Section 3: Capability

Project Understanding

The City of Bay St. Louis is no stranger to recovering from disaster events. The City's location along the Gulf Coast puts it at risk of being impacted by tropical storms, hurricanes, and other events that may cause repetitive flooding. Tetra Tech understands that the City is seeking the services of a vendor to support grant administrative services for past and future disasters. The City is committed to expediting financial recovery while mitigating future risks. Through the resulting contract, the City aims to secure expert guidance in navigating complex FEMA reimbursement processes, enhancing infrastructure resilience, and developing comprehensive disaster recovery strategies.

The vendor selected for this solicitation should have the expert knowledge and experience as well as the extensive resources to support the City with all of the critical functions identified in the City's RFP – and Tetra Tech is that partner. Our team is well qualified to provide services spanning across the disaster recovery continuum, including FEMA PA, FEMA 404 and 406 Hazard Mitigation, and CDBG-DR services, as well as a wide variety of technical and support services that may be needed by the City. **Our understanding of the City's disaster recovery management approach and continuity of staff results in a faster and more efficient ramp up, followed by streamlined service delivery.**

Overview of Approach

Tetra Tech's singular focus for the City is to provide best-in-class federal grant program management expertise and disaster recovery support. From events like hurricanes which threaten health, safety, and property, to a disaster such as the COVID-19 pandemic which impacts the everyday lives of all City residents, Tetra Tech will provide post-disaster, grant and financial management services that are scalable to the City's needs. The Tetra Tech team will work side-by-side with the City to deliver on our promise throughout recovery.

Tetra Tech's comprehensive approach to grant management is built on the foundation that preparedness, response, and recovery are not separate functions, but are interconnected phases of a robust disaster recovery strategy. With decades of hands-on experience, we have honed our ability to rapidly assess disaster impacts, coordinate large-scale debris monitoring operations, and implement recovery efforts that align with FEMA, FHWA, and other federal and state reimbursement guidelines. This approach ensures that emergency response is not just reactive but anticipates recovery needs from the beginning

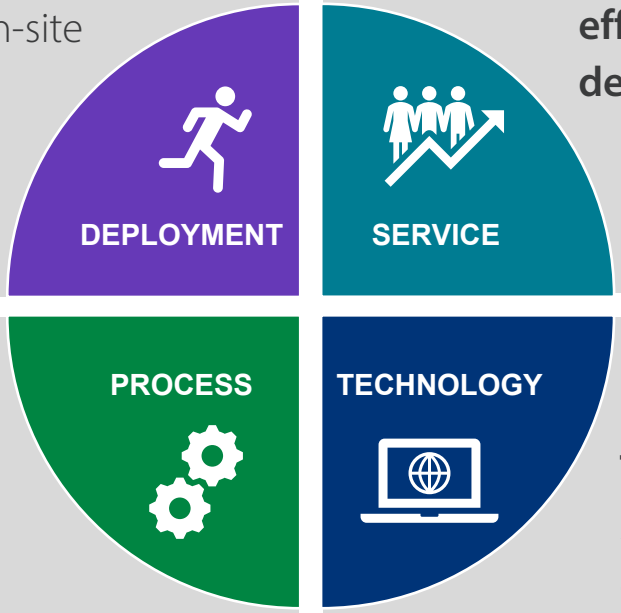
Due to our team's extensive and broad-based disaster recovery and grant program management experience, including direct experience working with the City, Tetra Tech has the necessary expertise to assist the City with the development and implementation of disaster recovery projects. The Tetra Tech team provides the City with utmost federal grant program subject matter expertise and transparency into project operations to deliver a model program. We look forward to working side-by-side with the City from project formulation through grant administration and closeout to expedite the City's disaster recovery initiatives.

Tetra Tech possesses the extensive experience in disaster recovery programs, grants management, and regulatory compliance to ensure that the City maximizes federal and state funding opportunities while maintaining full adherence to applicable laws and policies.

It is crucial that the City selects a trusted partner with expertise and capacity to execute the requested services efficiently and cost effectively.

The solutions detailed in this proposal are designed to leverage Tetra Tech's proven expertise in deployment, processes, service, and technology to deliver the requested services.

Tetra Tech is recognized for our ability to rapidly respond following a disaster. We can provide staff on-site within **48-72 hours** of notification.



Our solutions are built on experiences from our current work with the City to **efficiently and effectively deliver** the scope of work.

We will deliver high quality, audit-ready files to **quickly secure, disburse, and retain funding.**

Tailored technology solutions drive efficiency and accuracy throughout the project lifecycle.

Rapid Deployment

Our project team is prepared to mobilize immediately to begin scope of work preparation. We have prepared a qualified and dedicated team of experienced project managers and subject matter experts for this critical project.

- ✓ Local office locations
- ✓ Qualified experts
- ✓ Digital collaboration

We have used these staffing and mobilization tools to support more than **$70 billion of post-disaster service contracts including COVID-19 recovery projects and activities.** Our goal is to support the City in its time of need with the right staff, at the right time, for the right amount of time. We will rapidly mobilize resources in the pre-funding support activities to begin application development for disaster recovery projects.

Service

Tetra Tech's methodology includes a team of committed experts. Our service model is designed to efficiently and effectively meet the City's needs. We ensure that the City has the capacity to manage federal grant requirements to reduce risk and facilitate timely expenditure of grant funds by prioritizing compliance, advocacy, and customer service.

- ✓ Data-driven staffing
- ✓ Reduced costs
- ✓ Expedited funding
- ✓ Individual service
- ✓ Program compliance
- ✓ Clear communication
- ✓ Proven responsiveness

Tetra Tech's proven methodologies for assisting clients after large disasters integrate data-driven staffing ratios to reduce costs and expedite recovery programs. For the City, this includes an **adaptive staffing model** based on the stage of project application, funding approval, or implementation. This methodology emphasizes advocacy and compliance, meaning that our team promptly and thoroughly supports the City throughout the disaster lifecycle. This staffing philosophy is designed to ensure agile responsiveness to the City's needs.

Process

Our federal grant program management methodology sets the standard for client service and engagement across the disaster recovery and mitigation industry. Our approach is informed by direct experience with the City and federal agency policies, systems, and tools assisting subrecipients after large disasters.

- ✓ Audit-ready files
- ✓ 1:1 engagement
- ✓ Federal compliance
- ✓ Risk assessment

We deliver high quality, audit-ready files to allow the City to not only quickly implement its grant-funded programs but, more importantly, ensure the funding is retained. Our methodology emphasizes community outreach, advocacy, and federal compliance, meaning that our team aims to integrate seamlessly with other contractors and City staff. This project philosophy ensures clear communication for all stakeholders and agile responsiveness to our clients and their constituents.

Technology

Tetra Tech's scalable technologies streamline the grant management process. Our *RecoveryTrac*™ suite is a fully featured disaster and grant management application designed to address the needs of grant managers, clients, and subrecipients. This robust software tracks all phases of the grant cycle, including enrollment, data intake, approval, payment, and closeout. Our *RecoveryTrac*™ software provides cloud-based data management and analytics for documentation, processing, and submittal, as well as real-time tracking of damage assessments, site visits, inspections, and any other identified data need. We will utilize our extensive *RecoveryTrac*™ technology to intake, track, and organize project documentation and materials.

- ✓ Cloud-based data management
- ✓ Easy to use web interface
- ✓ Information intake
- ✓ Documentation retention
- ✓ Quantitative and qualitative data capture

Response to Scope of Work (SOW)

Our firm is committed to fulfilling the primary mission to help the City recover from disasters. We are prepared to lead the City's effort by leveraging federal funds to deliver a comprehensive disaster grant management program.

Our approach takes input from the community and applies best practices from across the nation. This approach is based on more than $70 billion of disaster grant funding experience and decades of individual staff experience working with clients across the U.S. to maximize reimbursement and obtain available disaster-related funding from federal funding sources, including the FEMA, HUD, FHWA, USACE, and the U.S. Department of Agriculture (USDA) NRCS. Our services will include:

- Program Design
- Technical Assistance
- Grant Identification
- Documentation Support
- Compliance
- Pre-Audit and Audit Support
- Eligibility assessments
- Financial Management
- Subrecipient Management
- Communications
- Reporting
- Executive Briefings
- Inter-Departmental Coordination

In addition, Tetra Tech offers the City the most comprehensive set of additional services of any firm in the emergency response industry. Included below is a summary of the services offered by Tetra Tech and teaming partners that may be needed in the event of a disaster response.

- Strategic planning/action planning
- Subrecipient grant management
- Program management
- Emergency response planning
- Emergency Operations Center (EOC) staff augmentation
- Call center, logistic, and communication support
- Field data collection and reporting (dashboards)
- Air quality evaluation and testing
- Construction management services
- Continuity of operations staffing for critical infrastructure

Prioritizing Recovery Projects

Following catastrophic disasters, Tetra Tech has assisted clients throughout the country in managing recovery operations from end to end. We understand how important it is to align recovery projects with the mission and vision of the community and to prioritize projects that support the community's goals and objectives. We want to ensure the City not only recovers from a disaster but also maximizes opportunities to build back stronger. This requires coordination with key stakeholders to assess and address the following elements of community resilience as identified in the National Disaster Recovery Framework (NDRF).

SOW Item 1: FEMA Public Assistance Advisory Services

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. Tetra Tech has far-reaching experience in assisting clients in post-disaster grant application, administration, program management, and project delivery, including direct experience with all funding categories of the FEMA PA Program. Our team has extensive experience assisting local and state governments with navigating this process and works with officials to properly manage and document work that is eligible for federal funding through FEMA programs. Our experience supporting clients with FEMA programs includes:

- FEMA PA Program
- Section 406 mitigation and Section 428 alternative procedures program
- FEMA Hazard Mitigation Grant Program (HMGP)
- Section 404 mitigation
- FEMA Individual Assistance (IA) Program
- FEMA Flood Mitigation Assistance Program (FMA)

Disaster Recovery Service Plan

Tetra Tech's grant administrators document eligible work and organize such documentation in an audit-ready format for future review. This includes guidance requiring that subrecipients monitor the expenditure of funds and document such expenditures in a manner that will satisfy regulatory audits in the future. This includes applicable local ordinances, state and federal laws, federal regulations such as 2 CFR 200, and other Federal grant requirements.

Our team will deliver a program that can guide the City through the cost reimbursement cycle. Tetra Tech will employ its time-tested, four-step CASE Management Approach to the federal grant program.

Step 1 - Collect the Data.

The biggest challenge we face is obtaining necessary data quickly and completely. We have found time and time again that our ability to work together to collect the data upfront will lead to success as we monitor the City's spending and build reimbursement documentation. We employ a number of methods to collect, store, and report data, including rapid and detailed program assessments, one-on-one meetings with departments to collect and secure data, and Microsoft PowerBI to report on the status of the project.

Result: We have the most robust data management capability in the industry. The City can trust our team to collect and manage the most critical data throughout each phase of the City's grant programs.

Step 2 - Analyze the Projects.

Whether it is analyzing thousands of labor records, assessing plans to make emergency purchases, identifying mitigation measures to protect damaged assets, or designing a multi-billion-dollar economic recovery program, the Tetra Tech team has unparalleled expertise the City may need to support recovery. Tetra Tech will work closely with the City from the beginning of our engagement to understand the project status, scope, and goals to determine the best course of action.

Result: We are committed to delivering national experts with a local perspective to deliver solutions. There is no problem too big for our team to solve.

Step 3 - Submit to FEMA.

We understand the need to expedite the recovery process and keep pace with program timelines. We have found that the best way to do this under FEMA's Delivery Model is actively working within the construct of FEMA's GrantsPortal side-

by-side with Tetra Tech's proprietary *RecoveryTrac*™ Technology data management tool. Aligning these systems will result in the ability to transmit data more quickly to FEMA and the City, maintain visibility in the status of its programs, and quickly illustrate when funds have been obligated. Our ability to integrate these programs has been a transformative tool that has led to a more streamlined and transparent process.

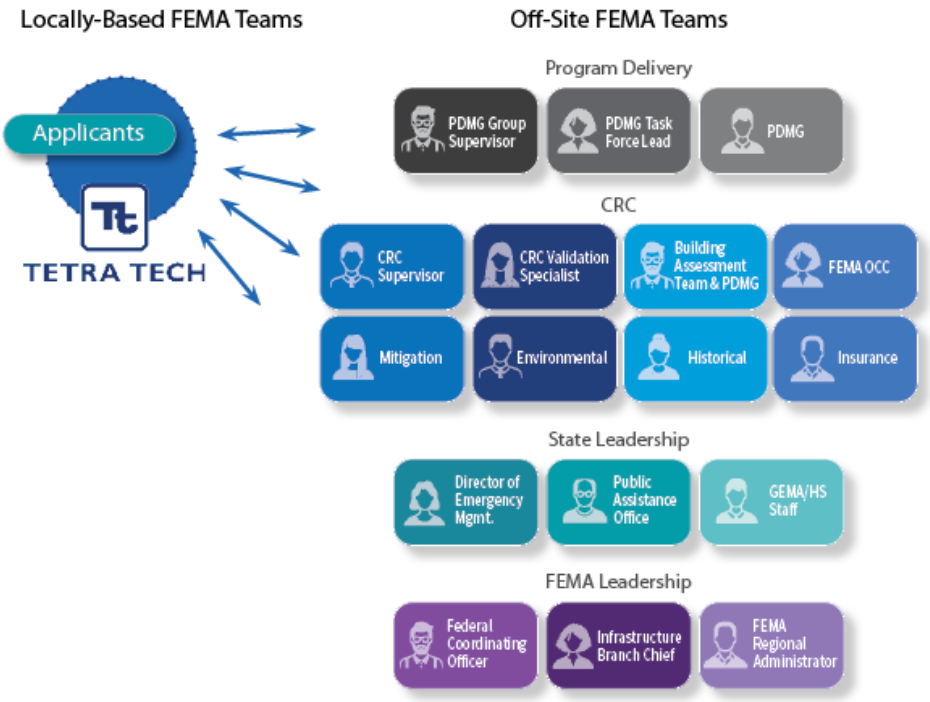
Result: We are committed to providing a rapid and compliant program that meets federal requirements for program administration, spending, and reporting.

Step 4 - Expedite the Requests.

When a project is submitted to FEMA for review, Tetra Tech is with the City each step of the way. Within each of the steps, FEMA and State personnel must review the submission. This often results in one or more RFIs or specialized requests or meetings. These requests must be dealt with timely and with the appropriate amount of information to maintain that the PW does not stall in the process or get moved to a previous step. Our team has responded to tens of thousands of RFIs and submissions of Essential Elements of Information (EEIs) as well as DURs for Detailed Damage Descriptions since 2017.

The exhibit below shows the number and types of personnel often involved in the process. After large disasters like Superstorm Sandy or the current COVID-19 pandemic, the City could be dealing with over 30+ FEMA and/or State personnel throughout the course of the programs, ranging from multiple Program Delivery Managers and Site Inspectors to dozens of staff located at FEMA's remote Consolidated Resource Center (CRC) to FEMA and State leadership.

Tetra Tech Helps Local Applicants Navigate FEMA's Complexities



Result: From best-in-class customer service to timely delivery of information, our team will stand beside subrecipients as they interact with the complex layers of FEMA staff involved in recovery, acting as the subrecipient's intermediary and advocate every step of the way.

FEMA Meeting Attendance

Our team members have worked with our clients to lead or participate in over hundreds of FEMA Exploratory Calls, Recovery Scoping Meetings and State/FEMA Applicant Briefings. In an effort for subrecipients to be prepared for the initial FEMA meeting, we will conduct pre-calls for the following:

Exploratory Call: Tetra Tech will provide example scripts and questions used by FEMA in past Exploratory Calls for subrecipients to review. We will work with the City as a "dress rehearsal" for the Exploratory Call.

Recovery Scoping Meeting (RSM): Tetra Tech will have the first draft of the Damage Inventory (DI) within forty-eight (48) hours of the City and FEMA scheduling the RSM. We will request that the City provide comments back within twenty-four (24) hours, and we will incorporate comments immediately. We will have electronic and printed copies of the DI prior to the official RSM for distribution to FEMA, the City, and the departments.

Throughout the course of our engagement, Tetra Tech may also be called upon to support ad hoc or scheduled meetings with the State and FEMA staff. These meetings may include 406 mitigation proposal reviews, ad hoc meetings with CRC / informal RFI meetings, regularly scheduled meetings, and additional meetings to maintain project forward momentum/progress.

Our approach will include pre-calls and preparation prior to meetings with FEMA. This will include preparation of agendas, PowerPoint slides, technical memorandums, and technical studies. In each meeting Tetra Tech will also provide notes from FEMA meetings, which will be made available to all participants to memorialize the discussion.

SOW Item 2: FEMA 404 and 406 Hazard Mitigation Grant Program

Tetra Tech maintains a best-in-class hazard mitigation team with expertise in maximizing the benefits of utilizing this program, including reducing future losses for residents and the federal government by identifying and producing hazard mitigation proposals that:

- Incorporate resiliency measures;
- Maximize the amount of hazard mitigation funding for the City;
- Utilize proven cost-effective mitigation measures (FEMA's Appendix J, 100% rule, and Benefit Cost Analysis tool);
- Ensure the most up-to-date federal and state environmental guidelines are followed
- Apply Wind and Flood Retrofit best practices (FBC, ASCE); and
- Ensure possible opportunities to incorporate hazard mitigation are maximized.

> Tetra Tech is FEMA's Region 6, 7, and 8 Hazard Mitigation Technical Assistance Contractor for the suite of Hazard Mitigation Programs.

Hazard mitigation is an essential tool to break the cycle of damage due to disasters. Tetra Tech is a leader in assisting states and municipalities in hazard mitigation planning and program execution. As the recovery to a disaster begins or preparations are made prior to a future disaster, it is critical that all operations consider available hazard mitigation opportunities. The Tetra Tech team has the expertise and experience to coordinate the City's efforts to support the consideration of all mitigation options. Tetra Tech provides the following services:

- Mitigation Program Administration
- Mitigation Planning and Hazard Assessment
- Section 404 and 406 Mitigation Integration

- Hazard Mitigation Assistance (HMA) Program Application(s) and Implementation (HMGP, FMA, and L-PDM/CDS)

Subrecipients participating in the FEMA PA Program can access Section 406 Mitigation funds during the development of PWs for damaged public facilities. The Section 406 program is designed to enhance the facility's ability to perform against future disasters, thus protecting it from repetitive loss. By maximizing Section 406 Mitigation opportunities, the City can reserve more finite funding sources such as HMGP or CDBG-DR to satisfy other unmet needs. Increasing the use of Section 406 Mitigation funds will also add to the total amount of PA funds, thereby increasing the HMGP funds made available to the State.

404 Hazard Mitigation Grant Program Support

At the City's request, the Tetra Tech team will assist with identifying future mitigation grant opportunities to supplement the disaster-related mitigation programs through FEMA's 404 Hazard Mitigation Grant Program (HMGP) or Flood Mitigation Assistance (FMA) program. Tetra Tech is prepared to assist the City with all Hazard Mitigaiton Assisstance (HMA) programs including both HMGP and FMA services, including preparing applications, conducting outreach to potential property owners, developing application scopes, assessing cost-effectiveness (benefit-cost analyses or BCA's), regulatory clearances, grant implementation during the period of performance, and audit and closeout services. Currently, Tetra Tech is assisting communities in Iowa, Florida, North Carolina, Georgia, California, Hawaii, Mississippi, Pennsylvania, New Jersey, New York, South Carolina, Florida, and Texas, including the City of Houston with Hazard Mitigation Assistance (HMA) grants including both HMGP and FMA.

Did You Know?

Our team has successfully worked with the City of Houston on the Flood Mitigation Assistance (FMA) grant over the last two years alone to obtain $38.9M in federal funding for Home Elevation grants. This unprecedented commitment by the City and the Tetra Tech team will contributed to over 100 homeowners in the floodplain to elevate their homes out of harm's way.

Additionally, over the past 4+ years we've assessed drainage issues associated with the City's drainage system and have reviewed hundreds of Capital Improvement Plan (CIP) projects for funding eligibility.

406 Hazard Mitigation Grant Program Support

With all permanent work PA projects, the Subrecipient has the option to request hazard mitigation measures as part of the project – termed a hazard mitigation proposal (HMP) – which can be funded up to an equivalent amount of 100% of the eligible repair or replacement costs. Where an HMP is 15% or less of the project cost, the HMP can be immediately approved by FEMA during project formulation. HMPs that are >15% but <100% that are from FEMA's pre-approved list of mitigation measures (aka Appendix J) are considered automatically cost-effective and approved during the project formulation process. For HMP >100% the Subrecipient must submit a BCA (minimum threshold ratio of 1:1) to FEMA for approval prior to starting the work.

428 Program Election Support

Section 428 projects are funded up to the fixed cost estimate for eligible repair, replacement, and mitigation work, and if actual costs are less than the fixed estimate, the Subrecipient may retain the excess funds for other approved uses. The Subrecipient may prepare and submit an estimate to FEMA for validation or may choose to allow FEMA to prepare the estimate. FEMA will validate each estimate for cost reasonableness, and if the estimate is within 10% of the local average weighted unit prices or industry standard construction cost data, will accept the Subrecipient's estimate.

Excess funds may be used for other approved or eligible work but cannot be used to offset the 10% local cost share. The Subrecipient,

Tetra Tech has unmatched depth in the areas of Benefit Cost Analysis (BCA) on 406 and 404 mitigation projects.

Our team is experienced in utilizing social and economic benefits to increase BCA ratios when handling some of the most complex projects.

FEMA, and the State have 12 months from declaration to reach agreement on the fixed cost estimate. Project formulation (DDD, eligible SOW, HMP approval) follows the same policies as Section 406 project development, and projects may be consolidated during formulation to allow maximum flexibility in developing the SOW. The governing grant document is a Fixed Cost Estimate Subaward Agreement Letter. Individual project estimates greater than $5 million will be reviewed by a FEMA expert panel.

HMGP Grant Monitoring

The lifecycle of a project from grant award through closeout requires clear communication with the State and FEMA. Often changes in project scope requiring a change order or the request of an extension of a project's period of performance may be required. These must be submitted with appropriate supporting documentation to the State and FEMA for approval. For some changes there are procurement requirements that must be followed to avoid a de-obligation of funds. Additionally, if FEMA denies a request or determines some work was ineligible, the action may trigger an appeal process. In addition, quarterly reporting requirements and regular documentation management must occur to keep the project on track.

Tetra Tech will provide grant monitoring services, which includes:

- Project administration
- Construction inspection (as requested)
- Time extension requests
- Quarterly reporting
- Issues resolution
- Project amendments
- Payment processing

Additionally, as updates and adjustments to HMGP policies are made, such as the Hazard Mitigation Grant Program Management Costs (Interim) Policy and the replacement of the Pre-Disaster Mitigation program with the BRIC program, Tetra Tech will develop info sheets and conduct briefings with City staff to highlight and crosswalk policy changes and implications for new or ongoing HMGP projects. Furthermore, Tetra Tech's subject matter experts have decades of policy experience and have applied novel remedies, methods, and approaches to enable solution sets and common ground to develop between applicants, FEMA, and the State to resolve roadblocks and facilitate issue resolution and project progress.

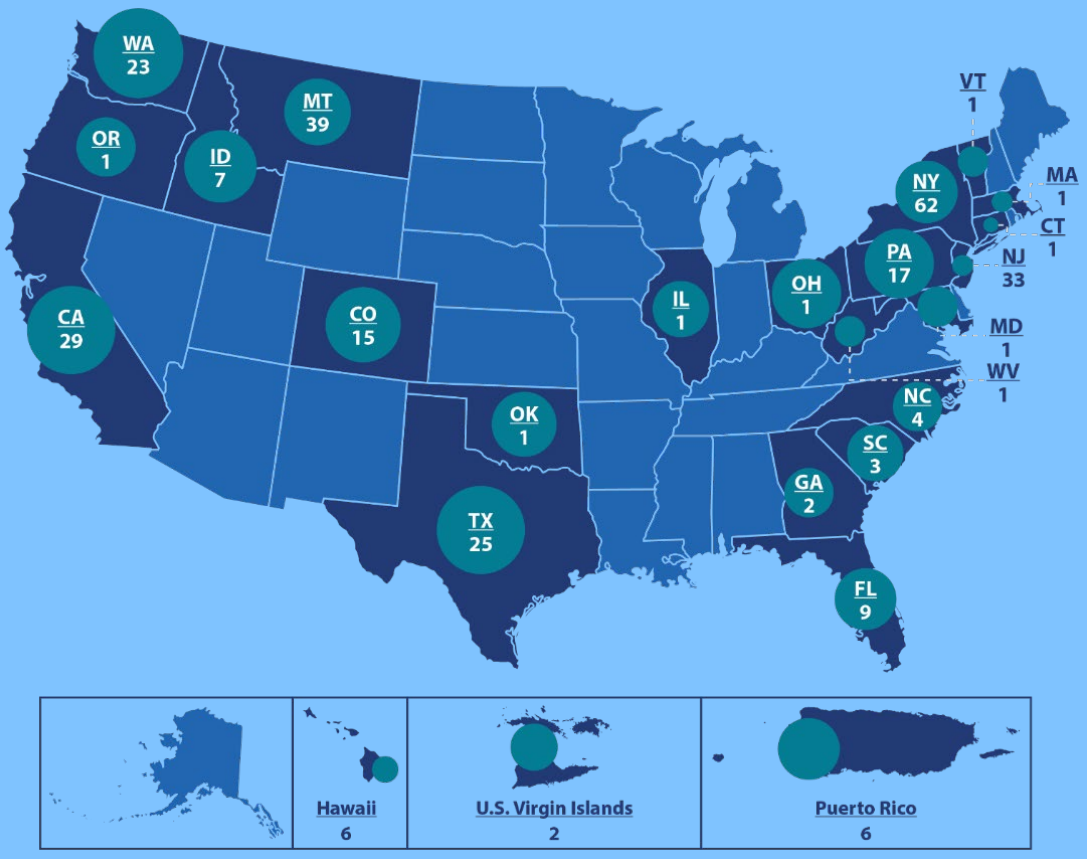
Hazard Mitigation Plan Development/Update

Tetra Tech has 20 years of experience in local, tribal, and state HMPs. We stay well-informed of new FEMA requirements and employ state-of-the-art hazard modeling to create enhanced planning products. Further, we have proven experience in integrating climate change threats and adaptation and resilience measures as part of the hazard mitigation planning process.

Each of our hazard mitigation planning projects has met the requirements of state or federal grant programs to provide continued access to funding. The planning projects noted on the map and in the table below involved working in partnership with the communities, counties, tribes, special purpose districts, and states to reduce natural risk and increase community resilience. This included conducting detailed vulnerability assessments and integrating changing future conditions to help prioritize an action plan and pave a pathway to implementation. Many of these planning efforts included the original plans and subsequent 5-year updates due to our continued strong relationships and dedication to reduce risk in these communities.

Tetra Tech has Developed more than 250 Mitigation and Resilience Planning Projects Nationwide

- State
- Local (City/County)
- Tribal Nations
- Special Purpose Districts



The Table below identifies recent HMP efforts performed by the Tetra Tech team, inclusive of detailed risk assessments and identification of mitigation and adaptation strategies. In many cases, we have worked with these same HMP partners 2-3 times developing their original and updating their plans every five years.

Hazard Mitigation Planning Experience Since 2018

FEMA Region	State	Jurisdiction(s)
I	MA	State: State of Massachusetts
I	CT	State: State of Connecticut
II	NJ	State: State of New Jersey; Counties: Burlington, Camden, Cape May, Essex, Gloucester, Hudson, Hunterdon, Mercer, Morris, Passaic, Sussex, Warren
II	NY	Counties: Broome, Cattaraugus, Cayuga, Chenango, Cortland, Dutchess, Erie, Genesee, Herkimer, Lewis, Livingston, Monroe, Onondaga, Orleans, Otsego, Putnam, Rockland, Suffolk, Tioga, Tompkins, Ulster, Westchester, Wyoming, and Yates
III	MD	Jurisdictions: Baltimore
III	PA	Counties: Armstrong, Bedford, Chester, Dauphin, Delaware, Fulton, Lancaster, Lehigh and Northampton (joint plan), Pike, Schuylkill, and Westmoreland
III	WV	State: State of West Virginia
IV	FL	Counties: Walton
IV	GA	Counties: Atlanta-Fulton (AFCEMA), Gwinnett
V	IL	Counties: Cook
V	OH	Counties: Franklin
VI	TX	Counties: Fort Bend, Frio, Galveston, Harris, Llano, San Saba, and Smith Jurisdictions: Brownsville Public Utilities Board, and Sugar Land
VIII	CO	Counties: Douglas, Routt
IX	CA	State: State of California; Counties: Contra Costa, Del Norte, Humboldt, Los Angeles, San Mateo, Sonoma, Tri Valley (Livermore, Pleasanton, and Dublin), and Ventura; Water Districts: Crescenta Valley, East Orange, Marin Municipal, Metropolitan; Jurisdictions: Concord, Los Angeles, Norwalk, Oakland, Pico Rivera, and Roseville; Tribal: Santa Ynez Band of Chumash Indians
IX	HI	State: State of Hawaii; Counties: Hawaii, Honolulu, and Kauai
X	ID	State: State of Idaho; Counties: Ada, Canyon, and Gem; Universities: Boise State
X	OR	Jurisdictions: Portland
X	WA	Counties: Adams, Chelan, Cowlitz, Grant, Lewis, and Thurston

**City plans are inclusive of their incorporated and unincorporated areas; and often involve special purpose districts and tribal nations.*

Enhanced Risk Assessments

Tetra Tech is a national leader in quantitative risk assessments for hazards, maximizing infrastructure continuity, and implementing countermeasure and resilience strategies to reduce hazard risk. Our team of expert threat and risk professionals, security analysts, emergency managers, and military planners have identified and continue to refine and implement a catalog of countermeasures across the country that address underlying risks and position organizations to better withstand the impacts and consequences of future disasters.

Tetra Tech's founding principle is to lead with science. As such, our team recognizes that risk assessments are not static and uses state-of-the-art technology, practices, and concepts to identify natural, technological, and human-caused risks and threats that provide a realistic, comprehensive understanding of the potential impacts to people, infrastructure, technology, supply chain, and facilities. We also examine how changes in conditions (i.e., development, climate) impact the assessments and integrate this information into our development of recommendations by assessing their feasibility and analyzing alternatives. This concept, called "risk-informed planning," provides professionals with the ability to measure the risk reduction impacts of preparedness in the future to provide cost-effective mitigation solutions today.

Tetra Tech's modular approach to threat, hazard, vulnerability, and risk assessment incorporates a combination of a quantitative risk assessment and specification of specific countermeasures that will directly reduce our clients' organizational risk. Our team carefully customizes the scope and methodology of each assessment to meet the specific needs and goals of each of our clients based on their business and the markets they serve. In response to the diverse needs of our customers, our recent work has included on-site asset evaluations, employee interviews, plan reviews, scenario development, quantitative modeling, risk ranking, and countermeasure identification and implementation.

As noted above, Tetra Tech has worked on over 250 mitigation and resilience planning projects - each have included detailed risk assessments. Our team develops detailed asset inventories to evaluate structure/infrastructure-specific loss estimations that help inform mitigation and adaptation strategy identification. We have evaluated risk and vulnerability for the following natural hazards of concern: climate change; dam failure; drought; extreme temperature; flood (coastal, riverine, urban/stormwater); landslide; sea level rise; seismic; storms; tsunami; and wildfire.

In addition to the planning projects listed in the table above, the following table summarizes additional hazard-specific risk assessments to further demonstrate our experience.

Additional Example Hazard-Specific Risk Assessments

Project	Description
State of Idaho P-154 Seismic Vulnerability Assessment	Tetra Tech is currently completing a seismic vulnerability assessment of targeted critical facilities in 4 south-eastern Idaho counties and part of its update to the Idaho State Hazard Mitigation Plan. This assessment applied the FEMA P-154 Rapid Visual screening protocol for pre-disaster planning. Over 110 structures are being assessed in Bear Lake, Caribou, Franklin, and Oneida Counties. Once the P-154 screening process is completed, a loss estimation will be performed using the Advanced Engineering Building Model (AEBM) in Hazus. The deliverable from this project will be a resilience toolkit for each of the 4 counties and will identify resilience strategies for the vulnerabilities identified by the assessment. Each of the counties will then be able to use the toolkits to inform future updates to the local hazard mitigation plans and identify projects for future grant applications.
City of Los Angeles, CA – Comprehensive Flood Hazard Management Plan - Update	Tetra Tech completed the 5-year update to the 2015, City of Los Angeles Comprehensive Floodplain Management Plan. The 2015 plan was also prepared by Tetra Tech. The objective of this planning process was to maximize the City's credit potential under its Community Rating System (CRS) program. There is significant flood risk within the City of LA. With over 6500 structures at risk, over 9000 flood insurance policies in force exceeding $5.6 million per year in premium, enhancing its benefits under the CRS program is very important. A comprehensive flood hazard risk assessment was conducted for multiple flood scenarios (10, 50, 100 and 500-year events). This risk assessment

Project	Description
	was utilized to communicate the flood risk to residents as well as identifying and prioritizing flood loss reduction actions.
City of Houston, TX Hurricane Harvey Flood Mitigation	To support HMGP application development, Tetra Tech performed hydraulic and hydrology modeling to further understand the flood risk and aid in the identification of a mitigation project designs post-Hurricane Harvey. In addition to the flood study, Tetra Tech performed engineering design, and generated a project budget, scope, and schedule. The projects required review of existing models and development of post-project models to determine the level of effectiveness.
City of Port Moody, Canada Extreme Weather Resilience Plan	The focus of this plan was to identify solutions to adapt to the changing climate by adjusting decisions, behaviors, and activities to account for existing or expected changes in climate while not increasing greenhouse gas emissions. The plan considers current and future climate projections and assessed the vulnerability of the population and a subset of the City's community lifelines to the following events: coastal storms; extreme cold; extreme heat; increased precipitation (rain/snow); and long dry spells.
Orange County NY Military Installation Resilience Study	Tetra Tech worked with Orange County, the U.S. Military Academy/U.S. Army Garrison-West Point and its surrounding communities to identify and analyze risks to the electric energy supply. The hazards aligned with the Hazard Mitigation Plan including flood, high winds, and seismic. Infrastructure-specific risk was assessed, and projects identified and prioritized to increase energy security to the study area through a collaborative process with stakeholders and the general public.

Community Rating System Support

As a national leader in technical support for communities wanting to maximize their CRS Program potential, Tetra Tech helps these communities join or increase their CRS Program ranking. Tetra Tech's depth of understanding of the DMA 2000, NFIP, and CRS Programs allows us to develop and conduct a plan process that supports these programs, promotes participation, and increases the benefits to the local program administrators and policyholders. We currently have existing **on-call contracts with three of the four highest-rated communities in the nation:**

- Roseville, California – CRS Class 1
- King County, Washington – CRS Class 2
- Pierce County, Washington – CRS Class 3

Tetra Tech develops HMPs according to the CRS 10-step methodology for mitigation plan development in an effort to maximize Activity 510 points. In addition, our team develops Repetitive Loss (RL) Area Analyses to support CRS ratings. For example, our team has conducted these analyses for Los Angeles County and the City of Los Angeles, California. The City of Los Angeles scored 426 points, and the County of Los Angeles scored 466 points, both inclusive of the RL Area Analysis component.

Substantial Damage Response Planning

In the aftermath of the impacts for Hurricane Harvey, substantial damage program administration was identified as a large gap in local capacity and capability by FEMA Region 6. The size and severity of that incident event caught many communities ill-prepared to apply their regulatory responsibility of substantial damage determination for structures properties located in the SFHA. Tetra Tech staff led the execution of a FEMA HMTAP task order to provide technical support to FEMA Region 6 to develop tools, templates, and protocols for the development of Substantial Damage Response Plan (SDRP) under its Ideal State initiative, to help communities build their local capacity and capability to be better prepared to respond in the aftermath of a major incident event, especially as it pertains to maintaining NFIP compliance.

Tetra Tech developed a model SDRP approach and supporting tools and templates that ensure that an SDRP is scalable, agile, and adaptable to any scenario. The communities varied in size and capability, had been recently impacted by significant events, and had significant deficiencies identified by FEMA during post-event Community Assistance Visits (CAV). The SDRPs were scaled to each community's capabilities and capacity. The lessons learned from these planning

efforts resulted in the development of a model SDRP, a suite of two-page fact sheets on how to develop an SDRP, and outreach materials that could be used by Region 6 to promote the Ideal State Initiative.

Environmental and Historic Preservation Reviews

Since 2007, Tetra Tech has completed EHP reviews for more than 31,000 individual projects and properties. Our EHP team can support all facets of the National Environmental Policy Act (NEPA) process, Section 106 support, Section 7 compliance, Executive Order 11988 Floodplain Management), and Executive Order 11990 (Protection of Wetlands) compliance.

Flood Modeling

Tetra Tech has over two decades of experience studying flooding problems and solutions for the USACE, NRCS, state agencies, and local agencies. Our expertise and knowledge in evaluating hydrologic systems is applied on specific water resource project types, including: water resource and flood damage assessment; stormwater infrastructure and drainage assessment and design; flood control design (including dams, channels, levees, detention basins and bank protection); hydraulic structure designs; erosion/sedimentation studies; stream restoration and wetland design projects; dam and levee safety evaluations; reservoir operation/optimization studies; flood control and floodplain management studies and mapping; development of flood warning systems; dam break flood studies and contingency planning; and surface and groundwater supply analysis.

SOW Item 3: Financial and Grant Management Support

Tetra Tech will provide experienced professionals with extensive experience in large-scale disaster management and related audit services. The Tetra Tech team will provide guidance and assistance to the City on documentation requirements, keeping in mind the 2 CFR 200, HUD, and other federal agency's documentation retention requirements. Specifically, we will help to institute processes that validate that projects are fully supported and "audit ready," based on the cost types claimed. We will confirm that the process includes a checklist/program guide to make grant and applicants aware of all required documentation for the major different cost types incurred.

Critical review points include documentation demonstrating proper procurement and contracting and supporting documentation is used given contracting type (e.g., lump sum, unit price, force account). Other areas of consideration include review of submitted charges for duplicate billings, compliance to state and federal labor requirements and other areas where overcharges typically occur, such as overhead & profit markups, labor burden claimed on force account, or duplicate billings.

We frequently review appeals databases and Department of Homeland Security, Office of Inspector General (DHS-OIG) reports to identify trends and common challenges in federal grant management, with a focus on proactive risk mitigation. Our goal is not to only complete after-action reviews and implement remediation procedures after misses or near misses, but to also pre-empt potential challenges based on prior experience and industry awareness. These preventive policies help avoid potential issues in compliance, reporting, and program administration without learning "the hard way."

In addition to our technical assistance function, our team members are also former members of state and federal grant management entities. We maintain relationships with FEMA at the highest levels and engage in a non-confrontational, collaborative working relationship with FEMA representatives to minimize difficulties and expedite program delivery.

While Tetra Tech will work with FEMA, the State, and the City to proactively resolve funding challenges through our collaborative approach, applicants have the legal right to appeal decisions and judgments made by the federal government if resolution cannot be reached. Tetra Tech will implement a systematic approach by which appeals are researched (including the PA Appeals Database reviews), developed, and submitted. If a first appeal to the FEMA regional administrator is unsuccessful, Tetra Tech will assist the City with drafting the second appeal for submission to the national

director of recovery. In the event that we would be engaged by the City to assist in an appeal, we have a legal support team that will collaborate with the City and Tetra Tech on the legal/FEMA policy-related components of the appeal.

Categorizing, Recording, Tracking, and Filing for Financial Reimbursement

Tetra Tech has time-tested cost tracking SOPs used to evaluate the City's cost documentation, including document management integration and associated digitization. This approach represents a comprehensive end-to-end solution for the City that will be web-enabled so that reviewers will have real-time access to the most up-to-date cost and supporting data. Taken to its next logical step, this solution can be accessed by federal agencies, such as FEMA and HUD, to perform review without incurring the expense of traveling to project sites.

Internal Controls and Compliance Monitoring

The Tetra Tech team helps clients identify, understand, and manage risks through internal controls and compliance monitoring. Our team will apply our extensive experience in internal controls, risk management, regulatory compliance, and technology to provide a full range of control and risk advisory services. Our team will assist in evaluating processes and controls, perform testing, and recommend control enhancements to mitigate overall program risk.

Review of Contracts and Procurement

Tetra Tech utilizes a procurement checklist contained in Tetra Tech's Standard Operating Procedures (SOPs) in the review process of disaster procurements and contracts. The checklists contain requirements from the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments (44 CFR 13.36-FEMA's purchasing regulation) as well as requirements from the Federal Highway Administration such as Form FHWA-1273 and associated requirements identified in the Contract Administration Core Curriculum Participant's Manual and Reference Guide of 2006, and OMB Super Circular 2 CFR 200.

For the City of Philadelphia, Tetra Tech helped the City develop its own Grants Compliance and Controls Guide as a grants manual for all COVID-19 funding sources. This document helped guide documentation collection across the City and establish a unified standard for audit compliance which was utilized in subsequent Controller audits. Additionally, this valuable resource can be used as a framework for the City to utilize beyond COVID-19.

Our team has performed 100+ 2 CFR 200 contract eligibility reviews.

Our team knows the ins and outs of grant management, having worked for Grantees like Louisiana, Connecticut, Vermont, Puerto Rico, Massachusetts, Florida, and New York.

Fraud, Waste, and Abuse

Our team's approach is focused on fraud prevention and deterrence, continuous improvement of current anti-fraud controls and fraud detection and monitoring with data analytics. We employ a flexible, case-sensitive approach to each fraud investigation. We will implement procedures including review, approval, and the related controls to detect potential duplicate payment requests during claims processing. We will use various data analytics tools to identify anomalies in claims, including data extraction techniques to prevent and detect duplicate payments.

When we identify an expense or claim that requires further analysis, we will request additional information from the vendor to supplement any claims that we deem deficient. We will design specific templates, including types of costs and the support that will be needed to adequately support the claims. The goal of requesting additional information will be to reimburse the costs, not deny payments. Therefore, we will work with the City to address all avenues before we deny any costs submitted for reimbursement.

Financial and Schedule Management

During the program initiation phase, the master schedule and budget baseline define projects to a common level through the definition of the work breakdown structure (WBS). As projects advance through the delivery lifecycle, the master schedule will be updated to reflect the additional scope and schedule details or adjusted when unforeseen obstacles arise.

The Tetra Tech Team will control the master schedule with input from all stakeholders and will analyze impacts from individual projects or activities programmatically. We have extensive experience in all aspects of project scheduling for many different project delivery methodologies. Our project controls professionals bring decades of scheduling experience to this contract and are fluent in a full range of software applications. The master schedule will:

- Provide a logical, structured, and feasible timeline for completing the program within the specified time highlighting compliance requirement.
- Identify the critical path from kickoff through final completion and closeout emphasizing dates for key deliverables submittal.
- Assist the program team in monitoring and measuring the program's progress, focusing on early identification and mitigation of variances.

The program master schedule progress and budget performance will be updated on a regular basis throughout the life of the project. Monthly, the Tetra Tech Project Manager will perform the following reviews:

- **Program Schedule Review:** As part of the monitoring and control processes, the Tetra Tech Program Manager will review all projects included in the master schedule on a monthly basis and provide any updates or adjustments to the City Project Management Team.
- **Budget Performance Review:** The program budget will be monitored and provided to the Project Manager, including approved Task Order amounts, actual costs, forecasted costs, and average spend by task. Any trending above or below benchmarks will be brought to the attention of City Program Manager and remedy or redirection will be discussed.
- **Disbursement Tracking:** Tetra Tech will track, review, verify, and approve funds distributed as requested by City. The Tetra Tech Team will be responsible for the steps of verification of costs and reconciliation.
- **Monitor and Report Overall Program Costs:** A key role of the Tetra Tech Program Manager is that of financial management. Accurate and timely reporting on actual costs, forecasting of accrued costs, and comparison to percentage of work completed and schedule are integral to effective program management.
- **Monitor/Report on Subcontractor Costs:** Tetra Tech will monitor and report on subcontractor cost to ensure they are in alignment with the overall approved cost approved by City Project Manager and that they remain the best value to the project management team.

Cost Controls

Tetra Tech has time-tested cost tracking SOPs used to evaluate the City's cost documentation, including document management integration and associated digitization. This approach represents a comprehensive end-to-end solution for the City that will be web-enabled so that reviewers will have real-time access to the most up-to-date cost and supporting data. Taken to its next logical step, this solution can be accessed by federal agencies, such as FEMA and HUD, to perform review without incurring the expense of traveling to project sites.

Project Cost Documentation

As one of the world's largest engineering firms with clients around the globe, Tetra Tech's cost estimating experience includes high profile reconstruction projects like Houston's Wortham Theater after Hurricane Harvey, to large complex infrastructure projects such as the Inner Harbor Navigation Canal Lake Borgne Surge Barrier construction near the confluence of and across the Gulf Intracoastal Waterway, and the Mississippi River Gulf Outlet near New Orleans.

Our team has reconciled over $70B in federal grants related documentation.

Our team knows the ins and outs of grant management, having worked for Grantees like Louisiana, Connecticut, Vermont, Puerto Rico, Massachusetts, Florida, and New York.

Eligible Purchase Review

Tetra Tech can assist in the collection and review of documentation from City departments, including review and analysis of:

- Collected documentation so that costs are reasonable and eligible
- Collected documentation so that the work and costs are adequately documented, are included in the approved scope of work, and are deemed eligible
- Invoices and receipts by checking the dates and amounts so the dates fall within the disaster event range and are reasonable for the purchase
- Contract labor timesheets by checking dates and hours worked per employee so the dates fall within the disaster incident period and are recorded as direct labor required as a result of the disaster
- 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

Reasonable Cost Analysis

The Tetra Tech team is highly experienced in performing forensic cost reasonable analyses, which is useful if procurement issues arise when a PW is challenged by FEMA. As an engineering firm with over 30,000 technical professionals and staff, we have all the resources needed to defend a cost challenge by FEMA, from the simplest road repair to a billion-dollar levee repair or wastewater system plant relocation. No matter the PW, Tetra Tech has the internal staff resources to assist the City with defending its PWs successfully.

Tetra Tech will prepare, on behalf of the City, completed packages for submission through Grants Portal for obligation and Requests for Reimbursement (RFR) to the State, including:

- Audits of claimed costs by comparing documentation and dates with the project scope of work and period of performance for the following:
    - Contract labor
    - Materials/supplies
    - Force account equipment
    - Force account labor
        - Including special issues like exempt employees, benefits/policies in place, and 40-hour threshold issue
- Ensure all work complies with the federal procurement requirements and environmental and historic preservation rules and regulations
- Reconciliation of force account labor, equipment, and material data
    - Avoiding possible duplication of benefit issues in projects which may have insurance coverage or be the responsibility of other federal agencies
    - Cost summary creation

Regulatory and auditing agencies can efficiently search and review electronic project files as required, and the *RecoveryTrac*™ system data is exportable and allows for importation into other applications such as the FEMA GrantsPortal.

Appeal and Audit Actions

Tetra Tech will provide experienced professionals with extensive experience in large-scale disaster management and related audit services. The Tetra Tech team will provide guidance and assistance to the City on documentation requirements, keeping in mind the 2 CFR 200, HUD, and other federal agency's documentation retention requirements. Specifically, we will help to institute processes that validate that projects are fully supported and "audit ready," based on the cost types claimed. We will confirm that the process includes a checklist/program guide to make grant and applicants aware of all required documentation for the major different cost types incurred.

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In addition to our technical assistance function, our team members are also former members of state and federal grant management entities. We maintain relationships with FEMA at the highest levels and engage in a non-confrontational, collaborative working relationship with FEMA representatives to minimize difficulties and expedite program delivery.

Our team has worked with FEMA to integrate 20+ improvements into FEMA's Grants Portal system.

In 2020, Our team met with FEMA Leadership multiple times on issues related to COVID-19 that has led to policy changes to the betterment of subrecipients across the U.S.

While Tetra Tech will work with FEMA, the State, and the City to proactively resolve funding challenges through our collaborative approach, applicants have the legal right to appeal decisions and judgments made by the federal government if resolution cannot be reached. Tetra Tech will implement a systematic approach by which appeals are researched (including the PA Appeals Database reviews), developed, and submitted. If a first appeal to the FEMA regional administrator is unsuccessful, Tetra Tech will assist the City with drafting the second appeal for submission to the national director of recovery. In the event that we would be engaged by the City to assist in an appeal, we have a legal support team that will collaborate with the City and Tetra Tech on the legal/FEMA policy-related components of the appeal.

Tetra Tech's close relationships with federal agencies results in a collaborative, nonconfrontational approach. This cooperative approach results in strong working relationships, frequent discussions, fewer disputes, and a faster, more efficient recovery process that ultimately generates higher financial reimbursement to our clients. As previous and current clients will attest, our relationships with FEMA and HUD have allowed us to be strong advocates for our clients' needs and to achieve truly successful results.

Final Inspections

To close out large projects and receive remaining funds, the City must request a final inspection and submit a closeout form through the State. Tetra Tech will conduct final inspection activities alongside the City and the State. In addition to

physically conducting the final inspections for projects, Tetra Tech will assist with writing closeout versions to large project PWs and any final project accounting.

Support for Audit Processes and Activities

Tetra Tech's transparent reporting capabilities allow our clients to seamlessly provide federal and state agencies with the necessary information in the case of an audit or review.

Insurance and Other Funding Support

The prevention of duplication of benefits (DOB) is not only helpful, its statutorily required. The City is required to identify and pursue any and all alternate sources of funding for its recovery, including insurance, risk pools and similar risk mitigation funding sources. Properly identifying any applicable schedules of values, policies and coverage documents is crucial and tying damaged elements of covered properties is challenging. Tetra Tech will review all applicable coverages and work with the City to determine the nature of each claim- all with an eye toward maximizing the use of ALL funding sources and fully complying with all DOB prevention requirements.

Our team of insurance recovery professionals is ideally suited to assist the City in addressing this scope of work. Sometimes DOBs can be created by insurance or similar vehicles held by the City. Sometimes, there mya be potential DOBs created by work provided to disaster survivors by the City as well. This section outlines highlights of our approach to assist the City in an expedited recovery, maximizing reimbursement, and limiting future liability for the City and affected survivors/property owners.

Our approach to maximizing disaster recovery funding includes engaging insurance companies to account for insured and uninsured losses as well as understanding and submitting deductible payments for reimbursement. Services to be provided by Tetra Tech during this task include the following:

- Gather, review, and summarize insurance policies
- Accompany insurance adjuster to damage site (if applicable)
- Obtain insurance adjuster's summation of damage
- Develop or review insurance claim filing
- Monitor status of claim processing
- Confirm that insurance claim proceeds are reconciled to appropriate project
- Record receipt of insurance proceeds on grant application to demonstrate subrogation and non-duplication of benefit

Managing insurance claim funding requires careful attention to avoid duplication of benefits and grant funding deobligations during closeout. Tetra Tech will confirm that insurance claims are properly filed, and the resulting proceeds are accounted for accurately to protect the applicants against such events.

Additionally, our team has experience implementing processes and procedures to identify and track duplication of benefits received from insurance, SBA, or other federal sources and analyzing how these benefits impact the applicant award eligibility based on federal regulations and program guidelines.

With other clients, we are engaged with preventing duplication of benefits with the services provided to homeowners through debris removal and remediation projects- often property by property.

Project Owner Data Collection and Analysis

Project Milestones

Building a complete picture of the insurance recovery process is essential. Tetra Tech's team members are experts in the digitization and correlation of data for each property. Our process is built on making a digital link between all documents and communication and then associating our team's analysis to determine the appropriate duplication of benefits that need to be eliminated by property. Important pieces of the overall picture that are tied together in the database include:

- Rights-of-Entry (ROEs)
- Communications with property owners and insurance companies
- Debris removal reports
- City costs for debris removal
- Insurance documentation
- Insurance proceeds payments
- Refunds for overpayment of insurance proceeds
- Determinations of uninsured properties
- Closeout letters

Project Constraints

Timing of the availability of the documentation of the cost incurred by each property from the City is the main driver of the ability to determine the actual duplication of benefit concerns for each property owner. In implementing the insurance recovery program, special attention to balancing program activity with the availability of these City costs is imperative to maintain a reasonable insurance recovery project budget.

Determine Duplication of Benefit and Collection of Eligible Proceed

Project Milestones

- Using the documentation collected during outreach, Tetra Tech will review information concerning insurance and duplication of benefit to identify the amount of proceeds that will need to be remitted to the City.
- One of the major successes of the Tetra Tech insurance recovery process is working with insurance companies that have not paid the property owners. These companies can have the insurance proceeds sent directly to the City eliminating redundant property owner interface. Our team can provide all invoices, bulk documentation ROE and Individual Property Report (IPR) access, and file uploading capabilities for insurance companies to process their claims in an efficient and timely manner.
- To expedite the insurance proceeds recovery process, Tetra Tech utilizes our case management software package *RecoveryTrac*™ to create, send, store, and track invoices to insurance companies or property owners.

Project Constraints

- During the recovery process insurance companies provide varying levels of support. At times it may be necessary to work with the Georgia Office of Insurance and Safety Fire Commissioner to provide guidance to the City and insurance companies.
- Property owners that have already received the available proceeds of an insurance policy may choose not to cooperate with the insurance recovery process. Tetra Tech will document all attempts made by the City to recover insurance proceeds from these property owners to be able to provide documentation to state and federal authorities of the reasonable efforts taken to alleviate duplication of benefit concerns.

Required Approvals by the City

- Tetra Tech will assist in scoping work processes and policies for the City for property owner refund and reduction requests from duplication of benefit due to additional debris removal costs being incurred outside of the City's program. When necessary, Tetra Tech will seek the City's approval for individual requests for reductions or refunds.
- There will be times when individual property owners have a difference of opinion on the amount of insurance proceeds that need to be permitted to the City based upon Tetra Tech's review. Our team will support the City in these situations to comply as fully as possible with federal and state regulatory requirements.

Identifying Additional Funding Sources

Tetra Tech has a long history working with subrecipients to identify alternative funding sources. We understand how federal funding sources can work in concert to reduce local financial impacts to the City, such as FHWA's Emergency Relief (ER) Program, NRCS Emergency Watershed Protection (EWP), HUD's CDBG-DR, CDBG-MIT or CDBG-CV programs, Treasury Coronavirus Relief Program (CRF) and State-level funding such as Senate Bill 7 – Local Cost Share assistance. For those projects that may require a local funding component, we will work with the Finance Department and departmental representative to identify and apply for this assistance, working this into cash flow projections and final cost calculations.

Our team members have decades of experience working within HUD's CDBG program eligibility framework, successfully leveraging public funds for our clients. We work with jurisdictions to develop action plans, complete applications, and identify, evaluate, and prioritize recovery projects, focusing on HUD eligibility. The Tetra Tech team has worked with dozens of communities across the nation to ensure that HUD-funded recovery programs are launched and implemented with long-term sustainability, risk reduction and elimination, and community safety and resiliency in mind.

For projects with multiple sources of funding, such as FEMA Public Assistance, our team has helped coordinate project details and separate the scopes of work for the different funding sources in the grant documentation. This tracking helps prevent the duplication of benefits, facilitates the invoicing process, and maximizes the available match funding. Our team is familiar with calculating duplication of benefits in accordance with the Stafford Act for subrecipients of HUD housing funds and for infrastructure and public facilities projects. We verify duplication of benefits by researching funding source databases, insurance documentation, and researching other available funding sources.

Throughout the recovery process, Tetra Tech identifies and clarifies required project cost share match provided by HUD for use on FEMA Public Assistance and Hazard Mitigation Projects. In a gargantuan effort, Tetra Tech staff is currently supporting the tracking and reconciliation of the CDBG-DR matching funds provided to Puerto Rico for Hurricane Maria. Our staff has reviewed thousands of individual projects to ensure compliance with the match requirements using the global match concept as a guide.

Tracking and Reconciliation

The Tetra Tech team is equipped with a deep bench of engineers and professionals with a vast array of project cost estimation experience across many different project types. This will assure the City that stated project costs are defensible under the grant program targeted for a project. This includes design/engineering, mobilization, construction, project management, and administration costs.

Tetra Tech has supported communities in both blue-sky and post-disaster scenarios to identify projects and align the best funding sources (federal, state, regional, local, and private) for implementation to ensure our clients achieve their resilience goals. This involves identifying funding sources at the planning stage, but further evaluating the project scope against each grant's technical and qualitative criteria to ensure competitive.

Tetra Tech has developed a Project Evaluation Tool to screen projects against the FEMA Notice of Funding Opportunity evaluation criteria listed for BRIC and FMA. It enables the user to enter in their projects using an electronic form with simple yes/no questions and additional minimal information. The tool calculates a score per project; the higher the score, the

more competitive the project is under the grant program. This powerful analysis allows departments to compare multiple projects across the same funding program and assist with selecting which project is best to advance to the application phase. This tool may be offered to the City to assist with project identification and alignment with potential funding sources; it may also assist with prioritization which projects to apply for FEMA funding.

Refer to the table below for a few project examples that summarize our experience developing a project budget and aligning with funding sources.

Example Experience Developing Project Budgets and Aligning Funding Sources

Project	Description
Floodwall Project for Redhook, NY	The floodwall project in Redhook is a $150 million project funded under HMGP and it will protect over 1,400 structures. Tetra Tech prepared the phase 1 BCA and will be completing phase 2 BCA when engineering and design are approved by FEMA.
Lake Houston Dam Flow Control Gates, Houston, TX	The Lake Houston Dam Flood Control Gates project is a $37 Million project funded under HMGP that will protect over 3,500 structures. Tetra Tech prepared the phase 1 BCA and will be completing phase 2 BCA when engineering and design are approved by FEMA.
City of Pasadena, TX Stormwater project	The City of Pasadena stormwater project is a $150 Million project funded under HMGP that will protect impact over 2,900 structures. Tetra Tech prepared the phase 1 BCA and will be completing phase 2 BCA when engineering and design are approved by FEMA.

Maximizing Federal Funding

We understand how federal funding sources can work "in concert" to reduce local financial impacts to the City, such as FHWA's Emergency Relief (ER) Program, NRCS Emergency Watershed Protection (EWP), HUD's CDBG-DR, CDBG-MIT or CDBG-CV programs, Treasury Coronavirus Relief Program (CRF) or American Rescue Plan Act (ARPA). For those projects that may require a local funding component, we will work with the City and its representatives to identify and apply for innovative sources of assistance, working this into cash flow projections and final cost calculations.

Whether it is analyzing thousands of labor records, assessing the plans to make emergency purchases, identifying mitigation measures to protect damaged assets, or designing a multi-billion-dollar COVID-19 economic recovery program, the Tetra Tech team has unparalleled expertise the City may need to support its recovery efforts. Tetra Tech will work closely with the City from the beginning of our engagement to understand the project status, scope, and goals to determine the best course of action.

Tetra Tech is a **turnkey provider** that can perform an all-inclusive approach, and with a national reputation for quality, reliability, and capacity to handle a variety of services. We have decades of experience in upholding regulatory compliance, which is imperative for large, complex programs that implement innovative concepts for whole community recovery.

As a **full-service engineering firm with expertise in federal grant compliance,** Tetra Tech is able to support development, design, prioritization, delivery, and closeout of a wide range of projects, from infrastructure engineering to disaster debris monitoring.

Tetra Tech has assisted clients throughout the country following catastrophic disasters manage recovery operations from end to end. The Tetra Tech team's primary mission is to aid the City with eligibility, administration, and compliance issues surrounding federal funding allocations. As grant programs and City needs evolve and new program requirements and guidance are released, we serve as a trusted advisor to modify programmatic SOPs and other procedures to mitigate risk of noncompliance.

The Tetra Tech team has a deep pool of policy and regulatory experts and can provide answers to the most complex regulatory questions. Tetra Tech provides valuable insights for our clients as they navigate Federal program

implementation. As indicated by our qualifications, Tetra Tech provides consulting services for government programs across the United States mainland, Puerto Rico, and the Virgin Islands, including FEMA PA, FEMA IA, FEMA HMGP, CDBG-CV, CDBG-DR, CDBG-MIT, HOME, FEMA, Treasury programs, and many others. Our team approaches policies and regulation questions with a thoughtful, collaborative process that produces sound results that the City can use to navigate the regulations and policies for tracking costs for programs pursued through this contract.

Tetra Tech has Federal Policy Groups composed of subject matter experts focused on reviewing and analyzing federal funding passed to state, tribal and local governments through new and existing programs for economic, whole community recovery. New information is frequently being released by the federal government in the way of additional funding, guidance documents, and Frequently Asked Questions (FAQ), and our team is immediately primed to analyze and report on impacts to our clients' programs.

Tetra Tech develops recovery project spending projections and maintains an overarching expenditure dashboard to establish a basis to monitor expenditures and establish cost controls. These actions work toward mitigating the risk of unanticipated shortfalls in cash flow, provide a method for allocating grant expenditures, monitor and track to reduce duplication of benefits, and can forecast potential grant award amounts. In addition, we have assisted our clients with financial controls for requests for reimbursement and state audits as well as Office of Inspector General (OIG) capacity audits.

Federal Regulations Related to Disbursements for Disaster Recovery Operations

Government Accountability Office (GAO) Regulations	2 CFR 200	Single Audit Act and Audit-Related Guidance for Entities Receiving FEMA PA Funds	OMB Memorandums
OMB Disaster Relief Guidance	Davis-Bacon Act	FHWA Form 1273	Federal Accounting Standards Advisory Board (FASAB)
Generally Accepted Government Auditing Standards (GAGAS or Yellow Book)	American Institute of Certified Public Accounts (AICPA)	Cost Accounting Standards (CAS)	Federal Acquisition Regulation (FAR)
FEMA Public Assistance Program and Policy Guides (PAPPGs)	HUD CDBG-DR Administrative Manual	44 Code of Federal Regulations (CFR) – Various Sections	Robert T. Stafford Disaster Relief & Emergency Assistance Act
FHWA-ER Manual (2012)	OMB Updates to Federal Procurement Regulations	Sandy Recovery Improvement Act (SRIA)	Section 428 – Alternative Procedures Pilot Program (Debris Removal)

Along with the FEMA Public Assistance Program and Policy Guides (PAPPGs), other policies and guidance we track are:

- Procurement Under Grants Training | FEMA.gov
- Audit-Related Guidance for Entities Receiving FEMA Public Assistance Funds
- Mass Care/Emergency Assistance Pandemic Planning Considerations
- 2022 PA Simplification Memos
- Crisis Counseling Program
- FEMA Building Codes Strategy
- FEMA Flood Risk Management
- Fire Management Assistance Grants (FMAG)

- NEPA and Section 106 EHP
- PDAT and Procurement Guide and PDAT Contract Provisions
- FEMA 90/10 Cost Share Adjustments
- FEMA_Advisory_FEMA_Increases_Public_Assistance_Small_Project_Maximum_to_$1Million
- FEMA_New-recipients-of-disaster-grants-guide_2019
- Simplified Procedures Final Rule - Memo 08.03.2022
- The National Defense Authorization Act (NDAA) with prohibitions on grant funding made on August 18, 2020.

Tetra Tech works directly with our clients to identify and scope projects during the planning phase, align with competitive funding, conduct conceptual design and engineering during grant development, to full cost estimating and engineering for implementation.

Tetra Tech's Top 10: Maximizing Federal Grant Funding

1	Prepare a comprehensive **plan.**	Maintain a comprehensive disaster recovery plan that outlines the process for applying for federal funding, as well as the roles and responsibilities of state and local agencies, and other stakeholders.
2	**Coordinate** effectively with federal agencies.	Establish a strong working relationship with federal agencies, such as FEMA and HUD, to ensure that they are aware of the City's needs and are familiar with the City's recovery plans.
3	Use all available **resources.**	Make use of all available resources, including federal grants, low-interest loans, and other forms of assistance, to maximize funding and minimize impacts on affected communities.
4	Be ready to provide **documentation.**	Be prepared to provide the necessary documentation, such as damage assessments and cost estimates, to support funding requests through federal grant programs.
5	Be proactive in identifying **unmet needs.**	Actively identify unmet needs in affected communities and work with federal agencies to secure additional funding to address those needs.
6	Be **transparent** and accountable.	Be transparent and accountable in the use of federal funds, and provide regular updates on the use of funds and the progress of recovery efforts to the general public.
7	Maintain a focus on **timelines.**	Timeline and deadline management are critical in ensuring that the City's needs are met and that the City is in compliance with federal regulations.
8	Leverage in-state and **local expertise.**	Leverage in-state and local expertise to identify and prioritize the most critical recovery needs, and to develop and implement plans that will help to minimize the impact of future disasters and promote long-term recovery and resilience.
9	**Engage** the affected communities.	Involve the affected communities in the recovery process by keeping them informed and engaged throughout the process.
10	Partner with **experts.**	Partner with a disaster recovery consultant like Tetra Tech to have expert guidance in maximizing the federal funding available and prioritizing recovery projects across all grant programs.

Working with a Broad Range of Applicants

Our solutions are built on experiences from our current work with a broad range of federal grant funding applicants to efficiently and effectively meet both recipient and subrecipient needs. Tetra Tech's proven methodologies for assisting clients to expedite recovery programs by prioritizing compliance, advocacy, and customer service. **The Tetra Tech team has worked with all types of applicants in all types of scenarios.**

Experience with Types of Applicants

Throughout the course of completing countless response and recovery projects for more than two decades, we have overseen numerous federal grants, including PA, HMGP, FMA, IA, CDL, CDBG, ESG, CRF, CARES, ARPA, PDM, FHWA, FTA, and USDA-NRCS for the following:

- States
- Counties
- Cities
- Individuals
- Houses of Worship
- Small Businesses
- Non-Profit Organizations
- Agricultural Producers
- Public Utilities

Expertise in CDBG-DR

Tetra Tech has experience with HUD Community Development Block Grant Disaster Recovery (CDBG-DR) grant programs at every level, including program design, implementation, monitoring, and closeout. We have worked with a diverse range of clients, including Harris County, Texas; Richland County, South Carolina, St. John's County, Florida; the Commonwealth of Puerto Rico; Lexington County, South Carolina; the City of Houston, Texas; and more. We also have experience working with the HUD CDBG-MIT and CDBG-CV grant programs.

Tetra Tech specializes in providing comprehensive support for Community Development Block Grant Disaster Recovery (CDBG-DR) programs, focusing on efficient administration and effective assistance to local communities. Our expertise spans the entire spectrum of CDBG-DR, from planning and administration to implementation, ensuring alignment with the regulatory requirements outlined in 24 CFR 570 and any modifications or waivers issued through the Federal Register.

Our team comprises seasoned professionals with extensive experience navigating the complexities of HUD's CDBG program eligibility criteria. We have a proven track record of maximizing the impact of funds for our clients, leveraging resources to address critical recovery needs effectively.

We have worked with numerous jurisdictions to shepherd the client through the intricacies of disaster recovery. Our team has served the community to ensure applicants receive grace and guidance through the stringent eligibility criteria of federal funding programs. We work with our clients to ensure they are receiving quality applications and facilitate training and best practices are at the forefront of program implementation to ensure compliance with HUD. Our goal is to ensure all projects meet the requirements of federal funding, thus maximizing reimbursement to our client and reduce any potential of recapture.

Our approach emphasizes long-term sustainability, risk reduction, and community economic and safety resilience. By integrating these principles into our planning efforts, we empower communities to rebound from disasters with resilience and strength.

From Hurricane Sandy to Hurricane Harvey, along with countless other disasters across the U.S. and territories, our team of experts has supported recovery efforts across the country.

Reporting

We believe in the power of **data-driven decision-making,** leveraging cutting-edge software systems to generate comprehensive, customizable, and automated reports that provide real-time insights into performance. This transparency not only keeps everyone informed, but also fosters a culture of accountability and continuous improvement.

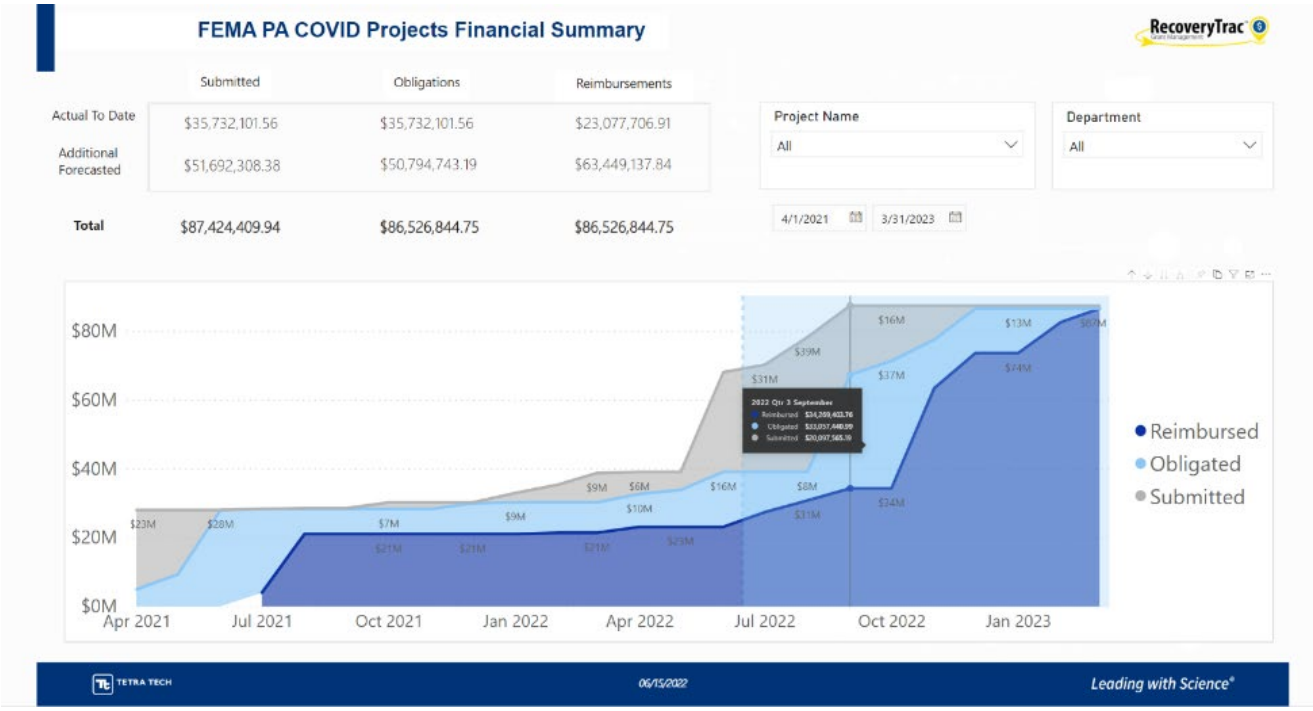
Tetra Tech dashboards allow for access and transparency in monitoring and controlling the project work, including constant validation of the scope, adherence to the schedule and associated costs, progress and effectiveness of quality control measures, and overall project team performance and activities. We continually monitor our operation to mitigate risks to the project

Progress Report Dashboard

The Tetra Tech Team will develop executive-level project status reports according to the requirements collected from the City, providing a dashboard summary of work performed and real-time performance metrics. Use of these executive-level status reports is important to keep all parties informed of ongoing work efforts in the field and to address any issues that may arise so they can be resolved quickly rather than becoming a systemic problem. We are strong believers in regular and frequent communication to achieve superior project results and as a way to keep disaster management projects on track.

Communication is especially important if staff turnover occurs by our federal partners over the course of the disaster recovery effort. The Tetra Tech Team will document the work that is completed weekly and provide minutes on all FEMA and State meetings and other work activities. This documentation is vitally important in establishing a clear record of approvals and sign-offs as staff changes occur over the duration of the project. The Tetra Tech Team will submit the weekly project status reports of these data as well as a snapshot of the executive-level project status report to the City. These work products will be stored in our *RecoveryTrac*™ Technology.

Sample *RecoveryTrac*™ Technology Progress Report Dashboard



Tetra Tech diligently measures project progression and performance to ensure scope tasks are conducted in accordance with the Project Management Plan. The Tetra Tech Project Manager will continue to monitor KPIs as described to determine if the project is on track. Tetra Tech will continually monitor project objectives to confirm that the quality of deliverables, effort, and cost are in alignment and to verify that project performance is tracking appropriately. If there are any issues identified, the Tetra Tech Program Manager will adjust the schedule and resources to ensure the project remains on track, seeking approval from the City where necessary.

SOW Item 4: Information Technology, Data Management and Reporting Support

Our team has spent years on research and development to streamline federal grant program documentation and data management functions, with a focus on minimizing the cost to our clients while improving the visibility of project operations. Tetra Tech offers a **scalable and fully featured program management application** designed to address the operational challenges faced during a federally funded project.

Our system provides real-time collection of data and offers multiple solutions to financial management, data management, reporting, and project controls. We have also worked with our clients to implement outsourced technologies based on individual needs.

Perhaps the most critical component of the grant process will be project reporting and providing visibility to the process. To maximize the efficiency and effectiveness of the program, the Tetra Tech team proposes using a suite of platforms specifically designed to capture the data points required throughout the lifecycle of the Program. The proposed data system was designed for the management and administration of documents, data, and information related to grant administration and project management.

Secure Integration	Designed to integrate and coordinate the activities of stakeholders to enhance production while maintaining security and compliance with information protection.
Process Driven	Streamlines complicated workflows to ensure proper work sequencing, reporting and critical path management. Process step notifications and task action management are key feature to enable the City to oversee the project's contractors.
Interoperable	Our software suite is designed with interoperability in mind. Securely sharing information in a variety of formats provide the ability to support and interact with City and contractor data systems.
Real-Time Information	Accurate real-time information aggregation and reporting is accomplished using several tools depending on the perspective of the user. *RecoveryTrac*™ visualization tools using industry standards Microsoft PowerBI and ESRI ArcGIS are linked to show real-time status that can be shared as needed from City to Stakeholder to Public supporting IIJA requirements.
Customized Reports	Tabular and bulk data are available to enable the City and authorized Stakeholders to allow development of reports and analysis of the project information streams. On-staff developers are available to assist with custom reporting needs on demand.

To maximize the efficiency and effectiveness of the program, the Tetra Tech team proposes using its *RecoveryTrac*™ system. The *RecoveryTrac*™ system was specifically designed for the management and administration of documents, data, and information related to grant administration and case management. The *RecoveryTrac*™ system is a scalable and fully featured disaster management application designed to address the operational challenges faced during a disaster recovery project. The system provides real-time collection of data and offers multiple solutions to financial management, data management, reporting, and project controls. We have also worked with our clients to implement outsourced technologies based on individual needs.

As a means of warehousing files, Tetra Tech utilizes the *RecoveryTrac*™ Data Management System as a secure, password-protected, online file-sharing platform to store electronic copies of the monthly progress reports, project work plan, files, and other project-related information. In this way, the City will have access to project-related information in one easy-to-access location without having to spend the time and expense of maintaining their own project filing system. To facilitate a streamlined approach to administering disaster grant programs, Tetra Tech has configured the *RecoveryTrac*™ system to organize and manage data and documentation associated with each of the programmatic areas.

Documentation and Reporting 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 FEMA 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.
Grant Application Development and Administration	Tetra Tech provides grant application development and administration, which 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.

Service Offering	Description
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.
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.
Contractor Invoice Reconciliation	Tetra Tech assists clients with contractor invoice reconciliation, which 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 maximize 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.
Management Cost Monitoring	Tetra Tech's *RecoveryTrac*™ proprietary monitoring software, will allow the City to monitor the amount of management costs available for administration various grant funding programs.
Grant Closeout	Tetra Tech assists clients' years after a disaster by providing closeout services. This includes developing a closeout package that is organized to satisfy grant closeout and auditing.

Dashboard Reporting

RecoveryTrac™ is a web-based application that provides the City with a real-time portal to the Tetra Tech team's project work. Tetra Tech will customize *RecoveryTrac*™ reports to meet the City's specific needs for both force account labor and contractor invoice records. Regulatory and auditing agencies can efficiently search and review electronic project files as required, and the *RecoveryTrac*™ system data is exportable and allows for importation into other applications such as the FEMA GrantsPortal.

Because Tetra Tech has managed FEMA PA, HMGP, and HUD grant programs for clients across the country, we can anticipate the information the State and FEMA will request to review throughout the entire grant lifecycle. We have built these requirements into our SOPs and our automated system for tracking and controlling costs. We provide transparent, concise, accurate, and routine information to state and federal agencies in aggregate and disaggregate formats as requested and needed. Our proprietary software allows us to run reports in real time that show a summary of costs to present to FEMA. We can generate these reports in various formats depending on what information is being requested. Our professional and knowledgeable staff can facilitate a presentation of summaries and reports that will provide the State and FEMA the information they need to support the City.

Tetra Tech will provide real-time data to the City using password protected dashboards that are updated constantly by the Tetra Tech Team. These dashboards will contain data regarding the status of subgrantee PWs in the system and their status. Tetra Tech will conduct daily briefings during the first 30 days of the engagement and biweekly meetings throughout the period of performance. To the extent required, Tetra Tech will provide status updates on activities undertaken, planned activities, successes, and alternative or corrective programmatic actions. All informational releases will be routed through City for delivery to the appropriate ESF #15 personnel for dissemination to the public or other appropriate parties.

Tetra Tech will provide real-time data to City using password-protected dashboards that are updated constantly by the Tetra Tech team. These dashboards will contain data regarding the status of subgrantee PWs in the system and their status.

Program Reports

In order for effective reporting to be achieved, key information needed for decision-making must be extracted and summarized from the large volume of data that is collected through the use of project controls processes and tools. We achieve this through a combination of reporting formats, content, data visualization, and careful analysis of the data to result in sound conclusions and recommendations.

Weekly Reports

The Tetra Tech team will prepare and submit a written report in electronic format to the City. The report will include information related to the key performance indicators (KPIs) agreed to with the City Project Management Staff during the kickoff meeting including numbers of applications, number of awards, denials, status, and the number of projects monitored and closed out.

Weekly Status Meetings

Tetra Tech's program manager will meet each week with the City to review the weekly status report and discuss any issues, concerns, or problems.

Monthly and Quarterly Progress Reports

Tetra Tech will submit monthly reports demonstrating accomplishments for the prior month to include production, quality, staffing, and any other criteria deemed necessary by the City pursuant to the contract. Additionally, Tetra Tech provides full visibility into the program progress and operations.

Tetra Tech understands the criticality of providing accurate, timely, and useful information to our clients. Arming the officials with such information and maintaining open lines of communication with applicants provides ample opportunity to identify trends in recovery operations and take appropriate actions if necessary to maximize the City's recovery.

Tetra Tech tailors data management tools so that the review and analysis of the data and preparation of tables and graphs is as automated as possible. This approach will provide consistency and accuracy to our reporting and give City staff the opportunity to review the data and provide their insights to make the reports more meaningful from a project delivery viewpoint.

Annual Performance Reports

We understand that the purpose of the Annual Performance Report is to provide a concise and insightful summary of progress that is suitable for executive-level review and potentially wider dissemination. The format will be provided to City for early review and comment.

Final Report

As the final deliverable provided by the Tetra Tech Team, the Final Report will capture the lessons learned and serve as a final accounting of the performance in program delivery. The Tetra Tech Team will begin the process of Final Report documentation before the end of the contract period to deliver a well-organized and insightful document that could serve as a roadmap for future successful projects. This approach is consistent with our "deliver with the end in mind" approach to program management.

Contractor Billing Oversight

Tetra Tech assists clients with contractor invoice reconciliation, which involves ensuring accurate payment to contractors and assigning incurred costs to funding sources to minimize local cost share.

Tetra Tech will tailor the *RecoveryTrac*™ Project Workflow Case Management System (CMS) to the City's needs. Tetra Tech will customize *RecoveryTrac*™ reports to meet the City's specific needs for both force account labor and contractor invoice records. *RecoveryTrac*™ has been designed to make an auditor's job easier by linking all costs to the proof of payment, invoice, and backup of the documentation to show the cost eligibility.

RecoveryTrac™ Grant Management

The *RecoveryTrac™* grant management system was specifically designed for the management and maintenance of documents, data, and information related to grant administration and case management. The result is a networked and highly functional framework for collecting, managing, and leveraging the flood of incoming data to visualize project projection and recovery in real time using customized dashboard reporting.

Key Features

Information is a critical ally when supporting a major community to stabalize in the wake of a disaster. Funding agencies require highly granular data to support grant application and reimbursement. Tetra Tech has configured the *RecoveryTrac™* grant management system to organize and manage data and documentation associated with each grant program in mind.

Real Time Statistics

Audit-Ready Data

Exporting Capabilities

Efficiency

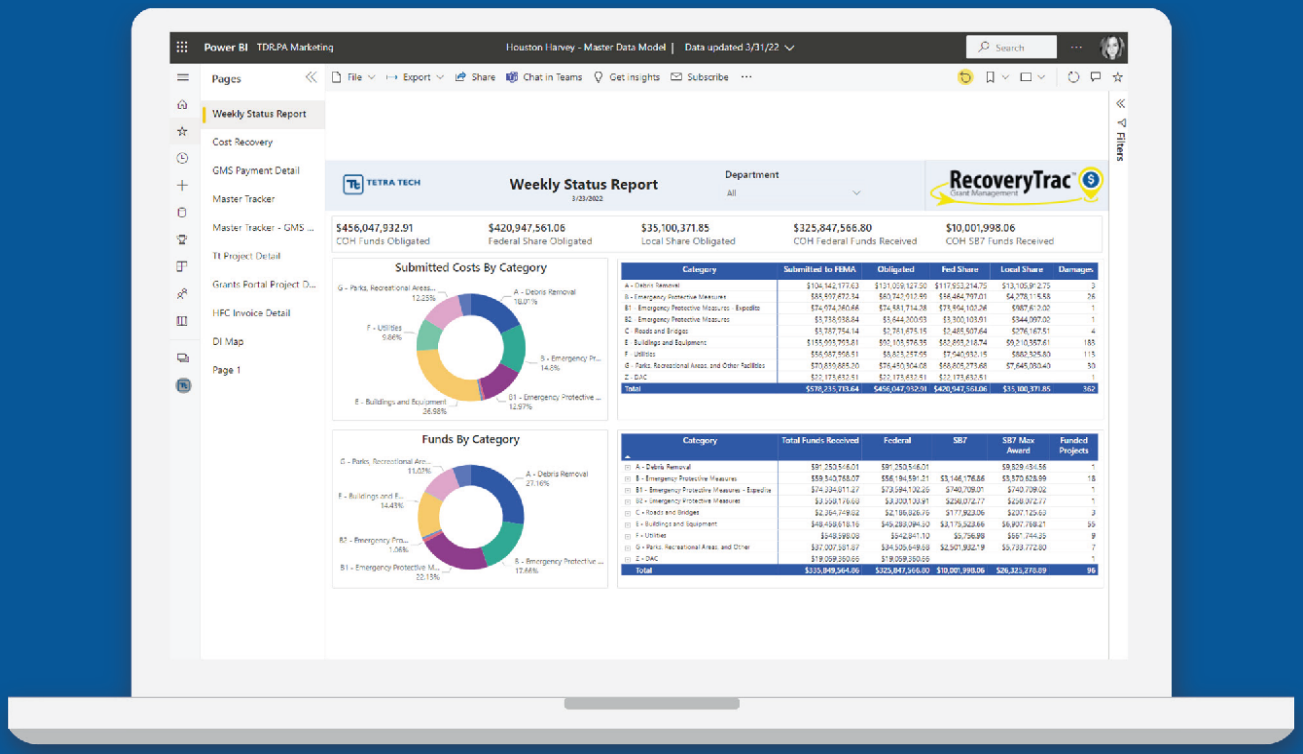
Regulatory agencies can quickly search and review electronic project data files.

Enhanced Reporting

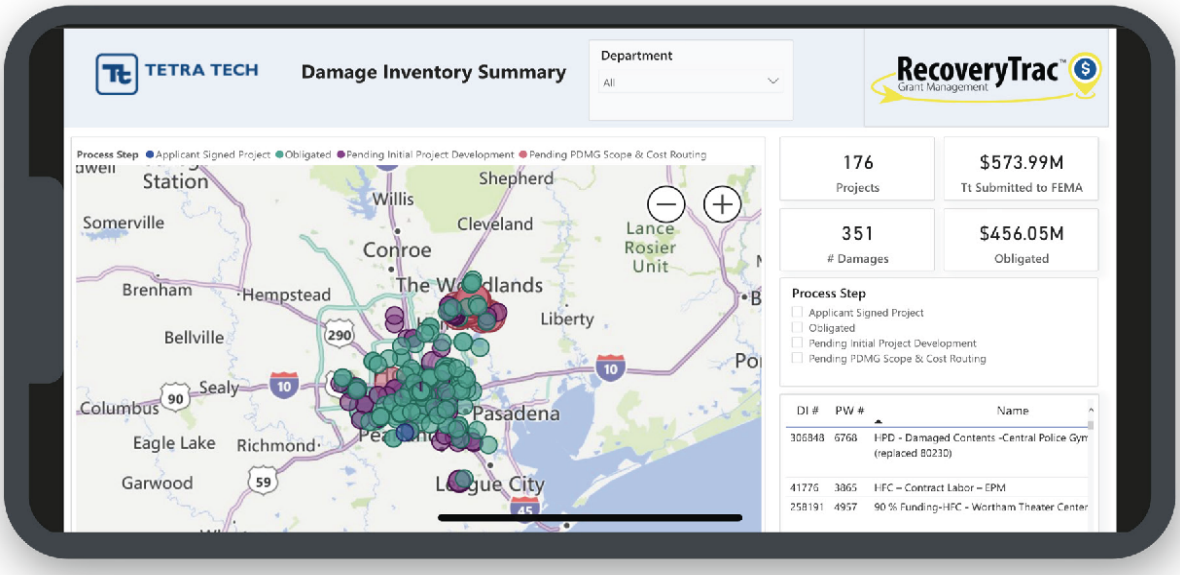
Fully customizable data control facilitates custom reporting for all recipients.

Fully Transparent

Access to a real-time portal to review project analytics and progress as it happens.



Customizable dashboards are designed to expand with your needs. The *RecoveryTrac™* system provides aggregate data management and chain-of-custody tracking of changes. Dashboards are web-accessible with cloud storage, and flexible and expandable to encompass project and portfolio lifecycle tracking.



Geospatial project tracking powered by Microsoft PowerBI. Tetra Tech has leveraged emerging technologies and the use of proprietary geospatial GIS software into all phases of emergency management. This software tracks key data against program objectives and key performance indicators, building the highest level of transparency for grant expenditure.

SOW Item 5: Pre-Disaster Cost Recovery Plan Development

To help the City prepare for future disasters and position itself for the fastest and fullest recovery possible, we will develop a detailed, actionable plan which establishes the framework, processes, tools, and organizational structure necessary to streamline FEMA Public Assistance (PA) and other federal/state grant reimbursements, reduce administrative burden during recovery, and mitigate the risk of funding delays or deobligations.

1. Framework, Processes, and Tools for Cost Recovery

We will design a customized cost recovery framework that aligns with FEMA's PA program requirements under the Stafford Act, while also incorporating best practices from our work supporting recovery efforts in Mississippi, Florida, Louisiana, California, and other disaster-prone areas. Key components of the plan will include:

- **Cost Documentation Templates:** Standardized forms for tracking force account labor, equipment, materials, and contracted services. These will meet FEMA's documentation requirements and be ready for immediate deployment post-disaster.
- **Compliance Checklists:** Tailored guides to help City departments comply with federal procurement standards, including 2 CFR Part 200 and FEMA's procurement policies, with prompts for required documentation (e.g., bid tabs, contract language, cost reasonableness).
- **Timekeeping and Tracking Systems:** Integration recommendations for digital time tracking tools (e.g., web-based or spreadsheet-based) to simplify the collection and coding of hours by project, grant, or PW.
- **Financial Reimbursement Workflows:** Visual process maps to illustrate the end-to-end reimbursement lifecycle—from cost incurrence to FEMA obligation and payment—supported by standard operating procedures (SOPs) for documentation submission and approval.
- **Grants Portal Readiness Tools:** A suite of checklists and naming conventions to organize records in a format compatible with FEMA's Grants Portal. This ensures fast uploads and minimizes data cleanup or rework post-disaster.

If desired by the City, we can incorporate tools like ***RecoveryTrac®***, our proprietary grant and cost-tracking system that provides real-time visibility into the status of all disaster recovery activities, documentation, and reimbursements. Alternatively, we will work within the City's existing systems to ensure interoperability and ease of use.

2. Roles and Responsibilities for Recovery Coordination

A critical component of the plan will be a clear delineation of responsibilities across departments and partners to eliminate confusion during a disaster response and recovery. This will include:

- **Pre-identified Recovery Leads:** Assignment of department-level recovery liaisons responsible for overseeing documentation, coordinating with Finance, and working with our team during disaster events.
- **Functional Responsibilities Matrix:** A crosswalk that aligns FEMA's required cost categories (Category A–I), grant-related actions, and coordination functions with City roles. This matrix will be used to train and orient staff pre-disaster.
- **Activation Protocols:** Guidance for how and when to activate cost recovery functions, including triggers for engaging contractors, opening internal tracking codes, or deploying staff to assist with field documentation.
- **Grant Management Team Structure:** Recommendations for a scalable structure that includes project development, documentation, financial review, QA/QC, and audit support roles. This may include identifying surge capacity staffing needs and pre-positioning contract support.

Throughout the development process, we will engage City leadership and key department stakeholders through interviews, facilitated workshops, and working sessions to tailor the plan to the City's organizational structure and past disaster experience.

SOW Item 6: Long-Term Disaster Recovery and Redevelopment Planning

Long-Term Recovery Plan Development

Following a disaster of a large magnitude, the City will expect to be **recovering for years to come.**

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.

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.

Our approach helps clients to identify methods for best organizing government agencies, service providers, faith-based organizations, and community influencers so that efforts are not duplicated, and resources can be shared in a way that is equitable to the community. Our team includes engagement specialists and planners who understand the challenges of engaging and communicating with target audiences, often with specific cultural, socioeconomic, religious, or language nuances. Making sure that stakeholders and the community are actively engaged in the planning process not only ensures that their needs and concerns are addressed but also shows them that their input is valued.

Long-Term Recovery Operations Implementation Planning

Tetra Tech's recovery services are genuinely comprehensive. Our team has worked with dozens of communities across the nation to ensure that recovery planning efforts are launched and implemented with long-term sustainability, risk reduction and elimination, and community economic and safety resiliency in mind.

Recent examples include providing on-site recovery support to communities in Texas following Hurricane Harvey, to communities in Puerto Rico following Hurricane Maria, to communities across four states in response to Hurricane Matthew, and taking active leadership roles in new, innovative community recovery programs jointly developed by FEMA and state governments following the devastation of Hurricane Sandy. We have helped clients not only develop their recovery program but also implement, test, and assess the programs following disasters.

Tetra Tech has developed Long-Term Recovery Operations Plans for clients including:

- **Atlanta, GA (Urban Areas Security Initiative)**
- **Dougherty County, GA**
- Territory of the US Virgin Islands
- Philadelphia, PA
- Miami-Dade County, FL
- San Diego County (Office of Emergency Services)
- Richland County, SC
- Broome County, NY

Our planning professionals have extensive knowledge of the National Disaster Recovery Framework (NDRF) and how to optimize its principles to create a unique plan that incorporates Recovery Support Functions (RSFs) in a way that supports the individual community's needs. Our approach helps clients to identify methods for best

organizing agencies, service providers, faith-based organizations, and community influencers so that **efforts are not duplicated, and resources can be shared in a way that is equitable to the community.**

Community-Centered Recovery Planning and Implementation

Successful recovery efforts, especially those for states, are often defined by the integration of engagement and outreach efforts during the recovery process. Tetra Tech's success can often be traced to ensuring these activities are fully integrated components of the overarching process, and steps are taken throughout the recovery planning process to engage stakeholders, local groups, and community experts. For example, our team includes engagement specialists and planners who understand the challenges of engaging and communicating with target audiences, often with specific cultural, socioeconomic, religious, or language nuances. Our team develops content is accessible by the disability, access, and functional needs community through compliance with Section 508 of the Rehabilitation Act for website content and other uses of information and communications technology.

Making sure that stakeholders and the community are actively engaged in the planning process not only ensures that their needs and concerns are addressed but also shows them that their input is valued. The COVID-19 pandemic has required modifying traditional approaches to stakeholder and community engagement. Our team has experience in using multiple methods of outreach in order to engage with stakeholders and the community:

- In-person meetings and townhall forums to review documents and provide feedback.
- Online resources include surveys and websites where information can be presented and feedback collected.
- Conducting webinars, workshops, and meetings using Microsoft Teams and Zoom allows for greater attendance and convenience for those who may not want to travel to a meeting site.

From our direct work with the public following disasters, we understand the critical importance of creating equitable investments in our communities. Disasters, whether weather-related or a pandemic, continue to disproportionately affect underserved populations, and as a society, we must actively work to ensure our entire communities are cared for during times of crisis. Through our work with states like New York, New Jersey and Iowa, major metropolitans such as Philadelphia, PA; Boston, MA; Chicago, IL; and Arlington County, VA, as well as smaller jurisdictions, Tetra Tech has experience conducting comprehensive community vulnerability assessments to identify and prioritize underserved areas during the recovery process.

Spotlight On: County of Maui, Hawai'i

In support of the County of Maui following the Lahaina Wildfires in August 2023, Tetra Tech has worked to develop long-term recovery strategies that meet the unique nature of the County's needs. Our team has developed a web-based reporting structure that allows Recovery Support Sections (RSF) to maintain a dashboard of current and planned recovery projects for their RSF. This dashboard is housed in a collaborative space that allows cross collaboration to foster organically while providing a centralized location of information to generate executive-level reporting. Through our experience in long-term recovery planning, we have led a multi-agency coordination team developing a housing plan for Maui that meets the needs of the housing crisis formed in the aftermath of the fire.

Our priority is to advise recovery project development that is creative in addressing the need while preserving the possibility to leverage available federal funding sources to mitigate cost impacts to our clients.

SOW Item 7: Emergency Management Support Services

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

- **Continuity of Operations, Continuity of Government, and Business Continuity Planning.** Tetra Tech understands residents expect their government to protect the safety and security of the community. A continuity plan effectively facilitates the performance of mission essential functions during an emergency and supports effort to provide critical services in a timely manner. Tetra Tech has developed continuity of operations, continuity of government, and business continuity plans for state agencies, local jurisdictions, and private sector businesses across the country that align with the standards in the Department of Homeland Security's Federal Continuity Directive and Continuity Guidance Circulars. Continuity planning provides the interim process and alternate methods for continuing critical government services during disruptive incidents.
- **Disaster Debris Management Planning.** Tetra Tech uses a field-tested approach to develop disaster debris management plans (DDMP). Our staff develops and implements DDMPs alongside our local government clients prior to and following a disaster. Our experience has demonstrated that pairing client personnel with Tetra Tech emergency management experts provides significant benefits, such as facilitating an understanding and acceptance of work products and deliverables and providing exposure to key concepts described in the plan. Increased understanding of disaster debris management planning strengthens a client's ability to maintain and implement their plan.
- **Emergency Operations Planning/Comprehensive Emergency Management Planning.** Understanding and managing the risks of operating in an area that is vulnerable to natural and human-caused hazards is a complex challenge. Tetra Tech develops resilient and robust all-hazard emergency operations plans and comprehensive emergency management plans that will help guide response effectively and efficiently to emergencies. The plans comply with applicable local, state, and federal guidelines, and industry standards applicable to emergency planning.
- **Cybersecurity Planning.** Cybersecurity and related services are a focus area for Tetra Tech. Tetra Tech provides cybersecurity services for a number of U.S. Federal clients, including contracts that require cleared personnel at the Secret and Top-Secret level. Tetra Tech has deep understanding of the application of U.S. Federal information assurance and cybersecurity standards, including Defense Information Systems Agency (DISA) Security Technical Implementation Guides (STIGs), National Institute of Standards and Technology (NIST) Special Publication (SP) 800-53 Recommended Security Controls for Federal Information Systems and Organizations, and NIST SP 800-37 Guide for Applying the Risk Management Framework to Federal Information Systems. Our blended team of cybersecurity experts and emergency management planners can provide support to develop plans, policies and procedures that address vulnerabilities and provide solutions to detect, prevent and mitigate impacts.
- **Incident-Specific and Function-Specific Planning**. In addition to an all-hazards emergency operations plan, communities often need more detailed operational level plans for specific types of incidents and emergency functions. These types of plans provide more detailed instructions for operational and tactical level procedures and often include checklists, flow charts, and job aids. Tetra Tech has the expertise to develop a range of incident and function-specific plans including:
    - Active Assailant
    - Chemical, Biological, Radiological, Nuclear, and Explosives
    - Communication
    - Earthquake
    - Evacuation
    - Finance and Administration
    - Family Reunification and Assistance
    - Flood and Riverine
    - Hazardous Materials

- Hurricane Operations
- Infectious Disease
- Information Technology Disaster Recovery
- Mass Care and Sheltering
- Mass Casualty and Fatality
- Public Information
- Severe Weather
- Recovery
- Terrorism
- Tornado
- Volunteer and Donation Management
- Wildland Fire

- **Hazard Mitigation Planning.** As a leader in mitigation, disaster readiness, and emergency response and recovery planning for state and local governments, Tetra Tech supports clients in all phases of hazard mitigation planning, including organizing and coordinating vital resources, performing risk and vulnerability assessments, developing mitigation plans and strategies, implementing those plans and strategies, and monitoring their progress. A well-developed hazard mitigation action plan (HMAP) provides a framework for streamlining the disaster recovery process and prioritizing mitigation interventions. It makes communities less vulnerable to the effects of an event and ensures a more secure, sustainable future. Tetra Tech can assists with assessing local and regional hazards and risks, establishing mitigation goals and objectives, and identifying projects that enable the jurisdiction to prepare for and reduce the impacts of a natural or human-caused disaster by developing a comprehensive mitigation strategy.
- **Public Health Preparedness.** While state and local public health agencies have made strides in developing capacity to prepare for and respond to public health incidents, COVID-19 and the recent Ebola event demonstrated our nation's continued vulnerability to widespread public health emergencies. Recognizing this, the Centers for Disease Control and Prevention (CDC) developed 15 public health preparedness capabilities that define standards for public health preparedness and response. The 15 public health preparedness capabilities. Tetra Tech can assess provide assistance to address broad public health preparedness and response measures, including bio-surveillance, community resiliency, countermeasures and mitigation, incident management, information management, and surge management. Our staff of public health subject matter experts, emergency preparedness, and response professionals can help build or enhance the ability to achieve each of the public health preparedness capabilities.
- **Threat, Vulnerability, and Risk Assessment.** Conducting an assessment of potential threats, risks, and vulnerabilities is one of the first steps in developing a viable emergency preparedness plan. The community needs to have a deep understanding of their risks in order to properly prepare for an incident. Tetra Tech uses several approaches to developing a broad range of assessments from basic community risk profile to a more in-depth Threat and Hazard Identification and Risk Assessment (THIRA) depending on the needs of the community. Tetra Tech can provide assistance with the following:
  - Desktop analysis of risks and vulnerabilities based on data collection, demographics, and survey analysis
  - Hazard and threat analysis using HAZUS-MH building stock and other modeling techniques
  - Community economic assessment using use census data and ESRI Business Analyst
  - Scenario study using outputs from hazard and threat analyses
  - Risk comparison by overlaying the risk assessment and the scenario study
- **Training and Exercises.** Tetra Tech can provide comprehensive training and exercises for our debris monitoring clients. Our training and exercises include realistic scenarios based on our experience responding to many of our nation's most challenging disasters. We provide detailed case studies of local government responses to disasters and the challenges they had to overcome. Tetra Tech develops and conducts in accordance with the Homeland Security Exercise and Evaluation Program (HSEEP) and exercise facilitators are HSEEP-trained. Exercises include an after action report and improvement plan to document lessons learned and establish corrective actions. Tetra Tech offers the following training and exercise services:
  - Web-Based Training Modules
  - In-Classroom Training
  - Train-the-Trainer Sessions and Classroom Materials
  - Incident Command System (ICS) Training
  - Emergency Operations Center Training
  - Seminars and Games
  - Workshops
  - Tabletop Exercises
  - Drills

- Functional Exercises
- Full-Scale Exercises
- Assist in any other reasonable programmatic duties that may arise

CRS Technical Assistance

Tetra Tech can work with the City to conduct hazard mitigation planning activities, including providing technical assistance to help the City maintain or enhance its Community Rating System (CRS) program participation. Our CRS team lead is a Certified Floodplain Manager and Internation Code Council Permit Technical with over 20 years' experience in floodplain management. Prior to joining the Tetra Tech team, she administered the CRS program within FEMA Regions 5, 6, and 7 and now supports Tetra Tech CRS clients nationwide. Technical assistance includes CRS focused training, construction certificate review, CRS annual recertification, CRS cycle verification, class improvements, building code and Building Code Effectiveness Grading Schedule support, developing standard operating procedures, and more. Tetra Tech supports the development of technical activities in the CRS program including Program for Public Information plans, Floodplain Management plans, Repetitive Loss Area Analysis, and Substantial Damage Management Plans. Our team supports field deployed course delivery specific to the CRS Program, Management Under the National Floodplain Insurance Program, FEMA Building Science Substantial Damage Estimator Tool, and FEMA Construction Certificates. All CRS centric projects are developed and align with the credit criteria outlined in the current CRS Manual(s).

CRS Clients *

City of Kansas City, Kansas	City of Snoqualmie, Washington
Maui County, Hawaii	Pasco County, Florida
Orange County, California	Long Beach, New York
Shandaken, New Jersey	Portland, Oregon

**This does not represent the full client list*

Specific to CRS Activity 510- Floodplain Management Planning Activities, Tetra Tech will conduct all hazard mitigation planning processes in accordance with DMA 2000 requirements for HMPs, and in accordance with the CRS Activity 510 process to ensure maximum credit in this fundamental CRS area. Tetra Tech can work with the City to reconvene its HMP Planning Team and augment it with additional stakeholders to increase the number of CRS points earned. Tetra Tech can work with the City to develop a public involvement process, including a project website and targeted outreach program, to maximize public participation in the planning process. Tetra Tech will incorporate available reports, plans, and other documents into the HMP, and will document where each resource was used in updating the HMP. Tetra Tech will then assess the hazards of concern to the City, including the flood hazard, and assess the problems caused by these hazards. Tetra Tech will work with the City and the Planning Team to set mitigation goals and objectives, and develop mitigation actions.

Tetra Tech will compile all analysis into the HMP document and will include a jurisdiction-specific annex for each participating jurisdiction. The annex approach brings the entire HMP to the community level, so each community can see its risks, capabilities, and mitigation strategy without having to wade through hundreds of pages of citywide text. This approach has been lauded by FEMA reviewers in multiple FEMA regions. Tetra Tech will submit the HMP to the state and FEMA for formal review. Tetra Tech will then work with the City and Planning Team to have the plan adopted and formally approved by FEMA.

We have prepared 300 FEMA-compliant local HMPs with an average CRS Activity 510 score of 318 points compared to the nationwide average of 171 points. Maximizing the CRS credit potential for those jurisdictions participating or considering participation in the CRS program is an added value of the Tetra Tech technical approach to planning efforts. Our standard planning approach evolved from the CRS 10-step planning process. Tetra Tech is a nationally recognized leader in providing assistance to communities that wish to enter the CRS program and those that are already in the program. Tetra Tech will provide technical assistance to the City, as requested, to help enhance the City's CRS rating.

The table below illustrates how plans developed by Tetra Tech have scored under the CRS program.

CRS Points Tetra Tech's FMPs and HMPs Earned

Client	Points Earned	Client	Points Earned
Cape May County, New Jersey	295	Town of Shandaken, New York	393*
Contra Costa County, California	256	City of Portland, Oregon	327
City of Los Angeles, California	426*	Harris County, Texas	315
Los Angeles County, California	466*	King County, Washington	289
City of Roseville, California	305	Pierce County, Washington	255
Ada County, Idaho	257	Snoqualmie, Washington	287
Brick Township, New Jersey	320	Thurston County, Washington	307
City of Long Beach, New York	340	Town of Shandaken, New York	393*

** Plan included a Repetitive Loss Area Analysis (RLAA) component that scored extra points.*

Tetra Tech's commitment to supporting community resilience through the CRS program is evident in our portfolio of work. The CRS 10-step planning process is the foundation of our hazard mitigation planning program. The CRS risk awareness parameters are key components of our standard approach to risk assessment and alternative analysis.

Staff Augmentation as Required Following an Emergency Event

As necessary and agreed upon, Tetra Tech will provide post-emergency consulting services related to public safety, homeland security, emergency management, and public health. Our team will work with the City to identify a process and procedure for requesting services during emergency situations in addition to requests during normal business hours.

In addition to on-call consulting services, Tetra Tech is capable of providing additional support, such as EOC staff and field coordination personnel. For complex disasters, particularly those with impacts on technology or critical infrastructure, the entire portfolio of Tetra Tech's capabilities will be available to provided best-in-class technical expertise in such areas as engineering, environmental, and other technical service areas.

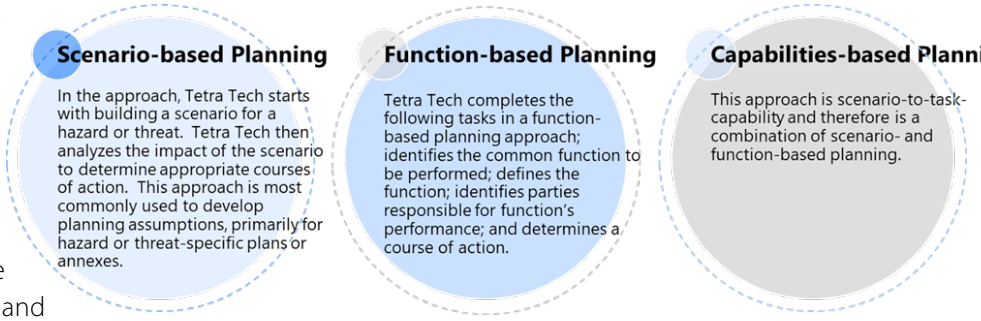
Preparedness Planning

Tetra Tech has assembled a team that features emergency management and homeland security experts with decades of real-world experience who have implemented all types of preparedness planning elements. Our team is experienced in developing all three tiers of CPG 101 plans:

- **Strategic Planning:** Describe how a jurisdiction wants to meet its emergency management or homeland security responsibilities over the long term. These plans are driven by policy from senior officials and establish program goals and objectives.
- **Operational Planning:** Provide a description of roles and responsibilities, tasks, integration, and actions required of a jurisdiction or its departments and agencies during emergencies.
- **Tactical Planning:** Break down bigger-picture goals and strategies into narrower, actionable tasks. Tactical plans are steps for implementing strategic and operational goals (for example, incident scenes or emergency operation center [EOC] standard operating procedures [SOPs] and checklists).

Tetra Tech's approach to preparedness plan development will be tailored to meet the needs of the project and the involved participants. In general, Tetra Tech follows the FEMA Comprehensive Preparedness Guide (CPG) 101 to develop plans, realizing that this guidance is not a rigid standard. Using the CPG 101 methodology, there are three tiers of planning: strategic planning, operational planning, and tactical planning. Tetra Tech has extensive experience using CPG 101 in developing, implementing, and evaluating the three tiers.

To develop comprehensive planning documents, Tetra Tech uses the approaches shown in the graphic, either individually or in combination.



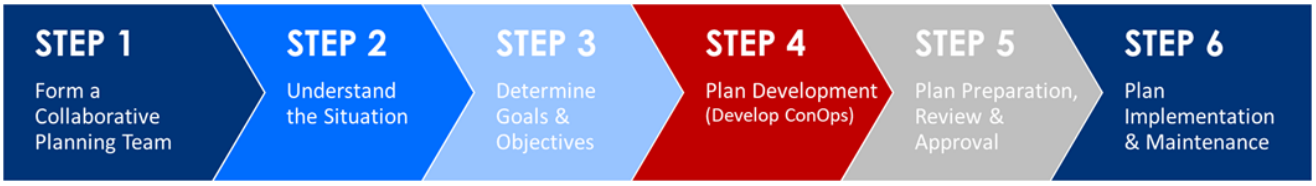
Tetra Tech recognizes that certain types of planning projects may have additional relevant standards and guidance. The table below highlights select standards that Tetra Tech has used for developing specific types of emergency plans with other clients.

Standards and Planning Types

Standard/Method	Type of Plan(s)
FEMA CPG 101v3	Emergency Operations Plan (EOP) EOP Hazard Annexes EOP Emergency Support Function (ESF) Annexes Comprehensive Emergency Management Plans (CEMP) Standard Operating Procedures (SOPs) and Job Aids
CPG 201v3	Threat and Hazard Identification and Risk Assessment
FEMA Hazard Mitigation Planning Guides (386 series)	State, local, and tribal Hazard Mitigation Plans
FEMA Continuity Guidance 2018	State, local, and tribal continuity of operations (COOP)/continuity of government (COG) plans
Disaster Recovery Institute (DRII)	Business continuity plans (BCP)
NFPA 3000 Standard for an Active Shooter/Hostile Event Response (ASHER) Program	Active shooter plans, training, and exercises plans
FEMA Pre-Disaster Planning Guide for Local/State Governments	Recovery Plans
FEMA P-785 Shelter Field Guide	Shelter Planning

Tetra Tech believes that a successful planning process should be clearly organized and include multiple opportunities for stakeholder input. The outcomes should be clear and understandable to a reader who was not involved in the development process. For all planning projects, Tetra Tech implements the CPG-101 Planning Process. This proven model outlined in the six steps below allows for greater stakeholder input and buy-in for the final product. Stakeholder involvement in the plan development process is key to the successful acceptance and implementation of any plan.

National Plan Development Process (NPDP) Model



Tetra Tech is committed to providing the City with:

Consistent project management for the duration of the contract to ensure the City receives best-in-class services from preparedness to response to closeout.

Clear and timely communication on recovery project status and administrative costs through routine and frequent status reporting via our *RecoveryTrac*™ suite of software.

Providing policy-level strategic advisory services throughout the entire disaster recovery process from kickoff and training through final closeout of disaster grants.

End-to-end compliance support services, including assessing systems and documentation, maintaining compliance during the grant program, and managing documentation through final closeout.

Professional coordination with MEMA, FEMA, and other state and federal agencies throughout the entire operation to ensure that the interests of the City are represented.

Technical expertise in federal disaster grant program management, including eligibility, documentation, cost tracking, timelines, key dates, disputes, and resolutions.

Recommendations for best practices and industry standards at all levels: executive-level support to City officials, management-level support to department leadership, and technical-level support to staff.