimated, there are two (2) primary variables: (1) the timeframe specified to complete the project, and (2) the estimated number of trips a hauling unit can make each day.

The following assumptions apply for scenario 1:

- The average hauling vehicle/container load: 40 cubic yards
- Average number of loads per day: 7
- Project completion schedule: 7 days
- C&D and mixed debris are direct hauled to a landfill.

The table: Scenario 1 provides the estimated number of hauling vehicles or containers required to complete scenario 1 within 7 days, and the table: Required Equipment and Resources shows required equipment and resources.

Scenario 1 (20,000 CYs)

Debris Type	Volume (Cubic Yards)/ Units	Avg. CYD/Units per Load	Avg. Number of loads per day	Project Completion Schedule (Days):	Number of Hauling Vehicles/ Containers
Vegetative	14,000	40	7	7	7
Construction & Demolition	4,800	40	7	7	2
Mixed	1,000	40	7	4	1
White Metals	100	40	7	.25	1
Hazardous Waste	100	40	7	.25	1

Required Equipment and Resources

Number of recommended DMS locations	• 1 DMS • C&D/Mixed debris direct hauled to a landfill for final disposition
Minimum size, type, and number of hauling equipment	• Minimum certified capacity of 50 CY • Five self-loaders • Five trailer units
Monitoring management and supervision staff	• One project manager • One field supervisor
Number of field monitors:	• Five monitors (one per loading unit i.e. self-loader)
Methodology for scheduling and routing the removal of debris	• Scheduling and routing of debris contractors is typically determined by the debris contractor. Recommend the Town task the debris contractor with using debris zones to collect debris

Scenario 2 – 100,000 Cubic Yard Event

Scenario 2 is a 100,000 CY event with debris streams of vegetative, C&D, mixed, white metals, and hazardous waste debris. The following assumptions apply for scenario 2:

- The average hauling vehicle/container load: 40 cubic yards
- Average number of loads per day: 7
- Project completion schedule: 30 days
- C&D and mixed debris are direct hauled to a landfill

The table: Scenario 2 provides the estimated number of hauling vehicles or containers required to complete scenario 2 within 30 days, and the table: Required Equipment and Resources shows the equipment and resources required. Note the estimate provided below is for planning purposes only. Other disaster-specific factors may alter operations, the number of hauling units required, and the number of monitoring staff needed.

Scenario 2 (100,000 CYs)

Debris Type	Volume (Cubic Yards)/ Units	Avg. CYD/Units per Load	Avg. Number of loads per day	Project Completion Schedule (Days):	Number of Hauling Vehicles/ Containers
Vegetative	70,000	40	7	30	8
Construction & Demolition	24,000	40	7	30	3
Mixed	5,000	40	7	15	1
White Metals	500	40	7	1	1
Hazardous Waste	500	40	7	1	1

Required Equipment and Resources

Number of recommended DMS locations	• 1 DMS • C&D/Mixed debris direct hauled to a landfill for final disposition
Minimum size, type, and number of hauling equipment	• Minimum certified capacity of 50 CY • Six self-loaders • Six trailer units
Monitoring management and supervision staff	• One project manager • One field supervisor
Number of field monitors:	• Six monitors (one per loading unit i.e. self-loader)
Methodology for scheduling and routing the removal of debris	• Scheduling and routing of debris contractors is typically determined by the debris contractor. Recommend the Town task the debris contractor with using debris zones to collect debris

Tetra Tech acknowledges that while the above scenarios are useful for planning purposes, the Town could be dealing with 1,000,000 cubic yards of debris. Our team of seasoned disaster recovery professionals who possess hands-on experience in recent disasters including multiple large-scale debris monitoring projects with in excess of 1 million cubic yards (CY) of debris are able to use the methodologies discussed to scale our response to meet the current needs of the Town.

Staff Training and Augmentation

Tetra Tech is recognized for its ability to quickly and effectively respond to large-scale projects. Since 1990, Tetra Tech has been providing comprehensive emergency response services to both governmental and private clients. Most notably, we have continuously supported the U.S. Environmental Protection Agency's (EPA) Emergency Response and Removal program since 1995, serving as prime contractor or subcontractor in eight of the ten regions across the country. Over this time, we provided technical consulting expertise on nearly 2,000 emergency response efforts nationwide. We have responded to all types of incidents, including industrial plant explosions, chemical fires, train derailments, oil spills, and pipeline ruptures impacting environmentally sensitive areas, clandestine drug laboratory operations, mercury spills in residences and schools, releases of unknown hazardous substances, chemical and biological agent incidents, and natural disasters, such as floods, tornadoes, and hurricanes.

Tetra Tech has never failed to respond to our clients' deployment and mobilization needs, regardless of location or disaster. In 2017, Tetra Tech successfully deployed **more than 6,000 field staff** throughout the country to respond to clients affected by Hurricane Irma in Florida, Hurricane Harvey in Texas, Hurricane Maria in Puerto Rico, and multiple wildfires in California.

In many cases, we respond rapidly within 24 hours of receiving notice-to-proceed and fully staff projects within 7 days. Our staffing process has rapidly mobilized project teams for major disaster recovery projects nationwide, leveraging both our in-house and on-call staff with demonstrated disaster response training and experience. We prioritize deploying local staff to the maximum extent practical, which not only benefits the local economy but also reduces mobilization and transportation costs. **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.**

Ultimately, the strategy, structure, and staffing requirements for the project organization are based on client expectations and the desired outcome. Tetra Tech's project team can scale as needed, coordinate response, establish common processes for planning and managing resources, and adapt organizational structure to match the needs and complexities of projects. A sample of rapid deployments and timeframes is provided below.

Representative Tetra Tech Response Deployment

Event and Year	Staff Mobilized	Mobilization Periods
Hurricane Laura (2020)	600	4 days
Hurricane Isaias (2020)	50	3 days
Tornadoes (2020)	120	3 days
Tornadoes (2019)	40	2 days
Hurricane Michael (2018)	665	4 days
California Wildfires (2018)	1,000	7 days
Hurricane Florence (2018)	450	3 days
Hurricane Harvey (2017)	1,417	10 days
Hurricane Irma (2017)	2,452	10 days
Hurricane Matthew (2016)	800	5 days
Texas Flooding – (October 2015)	50	2 days
Texas Flooding – (May 2015)	150	3 days

Event and Year	Staff Mobilized	Mobilization Periods
California Wildfires (2015)	100	2 days
Hurricane Joaquin (2015)	12	10 days
Hurricane Sandy (2012)	90	4 days
Hurricane Isaac (2012)	400	3 days
State of Connecticut Snowstorm (2011)	450	7 days
Hurricane Irene (2011)	500	5 days
Hurricane Ike (2008)	3,200	10 days
Hurricane Gustav (2008)	250	5 days
Hurricane Dolly (2007)	150	5 days
Midwest Severe Winter Storms (2008)	150	7 days
Midwest Severe Winter Storms (2007)	200	7 days
Buffalo Snowstorms (2006)	250	5 days
Hurricane Wilma (2005)	1,500	14 days
Hurricane Katrina (2005)	500	14 days
Hurricane Rita (2005)	200	7 days
Hurricane Dennis (2005)	250	5 days
Hurricane Ivan (2004)	600	5 days
Hurricane Jeanne (2004)	50	2 days
Hurricane Frances (2004)	75	2 days
Hurricane Charley (2004)	150	3 days

Rapid Recruiting

During program ramp-up, we focus on hiring locally. We deploy several methods for outreach and recruitment for local staff, including targeted outreach in community hubs, extensive networking with potential candidates, and coordination with local support groups.

Advertising Job Postings	Connecting with Labor Networks	Engaging in the Digital Space
Local newspapers	Community organizations	Facebook
Job boards of local colleges and universities	Vocational training organizations	LinkedIn
Supermarkets	Faith-based organizations	Twitter
Employment and job training websites	Semi-annual career fairs	Glassdoor
All project locations	Labor unions	Indeed
All satellite offices	Apprentice programs	Career Builder
	Job Corps	
	Unemployment Department	
	Chambers of Commerce	

Field Hiring Center

In addition to maintaining an extensive case management and community outreach staff database, Tetra Tech can deploy our Field Human Resources (HR) Hiring Center which is designed to be quickly mobilized to allow near immediate response for staffing needs. In fact, in most cases, Hiring Centers are ready in less than 72 hours from the notice to proceed. The number of trained HR representatives can scale up to 20 at a moment's notice – allowing Tetra Tech to **hire 200+ staff per day.** Under this process, local teams can be hired, trained, and deployed quickly.

Tetra Tech monitors the project work plan to meet the needs of the project throughout the engagement, including fluctuations in staffing needs. As the work volume decreases after the initial surge upon program launch, we typically reduce staffing levels accordingly. Our utmost priority is to balance workload and customer service – providing the proper amount of field staff to maintain pace with activity in the workflow.

Typically, during the program demobilization process, Tetra Tech works with each employee to determine the next step in their professional journey – very frequently another project with our team. Many of our current project management staff members began their career with Tetra Tech as locally hired staff and have grown with us into national senior leadership positions.

Local hires in 24 hours.

Tetra Tech can hire, train, and deploy local teams within 24 hours. Our onboarding procedures are designed for rapid mobilization, thorough training, and near-immediate execution of work.

From Recruit to New Hire

Once candidates are identified, Tetra Tech vets and screens potential new hires. This starts with an initial screening and verification of official documents, including driver's licenses, Social Security cards, and insurance to ensure the identity of prospective employees. A hiring package is completed, checked for completeness and accuracy, and then uploaded to the Corporate Hiring Service Center. Next, the Corporate Hiring Service Center completes an e-Verify eligibility-to-work check and a criminal background check within 24 hours. It also verifies education and any testing required for the position. Once these checks are complete, the new employee is entered into the Tetra Tech labor tracking system and issued official credentials.

Operating in a COVID-19 Environment

During the onset of the COVID-19 pandemic, Tetra Tech recognized the importance of immediately developing a COVID-19 Response and Contingency Plan and incorporating COVID-19 protocols and procedures into project specific Health and Safety Plans (HSPs). Tetra Tech has since incorporated COVID-19 awareness and safety procedures into all project HSPs since the start of the pandemic. These protocols will be incorporated into the project HSP to help slow the spread of COVID-19.

Recognizing that slowing the spread of COVID-19 starts with each employee, Tetra Tech staff are trained in COVID-19 protocols and required to sign a Return to Work and Self-Screening Checklist/Acknowledgement Form. This form defines the actions required by employees including self-screening, self-quarantine, frequent hand washing, mandatory face coverings in public, and social distancing. Tetra Tech also defined the Return-to-Work process in the event an employee is exposed to COVID-19 or becomes ill. All Tetra Tech (including subcontractors) office and field staff will go through an initial training on the COVID-19 protocols that are described in the Health and Safety Plan.

With COVID-19 protocols and our commitment to keeping staff safe and healthy, we make every effort to keep our field staff safe. We typically implement a model where staff report to an operations center for the first two weeks of their assignment to receive extensive training and oversight. Staff are then assessed and surveyed to identify candidates who will thrive in a virtual environment and candidates who will thrive in an in-person setting. Through training, processes, and technology, we are able to support staff in both types of settings very easily and implement protocols to keep staff safe and focused on their job.

Accelerated Training Program

The first step before field work is training. Tetra Tech logs all training activity and requires documentation of successful completion before new teammates can start field work. With a solid foundation of training, Tetra Tech project managers, data managers, and operations managers are prepared and required to follow standard operating procedures and protocols.

Just as Tetra Tech's experience demonstrates that we have previously managed and maintained capacity for programs of similar scope and scale, our past performance demonstrates that we've done so successfully. Our ability to deliver qualified personnel has proven effective when supporting the Puerto Rico Department of Housing as prime contractor on the Hurricane Maria Housing Recovery Program Management program, where our proactive management and staffing approach enabled Tetra Tech to **mobilize and train 17 assessment teams in less than a week and integrate scalable technology systems to streamline processes to address thousands of applicants.**

Tetra Tech utilizes a variety of training methods and customizes formal trainings to the duties of each new employee, and hosts trainings virtually or in the Hiring Center with a Tetra Tech certified trainer. These trainings include modules specific to each client's needs and requirements. By using interactive qualifying tools throughout training modules, Tetra Tech helps trainees better retain information while also screening and selecting the most qualified personnel for support positions.

To properly instruct newly hired local employees, Tetra Tech has developed a training program that includes modules specific to each program. These modules are complete with the information required to facilitate quality assurance and program compliance across program implementation. 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 required tasks.

Oversight Framework		
Span of Control	**Technology**	**Performance Metrics**
Tetra Tech implements a structure of span of control to ensure each staff member has a supervisor available to provide guidance and oversight. We typically implement a 4-5:1 ratio, depending on the complexity of tasks and project needs.	Tetra Tech uses technology like chat, forms, and surveys to reinforce processes, assess issues, and conduct knowledge checks. Frequent quizzes and contests through Teams keep staff engaged and allow supervisors to gauge knowledge.	We track performance of our staff through daily reporting. Tracking performance metrics and Key Performance Indicators (KPIs) are also how we identify high performers for promotion.

Staff Oversight

Providing support to newly-hired staff members so they can be successful in their roles is paramount to the success of the project. This begins with onboarding and training and ongoing oversight from a trained and experienced supervisor.

Project Management

Project Management Principles

Tetra Tech's project management principles include five critical pillars: transparency, resources, compliance, efficiency, and mitigation.

Transparency: Maintaining visibility of the project's contractual scope, prioritization, schedule, budget, and cost areas.

Real-time data sharing creates a common operating platform and allows the Town, its debris removal contractors, and our team to access the same accurate information, which markedly improves their ability to execute efficiently.

Resources: Ensuring availability and proper distribution of staff and equipment.

We have never failed to respond to a client, regardless of the size of the project. Our resources include the largest pool of qualified environmental and disaster recovery professionals in the nation.

We are committed to providing a consistent and coordinated project team to perform the scope of work upon activation. Our project team will dedicate themselves to the Town's needs throughout the year, not just during times of activation.

Compliance: Maximizing reimbursement funding as well as documenting and managing potential issues.

Tetra Tech's *RecoveryTrac*™ ADMS enables consistency, efficiency, and compliance in the documentation process. Tetra Tech field teams strictly adhere to funding agency requirements with up-to-the-minute awareness of changes in legislation, in-process quality controls, and guidance from our leadership team. As a result, the Town benefits from maximum potential for reimbursement.

Efficiency: Keeping pace with scheduled goals and milestones throughout project work.

We maintain the industry's largest staff of disaster professionals to facilitate immediate mobilization. *RecoveryTrac*™ ADMS reports real-time data, and our QA/QC team checks documentation as work is being completed. The Town will have real-time access to data and can geospatially visualize work activities, whether in our system or as an export to their own system. Throughout project execution, Tetra Tech project managers monitor and adhere to project timelines and milestones to ensure pace with the Town's expectations.

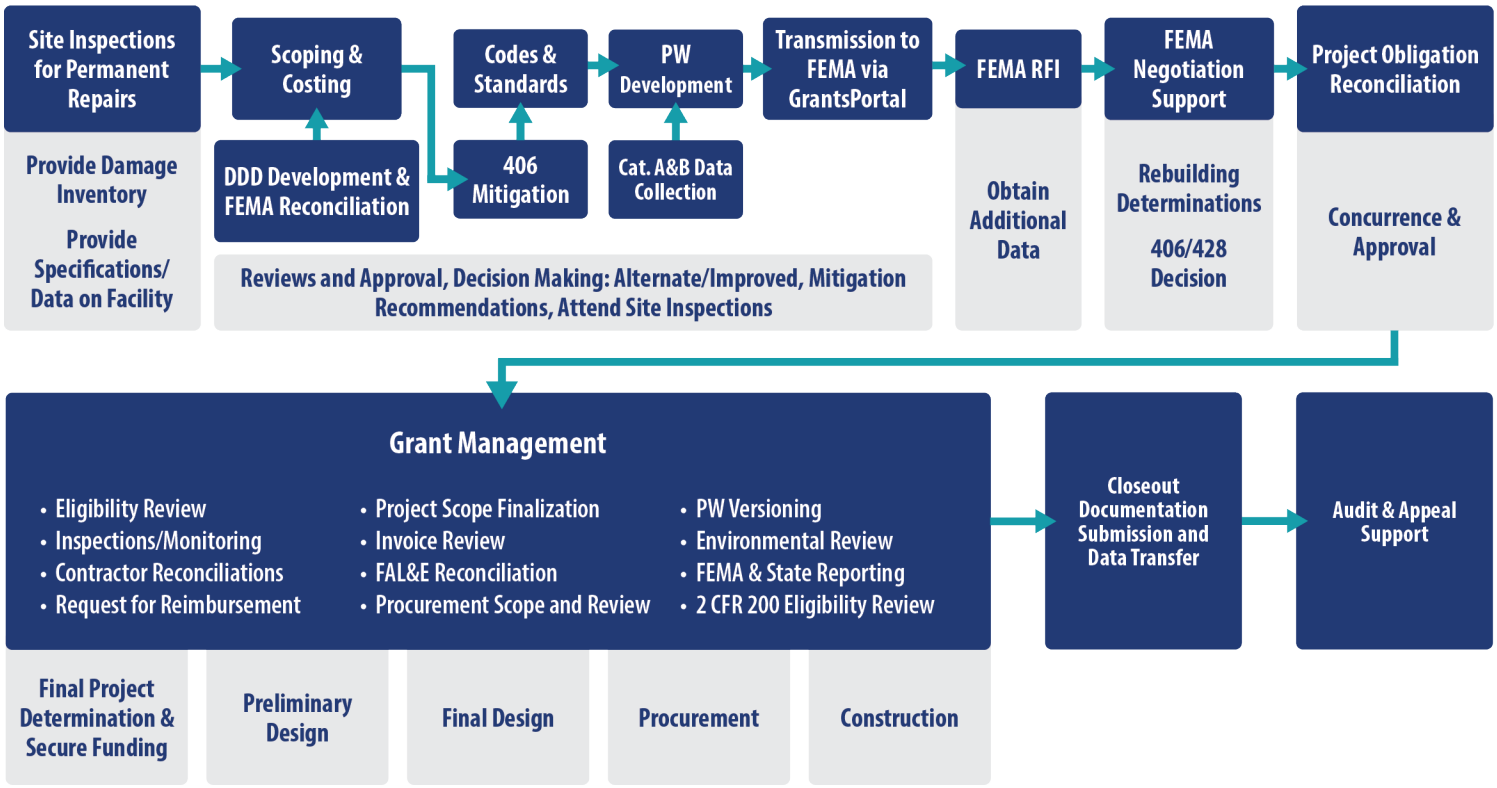
Mitigation: Identifying risks, managing the project risk matrix, and documenting risks encountered.

Tetra Tech provides a unique understanding of the various critical functions of debris monitoring (project management, environmental, logistics, data, grant management, etc.). This experience allows our team members to proactively identify risks, appropriately develop and document mitigation measures, and continually improve.

Technical Support for Reimbursement

Dedicated Team and Process for FEMA Reimbursement

The flowchart below illustrates Tetra Tech's approach to the FEMA PA Program lifecycle. Our team has developed documentation processes to capture the data at each step along the way.



Initial Damage Estimates

Through our experience working with clients in response to the 2020 hurricane season, FEMA is requiring greater documentation of disaster-generated damages than ever before in order to receive a disaster declaration. The proper reporting of damage by the public and inspection of the damage by the Town and governmental officials is becoming increasingly important.

Tetra Tech will assist the Town in a systematic approach of cataloging, reporting, and documenting disaster-generated debris. We will develop a work plan with the Town, ahead of storm season to maximize the efficient use of Town and Tetra Tech resources to quickly and accurately find and report debris. As detailed in the Technical Approach, the use of our proprietary *RecoveryTrac*™ ADMS technology can assist the Town in not only documenting this debris but also targeting resources to remove, haul, and monitor those operations.

The Town is supported by debris management consultant Chuck McLendon, who has served as principal in charge for 30+ major disaster activations, managing more than 100 million CYs of debris removed and **upwards of $2.5 billion in FEMA PA reimbursement.** Mr. McLendon maintains in-depth knowledge of the FEMA PA program, including an expert understanding of Federal Register 2 CFR Part 200 ("the Super Circular").

A critical part of painting the picture of the disaster event for FEMA is documentation regarding damage location using mapping and the nature of the damage using photo and descriptive evidence. The visualization of the event provides critical insight into the disaster itself and the required resulting response and recovery. To support the Town in conducting initial damage estimates, Tetra Tech maintains a critical focus on compliance from the outset. Tetra Tech will coordinate with the Town and its departments to integrate into the incident response framework by mobilizing staff to designated locations, leveraging local partners in specific jurisdictions, and working with citizen response teams.

Tetra Tech has utilized several methods to complete and document damage estimates and will work with the Town to identify and deploy the preferred solution. In addition to the assessment conducted on the ground by both Town and Tetra Tech personnel, potential tactics include:

- Public-accessible QR codes to report damage
- GIS mapping
- Social media mining to geotag photos of damages
- UAS/drone documentation to identify most heavily impacted areas

Immediate Needs Funding (INF)

Immediate Needs Funding (INF), also referred to as Expedited Funding, is intended to meet an applicant's urgent needs in the initial aftermath of a disaster and is often a critical part of the initial disaster response and short-term recovery. In utilizing Expedited Projects for Emergency Work, FEMA provides expedited funding for Emergency Work Projects. Eligible activities typically include debris removal and emergency protective measures; as such, the funding may be used to cover such costs as overtime payroll, equipment costs, materials purchases, and debris removal and monitoring contracts when these costs are incurred for emergency work.

FEMA is required to disallow all ineligible or unsupported costs. To avoid de-obligation of PA funding, it is critical that applicants sufficiently document costs by type. Knowing which information to capture during emergency work implementation is key and **Tetra Tech has decades of experience in assessing eligibility of and documenting compliance for costs.**

FEMA and the State normally require PA applicants to provide all supporting documentation for reimbursement for completed work, but they can relax this document requirement and provide initial funding to applicants for emergency work required in response to a declared event. Throughout the Expedited Project development process, Tetra Tech will assist the Town in gathering and documenting work undertaken as well as providing a summary of the costs for emergency work not yet completed. Tetra Tech will assist the Town with gathering the necessary inputs for completed work and developing and applying a sound methodology to present any projections of costs that are to be used to develop Expedited Projects.

Expedited Projects are obligated at 50 percent of eligible costs incurred for Debris Removal (Category A) and Emergency Protective Measures (Category B) conducted within the first days following the disaster and provide the necessary cash flow to kick-start recovery and ease the transition to the more traditional reimbursement-based program. Once the initial award of the expedited project is processed at 50% of the eligible costs incurred or projected, the Town will need to provide all required documentation prior to the remaining funds being awarded in a project amendment. After the receipt of the initial funding, Tetra Tech will assist the Town in documenting the use of the expediting funding for eligible activities and work to develop the next version/amendment of the project, accounting for those funds and presenting any others that may have been incurred.

Project Worksheet Completion and Application Process

Tetra Tech's experienced grant managers are poised to help the Town submit its initial Request for Public Assistance and attend or provide support for State-led applicant briefings, FEMA recovery scoping meetings (formerly known as kickoff meetings), or any other meetings with FEMA or the State in the development of projects. With the changes FEMA has made to their PA Delivery Model, eligibility determinations are no longer made "in the field" and the projects are written at the Consolidated Resource Centers. Close and consistent interaction with FEMA staff is still crucial, so the Town needs an experienced team to augment efforts in presenting any and all eligible costs and activities to FEMA for inclusion in projects.

Submitting a complete damage inventory is key to presenting disaster-caused damage and costs to FEMA. Experienced Tetra Tech project support staff will help gather all necessary inputs for the best possible outcomes. By timely addressing requests for information and uploading related information and documentation, Tetra Tech facilitates timely obligation of project funding and access to federal dollars for recovery.

Tetra Tech is a nationwide leader in the administration of federal funding for disaster response and recovery. Our dedicated staff includes former federal and state level executives with decades of **experience working with FEMA Region IV.**

One of the most often experienced barriers to timely obligation of projects and reimbursement of funds is lack of proper documentation. We work hand in hand with our clients to identify, gather, organize, and submit records reflecting any and all eligible activities undertaken. These records are audit-ready for our clients and paint the picture of well documented eligible work and costs to FEMA, the Department of Homeland Security's Office of Inspector General, Town Inspector General, State Legislative Auditor, or others. We serve as a force multiplier for your staff and recognize the importance of timely responding to any Requests for Information (RFIs) received from federal or state officials. We coordinate with all involved to minimize any "back and forth" on such requests that often result in the loss of precious time. Our team of experts can also be onsite with FEMA's site inspectors to adequately capture, measure, and quantify damages. Time equals money, and our goal is to minimize the length of time the Town spends waiting for return of eligible program dollars.

Audit Support

Our team has a proven track record of success in helping our clients resolve disputes with funding agencies such as FEMA or the Grantee (State). This includes support post-obligation audit and the appeal process. Throughout our FEMA-funded disaster response operations, we have only been involved with a handful of disputed projects over documentation.

We believe in remaining proactive in preventing further appeals requires frequent meetings with state partners and FEMA regions to avoid situations whenever possible.

Tetra Teach **uploads documentation and project support with consistent file naming conventions.** This organized, systematic approach enables timely and thorough review of documentation presented to FEMA and SCDOT.

Furthermore, due to our staff's in-depth knowledge of FEMA reimbursement policies, we are often hired by applicants to assist them after FEMA determination memos and Office of Inspector General (OIG) audits even when we were not involved with the applicant during the recovery period.

Recently, there has been a shift in the direct of FEMA to perform audits earlier in the disaster so that corrective actions can be made for the subrecipient or recipient. The three most common types of audits that we have supported within the first 2 years of the disaster include:

Tetra Tech has supported clients across disasters from 2016 through today on these up-front audits by:

1. Conducting pre-meeting with stakeholders
2. Preparing compliance checklists
3. Developing documentation notebooks
4. Attending meetings and providing subject matter expertise support
5. Responding to for Requests for Information

Elements of our audit support strategy include:

- **Maintain Data Quality:** Consistent quality checks are integrated throughout project operations to maintain data integrity from the beginning.
- **Retain the Data:** Maintain the data on our secure, cloud-based storage site to mitigate the risk of data loss.
- **Respond Quickly:** Acknowledge the question within 12 hours and respond to the audits within 48 hours of a request.
- **Maintain Communication:** Establish weekly calls with auditors that provide visibility into Town activities.
- **Stay Positive:** Maintaining a positive spirit between the parties to foster a solution quickly.

Public Information

Tetra Tech is prepared to assist with developing a means for the Town to manage inquiries from residents regarding the debris removal process. Tetra Tech has staffed debris hotlines for some of the largest disasters that have impacted the United States and can help the Town establish and staff a debris hotline (including supplying equipment, phone lines, etc.) to respond to public inquires and concerns.

Public information for debris operations should focus on two components: safety for handling debris and proper set-out procedures. Many hurricane-related injuries and deaths occur after the incident because citizens do not safely address disaster damage and debris. Some of these deaths and injuries could be avoided if residents were provided timely

information on how to safely address disaster-related damage to their homes. Public information for residents should include safety precautions for assessing their damaged homes and operating dangerous equipment to remove debris. In addition to safety instructions, proper set-out procedures are critical to ensure that the Town can maximize recycling opportunities, reduce impacts to landfill capacity, and maintain efficient debris removal operations.

Public information should include instructions for residents to properly separate their debris streams such as HHW, electric waste, construction and demolition debris, vegetative debris, and white goods. Public information should provide residents with specific instructions for separating and bundling their debris and include any information for citizen drop-off locations.

Public messages must meet the needs of the community to ensure all populations receive and understand critical information in a culturally appropriate and effective manner. Tetra Tech will coordinate with the Town public information officer to ensure the correct information regarding debris operations is provided to the public in a format that is accessible to the Town diverse population, in a language all can understand.

Public Information Campaigns

Flyer detailing debris separation and placement guidance for residents.

Public-facing website detailing collection information, debris removal status, and more.

Call Center Operations

Emergency events place tremendous stress on public information centers. Tetra Tech routinely provides call center operations to our clients following natural disaster events. We can deploy a remote call center with trained staff if needed by the Town. With our experienced team and advanced technical infrastructure, Tetra Tech can quickly assess needs and provide an end-to-end solution that includes a communications plan, toll-free numbers, operator staffing, call documentation, and reporting. Providing this service allows our clients to focus on the problems at hand, while staying connected and responsive to the community's need for information. Tetra Tech has provided these services to communities impacted by some of the worst disasters of our time.

Tetra Tech successfully operated a call center for Harris County OHSEM following Hurricane Harvey in 2017 and stood it up within 24 hours of a Notice to Proceed. We have also provided this service to Osceola and Polk County, FL following Hurricane Irma; and the City of Houston, City of Galveston, Galveston County, and Montgomery County, TX following Hurricane Ike.

K. Equipment

Tetra Tech maintains a warehouse located in Orlando with over 120 fully stocked bays of debris monitoring supplies capable of supporting over 50 simultaneous recovery operations for over 90 days. Tetra Tech has consistently deployed large-scale mobilizations of hundreds of staff and thousands of dollars' worth of equipment to multiple clients in a matter of days and on very short notice. Exhibit 3-8 lists available equipment and facilities readily available upon activation.

Exhibit 3-8: Resource List

Field Documents Currently in Our Warehouse	
ADMS Handheld Units	6,000
Time and Materials Forms	5,000
Truck Certification Forms	5,000
ADMS Ticket Stubs	800,000
Haul Out Ticket Stubs	300,000
Placards	5,500
Kits	
Project Manager Kits (1 Per 100 Monitors)	40
Project Coordinator Kits (1 Per 100 Monitors)	40
Human Resources Kits (1 Per 100 Monitors)	40
Collection Monitor Kits (1 Per 25 Monitors)	90
Disposal Monitor Kits (1 Kit Per Disposal Site)	100
Leaner/Hanger/Stump Kits (1 Per 50 Monitors)	40
Equipment**	
Laptops	400
Mifi (Mobile Wiireless)	90
High Speed Scanners	70
Printers	45

Mobile Command Office	2
Gas Trucks	To Be Obtained from Pre-Contracted Vendor
Modular Work Locations	To Be Obtained from Pre-Contracted Vendor
Generators	To Be Obtained from Pre-Contracted Vendor
Portable Facilities	To Be Obtained from Pre-Contracted Vendor

**All field documents are replenished as they are needed. Tetra Tech has several emergency vendors with the ability*
*** ADMS units are readily available and can be ordered as needed on a 24-hour turnaround.*

L. Cost

Tetra Tech has provided our proposed cost for the required services in accordance with the Fee Schedule in Attachment B. **The hourly rates shall remain firm for the first year of the initial term. Hourly rates for subsequent years and any extension term years shall be subject to an annual adjustment based on the latest yearly percentage increase of the Consumer Price Index for All Urban Consumers (CPI-U)(All Items) as published by the Bureau of Labor Statistics, U.S. Department of Labor.**

Position	Hourly Rate
Project Manager	$ 85.00
Operations Manager	$ 65.00
Field Supervisor	$ 45.00
Crew Monitor	$ 37.00
DMS and Drop-Off Site Monitors	$ 37.00
Data Manager	$ 55.00
GIS Specialist	$ 55.00
Project Coordinator	$ 35.00
Ticket Data Entry Clerk	$ -
Billing/Invoice Analyst	$ 45.00

M. Additional Information

Our team understands the organized chaos of an effective response and the realities of recovery. We have been involved in nearly every major response effort occurring within the past five years, including Hurricanes Maria, Harvey, Irma, and the California Wildfires. This breadth and depth of emergency preparedness expertise allows us to provide the full range of planning and program execution services. **Additional detail regarding the ancillary services offered by Tetra Tech is listed in 3.F - Work Plan.**

Tab | 3

WAYS AND MEANS

Agenda Item

LHG
LOU HAMMOND GROUP

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phone: 843.722.8880 web: louhammond.com

June 14, 2022

John D. Labriola
Mayor
Town of Kiawah Island
4475 Betsy Kerrison Parkway
Kiawah Island, South Carolina 29455

Dear John:

This letter, when signed by you, will confirm that the Town of Kiawah Island will retain Lou Hammond Group (LHG) for a communications audit and consulting per the scope below for 3 months beginning June 27, 2022 through September 27, 2022. Option to continue our services for an additional 9 months would be available for a fee of $7,500 a month.

Communications Audit, Recommendations + Consulting (3 months): $10,000/month

- Execute full communications audit + recommendations:
  - All communications methods: E-newsletters, websites, videos, direct mail,
  - Social media pages + groups, external + private forums, list serves, etc.
- Create communications strategy + decision tree, as appropriate
  - May include: Landing page ideation, FAQs, content capture via email, strategic message development
- Communications consulting:
  - To include: Community relations + stakeholder engagement
- Manage media relations
- Copywriting
- Liaise between the Town of Kiawah + Kiawah Partners, as appropriate
- Attend organizational meetings, as appropriate

In addition, you will be billed for reimbursement at cost for staff travel/mileage. Any other expenses will be presented to you in advance for review prior to incurring the expense on your behalf. All monies are payable upon receipt of invoice.

Please indicate your agreement in the space below and return one copy to us for our records.

You have our assurance of our best efforts on your behalf.

Sincerely,

LOU HAMMOND GROUP

Stephen Hammond
CEO

AGREED:_____