

MASTER SERVICES AGREEMENT

Consulting and Representation Services - Disaster Recovery

Contract No. _____

THIS AGREEMENT (the "Agreement") is made this 1st day of January, 2016, by and between **RICHLAND COUNTY, SOUTH CAROLINA** (hereinafter referred to as "Client" or "County") and **TETRA TECH, INC.** (hereinafter referred to as "Contractor" or "Tetra Tech").

I. DESCRIPTION OF PROFESSIONAL SERVICES

Contractor and Client agree Contractor will perform professional services associated with Debris Recovery Consulting Services as described in the Richland County Request for Proposal No. RC-651-P-2016 ("RFP") attached hereto as Exhibit A and Contractor's Technical Response to RFP No. RC-651-P-2016, attached hereto as Exhibit B. Task Orders shall be issued for specific deliverables under this Agreement and shall include estimated hours and fees for completion. Such deliverables to be provided by Contractor will be specified in writing on each Task Order prior to commencing work. The professional services shall be provided subject to the Terms and Conditions which follow.

II. RICHLAND COUNTY AND TETRA TECH ADMINISTRATIVE CONTACTS

Cheryl D. Patrick
Procurement Director
Richland County Government
2020 Hampton Street, Suite 3064
Columbia, SC 29204
Tel. No. 803.576.2133
Email patrickc@rcgov.us

Betty A. Kamara
Contracts Administrator
Tetra Tech, Inc.
2301 Lucien Way, Suite 120
Maitland, FL 32751
Tel. No. 321.441.8518 | 407.803.2551
Email betty.kamara@tetrattech.com

In consideration of the mutual obligations assumed under this Agreement, Contractor and Client agree to the Terms and Conditions attached hereto and incorporated by reference and represent that this Agreement is executed by duly authorized representatives as of the dates below.

AGREED BY:

RICHLAND COUNTY, SOUTH CAROLINA

By: Cheryl D. Patrick, CPPB
Name: Cheryl D. Patrick, CPPB
Title: Procurement Director
Date: 12-31-2015

TETRA TECH, INC.

By: Jonathan Burgiel
Name: Jonathan Burgiel
Title: Vice President/Operations Manager
Date: 1/14/16

Richland County Attorney's Office
Elizabeth A. Mc...
Approved As To LEGAL Form Only.
No Opinion Rendered As To Content.

TERMS AND CONDITIONS

1. Services

CONTRACTOR will perform the services ("Services") and deliver the deliverables ("Deliverables") described in RFP No. RC-651-P-2016 and CONTRACTOR's Technical Response to RFP No. RC-651-P-2016 as set forth in Exhibits A and B, attached hereto and incorporated by reference. Task Orders shall be issued for specific deliverables under this Agreement and shall include estimated hours and fees for completion. Such deliverables to be provided by Contractor will be specified in writing on each Task Order prior to commencing work.

2. Place of Performance

Unless otherwise provided in this Agreement, CONTRACTOR may perform the Services in whole or in part at CONTRACTOR's place of business, CLIENT's place of business, and/or such other locations as may be required in order to perform the services.

3. Effective Date; Term

This Agreement shall be effective as of the date first written above (the "Effective Date"), and shall continue in full force through December 31, 2016 with four (4) automatic one year renewals, unless either party elects to terminate this Agreement with a one hundred twenty (120) day written notice.

4. Payment Terms

(a) The fee for the services under this Agreement will be based either on a fixed fee basis or the actual hours of services furnished multiplied by CONTRACTOR's Billing Hourly Rates plus reasonable expenses as set forth in Exhibit C which is attached hereto and incorporated by reference. Task Orders issued under this Agreement shall specify the contract type and project cost.

(b) CONTRACTOR shall submit an invoice to CLIENT monthly for Services performed by CONTRACTOR on behalf of CLIENT pursuant to this Agreement and each specific Task Order.

(c) CLIENT will review invoices for acceptance within ten (10) calendar days of the receipt of the invoice. CLIENT shall, as soon as practical, notify CONTRACTOR of any discrepancies or dispute charges. CONTRACTOR and CLIENT will work in good faith to resolve any such discrepancies or dispute charges within ten (10) days after notification. Should a discrepancy or disputed charge result in a partial rejection of any item(s) invoiced, CLIENT shall proceed with partial payment of the undisputed charges within Net 30 days of the date of the invoice.

(d) Bill To Address. The invoice will be mailed to:
Richland County Finance Dept.
P.O. Box 192
Columbia, SC 29204

(e) Payment Address. Payments are to be mailed to:
Tetra Tech, Inc.
P.O. Box 911642
Denver, CO 80291-1642

5. Resources to be Provided by CLIENT

(a) CLIENT shall provide, maintain and make available to CONTRACTOR, at CLIENT's expense and in a timely manner, any required resources to complete the required scope of services as CONTRACTOR may from time to time reasonably request in connection with CONTRACTOR's performance of the Services. Delays in the provision of the required resources

to complete the required scope of services may result in delays and/or additional cost in performing the Services or Delivering the Deliverables.

(b) CLIENT will designate and make available to CONTRACTOR qualified CLIENT personnel or representatives who will consult with CONTRACTOR on a regular basis in connection with the Services. CLIENT will furnish such documentation or other information as is reasonably necessary to perform the Services.

(c) CLIENT shall furnish access to CLIENT's premises, and appropriate workspace for CONTRACTOR personnel working at CLIENT's premises, as necessary for performance of those portions of the Services to be performed at CLIENT's premises.

6. Confidentiality

In the event either party determines that it is necessary to provide confidential, proprietary, or trade secret information to the other party in connection with this Agreement, such disclosure will be made only after advance written notice to the other party, and the parties have executed a mutually satisfactory Non-Disclosure Agreement. Nothing in this Agreement or in the Non-Disclosure Agreement referred to in this section shall be deemed to restrict or prohibit CONTRACTOR from providing to others services and deliverables the same as or similar to the Services and Deliverables, nor CLIENT from providing information pursuant to a Freedom of Information Act request. In providing any such similar services or deliverables to any third party, CONTRACTOR shall keep confidential any CLIENT confidential, proprietary or trade secret information which is subject to the Non-Disclosure Agreement executed pursuant to this section, in accordance with the requirements of such agreement.

7. Intellectual Property

(a) CLIENT and CONTRACTOR shall each retain ownership of, and all right, title and interest in and to, their respective, pre-existing Intellectual Property (as hereinafter defined), and no license therein, whether express or implied, is granted by this Agreement or as a result of the Services performed hereunder. To the extent the parties wish to grant to the other rights or interests in pre-existing Intellectual Property, separate license agreements on mutually acceptable terms will be executed.

(b) As used herein, "Intellectual Property" shall mean inventions (whether or not patentable), works of authorship, trade secrets, techniques, know-how, ideas, concepts, algorithms, and other intellectual property incorporated in any Deliverable and first created or developed by CONTRACTOR in providing the Services.

8. Taxes

Not Applicable

9. Termination

Either party may terminate this Agreement for any reason upon one hundred twenty (120) days written notice to the other party. Termination will not affect payment obligations incurred under this Agreement for Services performed prior to the effective date of termination, including without limitation commitments to purchase products or services from third parties, which were entered into by CONTRACTOR and pre-approved by CLIENT in the course of performance hereunder prior to the effective date of termination.

10. Limited Warranty

(a) CONTRACTOR warrants that the Services provided under this Agreement shall be performed with that degree of skill and judgment normally exercised by recognized professional firms performing services of the same or substantially similar nature.

In the event of any breach of the foregoing warranty, provided CLIENT has delivered to CONTRACTOR timely notice of such breach as hereinafter required, CONTRACTOR shall, at its own expense, in its discretion either (1) re-perform the non-conforming Services and correct the non-conforming Deliverables to conform to this standard; or (2) refund to CLIENT that portion of the Price received by CONTRACTOR attributable to the non-conforming Services and/or Deliverables. No warranty claim shall be effective unless CLIENT has delivered to CONTRACTOR written notice specifying in detail the non-conformities within 90 days after performance of the non-conforming Services or tender of the non-conforming Deliverables. The remedy set forth in this section 10(a) is the sole and exclusive remedy for breach of the foregoing warranty.

(b) CONTRACTOR specifically disclaims any other express or implied standards, guarantees, or warranties, including any warranties of merchantability, fitness for a particular purpose or non-infringement, and any warranties that may be alleged to arise as a result of custom or usage, any warranty of error-free performance, or any warranty of third party products, or functionality of the client's hardware, software, firmware, or computer systems.

(c) CLIENT represents and warrants to CONTRACTOR that CLIENT has the right to use and furnish to CONTRACTOR for CONTRACTOR's use in connection with this Agreement, any information, specifications, data or Intellectual Property that CLIENT has provided or will provide to CONTRACTOR in order for CONTRACTOR to perform the Services and to create the Deliverables identified in Exhibit A.

11. Hold Harmless

CONTRACTOR agrees to defend, indemnify, and hold harmless CLIENT from and against claims, causes of action, damages, judgments, and awards, as well as the costs related thereto (hereinafter collectively referred to as "Damages") to the extent such Damages result from the negligent or willful acts or omissions of CONTRACTOR occurring in the performance of its obligations hereunder.

12. Non-Waiver of Rights

The failure of either party to insist upon performance of any provision of this Agreement, or to exercise any right, remedy or option provided herein, shall not be construed as a waiver of the right to assert any of the same at any time thereafter.

13. Rights and Remedies Not Exclusive

Unless otherwise expressly provided herein, no right or remedy of a party expressed herein shall be deemed exclusive, but shall be cumulative with, and not in substitution for, any other right or remedy of that party.

14. Severability

If any covenant, condition, term, or provision contained in this Agreement is held or finally determined to be invalid, illegal, or unenforceable in any respect, in whole or in part, such covenant, condition, term, or provision shall be severed from this Agreement, and the remaining covenants, conditions, terms and provisions contained herein shall continue in force and effect, and shall in no way be affected, prejudiced or disturbed thereby.

15. Conflicting Provisions

This Agreement and all of the exhibits, schedules, and documents attached hereto are intended to be read and construed in harmony with each other, but in the event any provision in any

attachment conflicts with any provision of this Agreement, then the RFP and CONTRACTOR's Technical Response to RFP No. RC-651-P-2016 shall be deemed to control, and such conflicting provision to the extent it conflicts shall be deemed removed and replaced with the governing provision therein.

16. Assignment

Neither party may sell, assign, transfer, or otherwise convey any of its rights or delegate any of its duties under this Agreement without the prior written consent of the other party. Notwithstanding the foregoing, CONTRACTOR may without violation of this paragraph engage the services of pre-approved by CLIENT independent contractors to assist in the performance of its duties hereunder. Such independent contractors shall meet the requirements set forth in the RFP. CONTRACTOR shall be fully responsible and accountable to the CLIENT for the negligent acts and omissions of such independent contractors, and of all persons directly or indirectly employed by them.

17. Applicable Law

This Agreement shall be governed by and construed under the laws of the State of South Carolina, without regard to its laws relating to conflict or choice of laws.

18. Interpretation

The captions and headings used in this Agreement are solely for the convenience of the parties, and shall not be used in the interpretation of the text of this Agreement. Each party has read and agreed to the specific language of this Agreement; therefore no conflict, ambiguity, or doubtful interpretation shall be construed against the drafter.

19. Disputes

CONTRACTOR and CLIENT shall attempt to resolve conflicts or disputes under this Agreement in a fair and reasonable manner and agree that if resolution cannot be made to attempt to mediate the conflict by a professional mediator. If mediation does not settle any dispute or action which arises under this Agreement or which relates in any way to this Agreement or the subject matter of this Agreement within ninety (90) days after either party requests mediation, the dispute or conflict shall be subject to litigation. The parties shall be entitled to pursue any and all remedies available under South Carolina law.

20. Insurance

During the performance of the Services under this Agreement, Contractor shall maintain the following insurance policies:

A. Commercial General Liability Insurance:

CONTRACTOR shall provide a liability policy written under Commercial General Liability form with limits of a minimum as required by law per occurrence on a location basis for each coverage and annual aggregate as required by law. The required basic coverage is for bodily injury and property damage and for personal injury. The policy shall also include:

(1) Certificate of Liability Coverage: The certificate of liability coverage shall provide evidence of the following:

a) The certificate of liability coverage shall verify compliance with the preceding requirements under "INSURANCE" and in addition it shall state bodily injury and property damage are covered and state the retroactive date for claims-made coverage. If the retroactive date has been advanced it must supply satisfactory evidence of an extended reporting period for the prior policy;

B. Automobile liability

CLIENT requires automobile liability insurance for all non-business automobile coverage written on the comprehensive form of policy. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in connection with performing the contract. Policies covering automobiles operated in South Carolina shall provide coverage of at least \$25,000 per person and \$30,000 per occurrence for bodily injury and \$25,000 per occurrence for property damage or as required by current South Carolina legal requirements. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the state of South Carolina sufficient to meet normal and customary claims.

C. Business Auto Coverage:

CONTRACTOR shall provide CLIENT with a business auto policy written on Business Auto Policy Coverage Form CA 00 01 that has limits required by South Carolina law per occurrence. The business liability coverage should be "Any Auto" (ISO Symbol 1). Physical damage coverage is at the option of the CONTRACTOR.

D. Workers Compensation and Employers Liability Insurance:

A workers compensation policy that specifies South Carolina coverage ("Other States" only is unacceptable), and an employer's liability policy with limits of per accident/per disease. It shall waive subrogation against CLIENT, its officials, employees, temporary and leased workers and volunteers.

(1) Certificate of Workers Compensation and Employers Liability Insurance:

The certificate shall indicate South Carolina coverage and the limits of the employer's liability coverage. It shall affirm the policy contains a waiver of subrogation against CLIENT, its officials, employees, temporary and leased workers and volunteers. It shall provide evidence of compliance with the requirements in cancellation.

E. Cancellation, Non-renewal, Reduction in Coverage and Material Change:

The insurer and CONTRACTOR shall provide CLIENT thirty (30) calendar days' notice in writing of any cancellation, non-renewal or reduction in coverage or any other material change in the policy.

(1) Words indicating failure to provide notice or imposition of no liability are unacceptable.

(2) Each certificate must state the insurance evidence thereon applies to work performed by or on behalf of the CONTRACTOR.

(3) Certificate Recipient: original certificates of insurance shall be sent to:

Richland County Government
Procurement and Contracting
2020 Hampton Street, Suite 3064
Columbia, SC 29204-1002
Attn: Cheryl D. Patrick, Director

The Insurance Certificate should state, "The insurance evidenced hereon applies to work performed by or on behalf of Tetra Tech, Inc. for Richland County South Carolina.

21. Performance/Payment Bonds
Not Applicable

22. Force Majeure
Neither party shall be liable for any failure of or delay in performance of its obligations (except for payment obligations) under this Agreement to the extent such failure or delay is due to acts of God, acts of a public enemy, fires, floods, power outages, wars, civil disturbances, epidemics,

pandemics, sabotage, terrorism, accidents, insurrections, blockades, embargoes, storms, explosions, labor disputes (whether or not the employees' demands are reasonable and/or within the party's power to satisfy), failure of common carriers, Internet Service Providers, or other communication devices, acts of cyber criminals, terrorists or other criminals, acts of any governmental body (whether civil or military, foreign or domestic), failure or delay of third parties or governmental bodies from whom a party is obtaining or must obtain approvals, authorizations, licenses, franchises or permits, inability to obtain labor, materials, power, equipment, or transportation, or other circumstances beyond its reasonable control (collectively referred to herein as "Force Majeure Occurrences"). Any such delays shall not be a breach of or failure to perform this Agreement or any part thereof and the date on which the obligations hereunder are due to be fulfilled shall be extended for a period equal to the time lost as a result of such delays. Neither party shall be liable to the other for any liability claims, damages or other loss caused by or resulting from a Force Majeure Occurrence.

23. Multiple Copies or Counterparts of Agreement

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. This Agreement shall not be effective until the execution and delivery between each of the parties of at least one set of the counterparts.

24. Notices

All notices or other written communication required or permitted to be given under any provision of this Agreement shall be deemed to have been given by the notifying party if mailed electronically, by facsimile, hand-delivery, courier service, or certified mail, return receipt requested, to the receiving party addressed to the mailing address set forth in the first paragraph of this Agreement, or such other address as the parties may designate in writing to the other parties. Additionally, notices sent by any other means may be acceptable subject to written confirmation of both the transmission and receipt of the notice.

25. Relationship of Parties

CONTRACTOR is an independent contractor in all respects with regard to this Agreement. Nothing contained in this Agreement shall be deemed or construed to create a partnership, joint venture, agency, or other relationship other than that of contractor and CLIENT.

26. Third Party Beneficiaries

This Agreement does not create, and shall not be construed as creating, any rights or interests enforceable by any person not a party to this Agreement.

27. Waiver or Modification

This Agreement may be modified, or part or parts hereof waived, only by an instrument in writing specifically referencing this Agreement and signed by an authorized representative of the party against whom enforcement of the purported modification or waiver is sought.

28. Entire Agreement

This Agreement, including any and all Exhibits attached hereto, which are hereby incorporated by reference, constitutes the entire agreement and understanding between the parties and supersedes and replaces any and all prior or contemporaneous proposals, agreements, understandings, commitments or representations of any kind, whether written or oral, relating to the subject matter hereof or the Services or Deliverables to be provided hereunder.

29. Survival

The provisions of sections 4, 6, 7, 9, 10, 11, and 19 shall survive the termination or expiration of this Agreement.

EXHIBITS:

- A. Richland County RFP No. RC-651-P-2016 (31 pages)
- B. Tetra Tech Technical Response to RFP No. RC-651-P-2016 (176 pages)
- C. Tetra Tech Rate Schedule (8 pages)

**EXHIBIT A:
RICHLAND COUNTY RFP NO. RC-651-P-2016
(31 pages)**



**REQUEST FOR PROPOSAL
RC-651-P-2016
Consulting and Representation
Services – Disaster Recovery**

AMENDMENT # 1 – 11-06-2015

Changes are highlighted in Yellow

Page 7: Due Date corrected to 2015 from 2016

Questions are answered in Attachment B

Richland County Government will not accept liability for any incidental or consequential damages arising from or as a result of the electronic transmission of this document, acknowledgements or other data hereunder. In the event of receipt of an electronic document that is garbled in transmission or improperly formatted the authorized representative shown below must be notified immediately.

All questions must be addressed to the person listed in block # 3 of Section "G" page #29 prior to submitting a proposal.

Authorized Representative	Signature	Date
Cheryl Patrick, CPPB Richland County Procurement Director	Cheryl Patrick, CPPB	11-06-2015

Table of Contents

1. Solicitation Contents:

Sections	Form Description	# of Pages	Return with Submittal
	COVER PAGE	1	NO
	CONTENTS	1	NO
SECTION - A	GENERAL INFORMATION	1	NO
SECTION - B	SPECIAL CONDITIONS	4	NO
SECTION - C	GENERAL CONDITIONS	1	NO
SECTION - D	PROPOSAL SCHEDULE	1	YES
SECTION - E	STATEMENT OF ASSURANCE, COMPLIANCE AND NONCOLLUSION	1	YES
	DRUG FREE WORKPLACE	3	YES
	NO RESPONSE FORM (<i>Return Only If Not Participating</i>)	1	YES
SECTION - F	REQUIREMENTS (<i>provide responses</i>)	6	YES
ATTACHMENT A	Hourly Labor Rates and Reimbursable Project Expenses	2	YES
SECTION - G	SOLICITATION, OFFER & AWARD	1	YES
ATTACHMENT - B	QUESTIONS & ANSWERS	2	YES
	<i>Returned sections will be incorporated with executed agreement, if applicable</i>		
2. Acknowledgment of Amendments		Amendments #	Date
Offeror acknowledges receipt of the amendment(s) to this solicitation. (show amendment(s) and date of each) – Please initial in Amendments # box to verify you have received the Amended Proposal		1 (Initial here)	11-06-2015

Section - A

General Information

General Information

About Richland County

The County is located in the center of South Carolina and covers a total area of 756 square miles. The County surrounds the state capital city of Columbia, which is also the County seat. Established in 1785, the County has grown to become home to just over 334,000 residents, and represents a thriving business, industrial, governmental, and educational center. The County employs approximately 1765 people and operates a general fund budget in excess of \$100 million dollars.

Ranked consistently as one of the fastest growing areas in the State, Richland County and Columbia possess a virtually recession-proof economy. This is due to the presence of the seats of State and County government, the University of South Carolina, 7 additional institutions of higher education, and Fort Jackson (the nation's largest and most active initial entry Army training base). Other positive attributes of the area include the new 142,500 sq. ft. Columbia Metropolitan Convention Center, Riverbanks Zoo & Botanical Gardens (twice awarded the Governor's Cup for the most outstanding tourist attraction in South Carolina), the Richland County Public Library (ranked 8th national among urban libraries serving a population of 250,000 - 499,999) and the Colonial Center (the largest arena in the state of South Carolina at 18,000 seats and the 10th largest on campus basketball facility in the nation).

Approximately 65% of the land within the County is categorized as forest, 15% as urban, and the remaining 20% falls into the wetlands agriculture water, range land and barren categories. The average maximum temperature is 75.4 degrees Fahrenheit, the average minimum temperature is 51.4 degrees Fahrenheit, and the average annual precipitation is 48.5 inches.

The County is governed by an 11-member council, which in turn appoints an Administrator to handle daily operations and to provide professional expertise in government management. Under state law, the County is the primary governmental unit for the administration of law enforcement, justice, health, education, taxation, social service, library service, agricultural service, and the maintenance of public records.

Section – B

Special Conditions

SPECIAL CONDITIONS

Read all parts of the solicitation package thoroughly;

Follow all instructions and respond to requested information, qualification and requirements;

Return all paperwork requested; Sign required documents;
Submit your complete package on or before the date and time requested.

1. **False Statements in Submittal of Proposals:**
Proposers must provide full, accurate, clear and complete information as required by this solicitation its attachments and amendments. The penalty for making false statements in solicitations will be debarment or suspension from participating in Richland County Government (County) solicitations, purchasing and award of contracts for a period as prescribe by the Office of Procurement & Contracting. The County does not waive its rights to seek further actions.
2. **Submission of Offers in the English Language:**
~~Offers submitted in response to this solicitation shall be in English. Offers received in other than English shall be rejected.~~
3. **Submission of Offers in U.S. Currency:**
Offers submitted in response to this solicitation shall be in terms of U.S. dollars. Offers received in other than U.S. dollars shall be rejected.
4. Proposals shall be publicly received and recorded at the time and place indicated by Section "B" Special Conditions and "G" Solicitation, Offer and Award and amendments of this solicitation.
5. Proposals shall be made in the official name of the company or individual under which business is conducted (showing official business address) and shall be signed in ink by a person duly authorized to legally bind the person, proprietorship, firm, partnership, company or corporation submitting Proposals. In addition, the Federal Identification Number (FEIN), Sole Proprietorship Number or in its absence, the Social Security Number of the individual and agent must be included.
6. Proposal information may be obtained by visiting our webpage at:

<http://www.richlandonline.com/Government/Departments/BusinessOperations/Procurement.aspx>
7. One (1) Original (clearly marked "**ORIGINAL**") Sealed Proposal **and** four (4) additional hard Copies, all clearly marked: "**RC-651-P-2016, Consulting and Representation Services – Disaster Recovery**" shall be submitted in an enclosed and secured envelope/container.
8. **Attachment A "Hourly Labor Rates and Reimbursable Project Expenses"** shall be in a separate secured envelope/container. The envelope/containers shall be addressed to:
**Richland County Government
Office of Procurement and Contracting
2020 Hampton Street, Suite 3064
Columbia, SC 29204-1002
Attn: Cheryl Patrick, CPPB**

Additionally: Proposers must submit one exact electronic copy of the original proposal on a compact disc (CD) or a USB flash drive. The electronic copy shall be labeled: "**RC-651-P-2016; Consulting and Representation Services – Disaster Recovery**" and submitted with the envelope/containers to the address as shown above. Four (4) additional electronic copies of Attachment A may also be submitted and are appreciated.

Attachment A: "Hourly Labor Rates and Reimbursable Project Expenses

shall be in a separate electronic format, along with five (5) hard copies and submitted in a separate envelope/container.

Proposals shall be accepted any weekday from Monday through Friday (excluding County holidays and weekends) between 09:00 AM, through 4:00 PM, local time. Last day of acceptance for this solicitation is **Monday, November 16, 2015, 3:00pm Local Time.**

9. The County will not accept liability for any incidental or consequential damages arising from or as a result of the electronic transmission of this document, acknowledgements, or other data hereunder. In the event of receipt of an electronic document that is garbled in transmission or improperly formatted the Office of Procurement & Contracting must be notified immediately.
10. Mistakes may be crossed out and corrections inserted adjacent thereto, and shall be initialed in ink by the person signing the proposals.
11. The County shall not accept responsibility for unidentified proposals.
12. The County shall not be liable for any costs associated with the preparation and responses to this solicitation; therefore, all costs shall be borne by the Proposer.
13. Proposal must be clearly marked "Confidential" for each part of the Proposal that is considered to be proprietary information that could be exempt from disclosure under Section 30-4-40, Code of Laws of South Carolina, 1976 (1986 Cum Supp.) (Freedom of Information Act). If any part is designated as "Confidential", there must be attached to that part an explanation of how this information fits within one or more categories listed in Section 30-4-40. The County reserves the right to determine whether this information should be exempt from disclosure.
14. It is the intent and purpose of the county that this solicitation permits competition. It shall be the Proposer's responsibility to advise the Office of Procurement & Contracting in writing if any language, requirements, etc., or any combination thereof, inadvertently restricts or limits the requirements stated in this solicitation to a single source. Such notification shall be submitted in writing, and must be received by the Office of Procurement no later than Thursday, November 6, 2015 at 11:00am local time. A review of such notification shall be made.
15. Every effort has been made to ensure that all information needed is included in this document. If the Proposer finds that they cannot complete their response without additional information, they may submit written questions to the Office of Procurement no later than Thursday, November 6, 2015 at 11:00am.
16. When applicable, South Carolina Sales Tax shall be shown as a separate entry on offeror's total summation. When required, exemption certificates shall be furnished on forms provided by the Proposer.
17. Proposal price must be submitted as a price schedule in a separate sealed and enclosed container properly identified with the proposal number and name.
18. Offeror(s) are to include all applicable requested information and are encouraged to include any additional information they wish to be considered on a separate sheet marked "Additional Information".
19. The County reserves the right to accept one or more proposals or reject any or all proposals received in response to this solicitation and to waive informalities and irregularities. The County also reserves the right to terminate this solicitation and reissue a subsequent solicitation, and/or remedy technical errors in the solicitation process.

20. By responding to this solicitation, it is understood that each Offeror shall comply with all applicable federal, state and local laws and shall meet all requirements imposed upon this service industry by regulatory agencies.

21. IRAN DIVESTMENT ACT - CERTIFICATION (a) The Iran Divestment Act List is a list published pursuant to SC Code of Laws Section 11-57-310 that identifies persons engaged in investment activities in Iran. Currently, the list is available at the following URL: <http://procurement.sc.gov/PS/PS-iran-divestment.phtm> (.) Section 11-57-310 requires the government to provide a person ninety days written notice before he is included on the list. The following representation, which is required by Section 11-57-330(A), is a material Inducement for the State to award a contract to you. (b) By signing your Offer, you certify that, as of the date you sign, you are not on the then-current version of the Iran Divestment Act List. (c) You must notify the Procurement Officer immediately if, at any time before posting of a final statement of award, you are added to the Iran Divestment Act List.

The County does not have a formal MWDBE program at this time. The County does have an OSBO (Office of Small Business Opportunity) which includes an SLBE (Small Local Business Enterprise) program which certifies small and local businesses. The County encourages utilization and participation of local small Richland County based businesses and MWDBE firms. A directory of the certified SLBEs is available on the OSBO website:

<http://www.rictiandonline.com/Government/Departments/BusinessOperations/SmallLocalBusinessEnterprses.aspx>

EVALUATION

1. GENERAL

A duly appointed Evaluation Team (Team) will conduct proposal evaluations; the Team shall be assigned by the County. Proposals will be evaluated and the Team shall assign ratings to each proposal submitted and *may* establish a short list representing the top firms for further evaluation (at the County's discretion), at which time the County reserves the right to establish different and separate evaluation criteria. Documents also may be examined by other agencies and consultants at discretion of the County.

The County reserves the right to request any one of the top ranked submittals or the entire top ranked to appear for oral interviews and / or provide electronic presentations in order to further evaluate submittals. Top ranked submittal(s) will be evaluated based on criteria established for the second round of evaluations (if conducted).

The County may select one or more step(s) to have a proposed solution by a selected proposer (at County's discretion) demonstrated in a real life, test scenario environment and *may* include live, face to face, oral presentations and demonstrations. The County will ultimately select the Qualified Proponent who demonstrates the greatest combination of capability, experience, vision, and commitment for the development of the proposed project.

The evaluation process is to determine which proposal is most advantageous to the County taking into consideration evaluation factors set forth in the solicitation and such evaluation criteria as established internally for evaluations to select the contractor most qualified to provide the services as stipulated and proceed with negotiations;

If an agreement cannot be reached with the top Proposer, the County may then negotiate in descending order. The County is not obligated to accept the highest price; award of a contract will be made to the Proposer providing the most responsive, responsible offer that provides the best overall value and a fair and reasonable price (as determined by the County), and is most advantageous to the County.

The County will further take into consideration soundness, flexibility, functional capability, quality of performance, service, and time specified for performance of the contract; ability to provide support,

overall price, and Proposer's references, and any other factors that may impact the project.

The County reserves the right to reject all proposals or accept such proposals, as appears in its own best interest, and to waive technicalities or irregularities of any kind in the proposal.

2. MINIMUM GENERAL EVALUATION CRITERIA

The evaluation factors to be considered in the evaluation of proposals are listed below:

- A. Demonstration of the firm's prior experience in providing consulting services and its familiarity with FEMA and other federal programs. **0 – 40 Points**
- B. Proposed Strategy of the firm in representing the County in responding to the FEMA Major Disaster 4241 event. **0 – 25 Points**
- C. Firm's capacity to address the County's scope of work. **0 – 20 Points**
- D. Capability and qualification of the proposed personnel. **0 – 15 Points**

SECTION - C

GENERAL CONDITIONS

Located on Richland County Procurement Web Site

<http://www.richlandonline.com/Government/Departments/BusinessOperations/Procurement.aspx>

Located in "Terms and Conditions"

SECTION - D

Proposal Schedule

The Proposer shall furnish items and services identified under description in accordance with Special Conditions/Provisions, requirements and all other terms and conditions as set forth elsewhere herein. By executing this document the Offeror is agreeing to and acknowledging the acceptances of the responsibility to provide all as specified; this page must be submitted with the Offer. The Offeror also understands by executing and dating this document proposed prices/costs shall hold firm for a period of not less than *three hundred, sixty-five (365)* calendar days after the date of the solicitation award.

Company name:	
Name of Agent (Print or Type):	
Title:	Date:
Signature of Agent:	
Telephone #	Fax #:
Federal Identification Number:	
Email address:	
Subscribed and sworn to me this day of	
my commission expires:	Title:

(Must be notarized by a Notary Public)

SEAL

SECTION - E

***STATEMENT OF ASSURANCE, COMPLIANCE &
NONCOLLUSION***

DRUG FREE WORKPLACE

NO RESPONSE FORM

Richland County, South Carolina

Statement of Assurance, Compliance and Non-collusion

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

- 1 The undersigned, as Vendor, certifies that every provision of this Submittal have been read and understood.
- 2 The Vendor hereby provides assurance that the firm represented in this Submittal:
 - (a) Shall comply with all requirements, stipulations, terms and conditions as stated in the Submittal/Submittal document; and
 - (b) ~~Currently complies with all Federal, State, and local laws and regulations regarding~~ employment practices, equal opportunities, industry and safety standards, performance and any other requirements as may be relevant to the requirements of this solicitation; did not participate in the development or drafting specifications, requirements, statement of work, etc. relating to this solicitation; and
 - (c) Is not guilty of collusion with other Vendors possibly interested in this Submittal in arriving at or determining prices and conditions to be submitted; and
 - (d) No person associated with Vendor's firm is an employee of Richland County. Should Vendor, or Vendor's firm have any currently existing agreements with the County, Vendor must affirm that said contractual arrangements do not constitute a conflict of interest in this solicitation; and
 - (e) That such agent as indicated below, is officially authorized to represent the firm in whose name the Submittal is submitted.

Name of Firm:

Name of Agent:

Signature & Title:

Address:

City, State & Zip:

Telephone:

Fax:

e-mail:

Subscribed and sworn to me this _____ day of _____, 20_____.

(Title) My commission expires:

NOTARY SEAL

**RICHLAND COUNTY GOVERNMENT
DRUG-FREE WORKPLACE CERTIFICATION**

Company:

Project Number:

Project Name:

The undersigned hereby certifies that he/she understands and is in full compliance with the requirements set forth in Title 44, Code of Laws of South Carolina, Chapter 107.

Richland County Government (County) requires certification from participants in the Procurement process that it will comply with the statutory and administrative requirements in carrying out work or service or under contract. The certification is a requirement for Federal grant programs as described in Title 49, Code of Federal Regulations, Part 29.

Participants are required to certify they will be, or will continue to provide, a drug-free workplace in accordance with the regulation. The agreement contains specific assurances on the Drug-Free Workplace Act of 1988.

Except for the certified items below marked not applicable (N/A), the list includes major requirements for these aspects of implementation, although it is not comprehensive, nor does it relieve the participants from fully complying with all applicable statutory and administrative standards.

1. A statement has been or will be published notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the sponsor's workplace, and specifying the actions to be taken against employees for violation of such prohibition.

Yes No N/A

2. An ongoing drug-free awareness program has been or will be established to inform employees about:

- a. The dangers of drug abuse in the workplace;
- b. The sponsor's policy of maintaining a drug-free workplace;
- c. Any available drug counseling, rehabilitation, and employee assistance programs; and
- d. The penalties that may be imposed upon employees for drug

abuse violations occurring in the workplace.

Yes No N/A

3. Each employee to be engaged in the performance of the work has been or will be given a copy of the statement required within item 1 above.

Yes No N/A

4. Employees have been or will be notified in the statement required by item 1 that, as a condition of employment the employee will:

a. Abide by the terms of the statement; and

b. Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction.

Yes No N/A

5. The County will be notified in writing within five calendar days and the federal granting agency ten calendar days after receiving notice under item 4b above from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, (including position title of the employee) to the County and the federal granting agency. Notices shall include the project number of each affected grant.

Yes No N/A

6. One of the following actions will be taken within 30 calendar days of receiving a notice under item 4b above with respect to any employee who is so convicted:

a. Take appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

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

Yes No N/A

7. A good faith effort will be made to continue to maintain a drug-free workplace through implementation of items 1 through 6 above.

Yes No N/A

I have prepared documentation shown below or attached hereto with site(s) for performance of work (street address, city, county, state, zip code). There are no

such workplaces that are not identified below or in the attachment.

I have prepared additional documentation for any above items marked "no" and attached it hereto. I certify that, for the project identified herein, responses to the forgoing items are accurate as marked and attachments are correct and complete.

Location

Street Address:

City:

State and Zip code:

Name of Agent:

Signature of Agent:

Date:

Subscribed and sworn to me this _____ day of _____ 20____

Title:

My Commission expires:

NOTARY SEAL

No Response

If a "No Response" is to be submitted, please check the appropriate box(es) below and return this form, prior to the due date, to:

Richland County Government
Office of Procurement and Contracting
2020 Hampton St, Suite 3064 (Third Floor)
Columbia, SC 29204-1002

Cannot respond to this solicitation due to the following reason:

- Do not sell or provide the requested goods or services
 - Cannot comply with specifications/statement of work
 - Specifications/statement of work is unclear
 - Cannot meet delivery or period of performance
 - Delivery/period of performance is unreasonable
 - Cannot meet the bond requirements
 - Not enough time to prepare proposal
 - Plan to subcontract
 - Job is too large
 - Job is too small
 - Other (please specify) _____
- _____
- _____

Company: _____

Phone/Fax: _____

Company Rep.: _____

Signature: _____

SECTION - F

REQUIREMENTS

NATURE OF SERVICES REQUIRED

A. General

Richland County is soliciting proposals from professional consulting firms to provide consulting and representation services in support of the County's recovery from the FEMA Major Disaster 4241 and any subsequent declared disaster or associated service(s) during the contemplated contract term. The ideal Proposer shall possess demonstrated experience in disaster recovery programs and must have extensive knowledge and expertise in the operations of the Federal Emergency Management Agency's (FEMA) Public Assistance (PA) Program and hazard mitigation planning for municipal and governmental entities

B. Possible Contract Term

Any resulting Contract may be extended by the County; not to exceed seven (7) years. The initial agreement is contemplated as a five (5) year term with two (2) renewal terms of one (1) year each.

C. Specific Duties

The selected firm will be responsible for services including, but not limited to, Post Disaster Consulting and Engineering Services as described:

I. FEMA Public Assistance Advisory Services

Specific tasks include:

1. Develop a process/system to submit Federal grant applications, identify eligible projects, capture costs, prepare cost reports, reconcile invoices, and close-out projects associated with declared disasters.
2. Attend meetings with any State emergency entities and FEMA (Federal Emergency Management Agency) to address eligibility and process issues at the request of the County.
3. Provide extensive knowledge, experience and technical competence in dealing with Federal regulations, specifically including the Stafford Act, 2 CFR 200, and the Sandy Recovery Improvement Act.
4. Proactively identify and resolve issues that may arise related to the funding of work to be completed by the consultant or to be completed by the County.
5. Provide technical assistance as requested. Technical assistance may involve engineering and architectural support, among other types of assistance as required/requested by the County.
6. Provide support in completing an assessment of damage to public infrastructure components, transportation systems, and facilities as applicable.
7. Obtain, analyze and gather field documentation, including gathering of relevant records, in order to extract pertinent information necessary for submittal including timekeeping and staff assignment records as applicable.
8. Review for clarity and completeness, as well as consistency and accuracy, data and supporting documentation related to reimbursement claims.
9. Evaluate and assist in the formulation of FEMA PA (Public Assistance) Emergency and Permanent Work Project Worksheets. This will involve expertise in Cost Estimating, developing Detailed Damage Descriptions and Dimensions (DDD) and project(s) Scope of Work (SOW).
10. Assist in the development of hazard mitigation proposals under Section 406 of the Stafford Act.
11. Evaluate alternate and/or improved projects.
12. Review Project Worksheets to determine final eligible costs and third party refunds and reimbursement as applicable.
13. Reconcile eligible costs and prepare Project Worksheet versions, as applicable.
14. Prepare first and second appeals, as applicable.

II. HUD Community Development Block Group Disaster Recovery (CDBG-DR) Support Services

Specific tasks include:

1. Provide knowledge, experience and technical competence in the planning, administration, and implementation of eligible CDBG activities as identified at 24 CFR 570 and modified or waived under the Federal Register allocation of the CDBG-DR funds.
2. Assist with developing unmet needs assessments that identify type(s) and location(s) of the community's disaster recovery needs, especially in the three core aspects of recovery – housing, infrastructure, and the economy.
3. Provide technical assistance related to the determination of CDBG eligible activities and national objectives, particularly as they apply to disaster recovery.
4. Provide technical assistance as requested including HUD (Housing and Urban Development) level environmental reviews and clearance and other federal requirements such as procurement, federal labor standards, fair housing, accessibility, uniform administrative requirements, and monitoring and compliance.
5. Assist with the development and submission of HUD required Action Plan for Disaster Recovery, Action Plan Amendments, performance reporting, and grant closeout.
6. Assist with Project Management and Operations including the ability to develop policies and procedures for implementing all CDBG-DR funded programs and activities including contractor, subcontractor, and sub-recipient oversight and monitoring.
7. Assist with maintaining project files with supporting documentation for all CDBG-DR funded activities that meet HUD's regulatory requirements.
8. Provide assistance to the client on HUD's Disaster Recovery Grant Reporting (DRGR) data management system including Action Plan set-up and Quarterly Reporting.
9. Provide technical assistance related to HUD's requirements for housing programs including rehabilitation, reconstruction, acquisition, buyout, relocation, and rental assistance.
10. Provide technical assistance or cost reconciliation services related to HUD's requirements for infrastructure and public facilities including FEMA PA match programs.
11. Provide technical assistance on HUD's requirements for economic development activities.
12. Provide technical assistance on HUD's requirements for calculating duplication of benefits in compliance with the Stafford Act.
13. Provide technical assistance with any requirements of the Davis Bacon Act as applicable.

III. FEMA 404 and 406 Hazard Mitigation Expertise

Specific tasks include:

1. Assist in identifying, developing and evaluating opportunities for hazard mitigation programs to reduce or eliminate risk from future events.
2. Provide experienced hazard mitigation staff to identify and prepare hazard mitigation proposals, grant applications, benefit cost analysis, and other services related to Hazard Mitigation Grant Program, Pre-Disaster Mitigation, and other mitigation programs.
3. Provide post-award grant administration services and program management services for projects funded by HMGP, FMA, or PDM. This may include outreach, intake, documentation processing, construction inspection, and closeout.

IV. Financial and Grant Management Support

Specific tasks include:

1. Advise on FEMA's rules, practices and procedures and advise on how to track costs, including direct administrative costs to facilitate reimbursement for all eligible client costs, including contractor costs.
2. Provide general grant management advice.
3. Conduct pre-audit activities and prepare documentation for audit.
4. Meet as necessary with County/State/Federal representatives in connection with the programmatic, financial, contracting and accounting services necessary to meet Federal and State regulations.
5. Prepare reports for the State and FEMA, as needed.
6. Provide oversight of contractors' billing to ensure that they invoice properly and are only compensated for work actually performed, and that all costs eligible for the disaster grant funding are documented and claimed.
7. Categorize, record, track and file costs in support of the financial reimbursement process.
8. Track Project Worksheet status and status of payment from the State and FEMA.

V. Information Technology, Data Management and Reporting Support

Specific tasks include:

1. Design and develop IT solutions that support the management and implementation of the disaster recovery programs.
2. Provide experience managing data for disaster recovery programs.
3. Provide expertise using systems to report information to assist in the management of the disaster recovery programs.
4. Provide expertise to analyze data and information for process improvement and optimization.

VI. Disaster Recovery Engineering Related Services Support

Specific tasks include:

1. Design Services to include the following activities:
 - a. Planning, procuring (2 CFR 200 compliant), and/or preparing necessary topographic surveys, environmental studies, and geotechnical investigations required for preliminary design considerations.
 - b. Prepare preliminary horizontal/vertical alignments based on aerial photography with LIDAR contour information.
 - c. Prepare proposed typical section.
 - d. Prepare site evaluation. (*Watershed data including drainage area, design flow, and hydraulic profiles will be provided by the County.*)
 - e. Prepare preliminary project construction cost estimate.
 - f. At the County's request, prepare conceptual repair estimates that may assist with FEMA funding obligation. Such estimates may include the cost to implement an exact replacement, repair versus replace comparisons, etc.
2. Topographic survey to include the following activities:
 - a. Provide necessary field investigations and surveys to produce engineering construction plans. For bridge projects, topographic surveys shall extend approximately 500 feet each side of bridge.
3. ROW (Right of Way) Mapping to include the following activities:
 - a. Field boundary survey of existing property lines within the corridor of the project.

- b. Prepare ROW Maps (Abstracts to be provided by Owner).
- 4. Engineering Design to include the following activities:
 - a. Prepare Preliminary and Final construction plans, hold a Plan-in-Hand with utility owners affected, and provide final cost estimates.
- 5. Construction to include the following activities:
 - a. Assist the administrative consultant with the construction bid package in conformance with 2 CFR 200 federal requirements and supervising the bid advertising, tabulation, and award process, including preparing the advertisements for bid solicitation, conducting the bid opening, and issuing the notice to proceed.
 - b. Respond to Request(s) for Information on an as-needed basis.

VII. Disaster Debris Monitoring Services

Specific services may include:

1. Coordinating daily briefings, work progress, staffing, and other key items with the County.
2. Hiring, training, scheduling, and managing field monitoring staff.
3. ~~Monitoring and documenting debris removal operations ADMS (Advanced Disaster Management Simulator) technology.~~
4. Assisting the County with responding to public concerns and comments.
5. Certifying contractor equipment for debris removal using methodology and documentation practices appropriate for contract monitoring.
6. Digitization of source documentation (such as monitor logs, scale tickets, etc.).
7. Furnishing and operating an automated/electronic (paperless) debris tracking system.
8. Comprehensive review of project documentation and data for quality control.
9. Developing daily operational reports to keep the County informed of work progress.
10. Development of maps, GIS applications, etc. as necessary.
11. Comprehensive review, reconciliation, and validation of debris removal contractor(s) invoices prior to submission to the County for processing.
12. Provide documentation for project worksheets and other pertinent report preparation required for reimbursement by FEMA, FHWA and any other applicable agency for disaster recovery efforts by County staff and designated debris removal contractors.
13. Maintain a safe working environment including developing and implementing a health and safety plan for debris monitoring operations.
14. Providing staff and equipment to support the County in various functional areas as required following an emergency event.
15. Debris management planning services including the development of a debris management plan, debris management site identification and review, or staff training.
16. ~~The selected firm will be expected to provide disaster debris monitoring services utilizing automated debris management system (ADMS - Advanced Disaster Management Simulator) technology. Debris monitoring may include debris generated from the public rights-of-way, private property, drainage areas, waterways, and other public, eligible, or designated areas. (SEE ATTACHMENT B)~~

VIII. Emergency Management Support Services

Specific tasks may include:

1. Emergency management plans and documents to include COOP/COG (Continuity of Operations and Continuity of Government), Debris Management Plans, EOPs, evacuation and sheltering plans, mass care, or other related plans.

2. Testing, training, drills, and exercises (tabletop, functional or full-scale) support including exercise development (HSEEP {Homeland Security Exercise and Evaluation Program} compliance), after action reporting, and facilitation.
3. Hazard mitigation planning activities including Hazard Mitigation Plan updates and Community Rating System (CRS) technical assistance.
4. Providing staff to support the County in various functional areas as required following an emergency event.

IV. Other tasks as determined by the County to be imperative depending on the type of disaster declared by: the County, the State of South Carolina, the United States Federal Government or FEMA (the Federal Emergency Management Agency.

PROPOSAL REQUIREMENTS

The following material is required to be received by **November 16, 2015 at 3:00 PM, local time**, for a proposing firm to be considered:

The Proposal shall include:

Title Page: Title page showing the RFP number; the firm's name; name, address, email and telephone number of the contact person; and the proposal date.

Statement of Qualifications: A signed letter of transmittal which includes:

1. A description of the firm, the size of its staff, staff's qualifications and the experience of the staff. Resumes -- not to exceed three (3) pages per person --of the proposed personnel should be included.
2. The firm's past experience in providing such services for companies or local governments. The project references should include client contact information.
3. The firm's proposed strategy to assist Richland County to maximize Public Assistance and other funding available to it as a result of the FEMA Major Disaster 4241 event.
5. Please submit **five (5)** copies of your Proposal – one (1) marked "**Original**" and four (4) marked "**Copy**". Also submit your Proposal on a thumb drive or CD (marked "**RC-651-P-2016**".) Proposers must submit one exact electronic copy of the original proposal on a compact disc (CD) or a USB flash drive. Proposers may also submit a redacted electronic copy – clearly marked "**REDACTED**" if Proposer deems any portions of their proposal to be "confidential".
6. Completed **Hourly Labor Rates and Reimbursable Project Expenses Form – Attachment "A"** as included with this RFP.
NOTE**Cost is not part of the evaluation criteria. However, please submit in a **Separate Sealed Envelope**, clearly marked "**Attachment A – RC-651-P-2016**". **Please submit five (5) copies of Attachment "A" as well as one electronic copy.**

SELECTION OF FIRM

The County will select a firm based on an evaluation of the proposals. The firm shall be evaluated based on the following criteria:

- E. Demonstration of the firm's prior experience in providing consulting services and its familiarity with FEMA and other federal programs. **0 – 40 Points**
- F. Proposed Strategy of the firm in representing the County in responding to the FEMA Major Disaster 4241 event. **0 – 25 Points**
- G. Firm's capacity to address the County's scope of work. **0 – 20 Points**
- H. Capability and qualification of the proposed personnel. **0 – 15 Points**

The County will enter into negotiations with the firm deemed as the highest ranked proposer by the evaluation team. Should the County be unable to negotiate and execute a contract with the highest ranked firm, negotiations shall immediately commence with the second-highest ranked firm.

ATTACHMENT A:

Hourly Labor Rates and Reimbursable Project Expenses

POSITIONS	HOURLY RATES
Project Executive	\$ _____
Subject Matter Expert	\$ _____
Project Manager	\$ _____
Accountant	\$ _____
Closeout Specialist	\$ _____
Grant Manager	\$ _____
Analyst	\$ _____
Senior Grant Manager	\$ _____
Engineer I (Junior)	\$ _____
Engineer II (Mid)	\$ _____
Engineer III (Senior)	\$ _____
Surveyor	\$ _____
Debris Project Manager	\$ _____
Debris Operations Manager	\$ _____
Debris Monitor	\$ _____
Debris Supervisor	\$ _____
Scheduler	\$ _____
Emergency Management Consultant	\$ _____
Senior Emergency Management Consultant	\$ _____
Executive Emergency Management Consultant	\$ _____
Other: _____	\$ _____

Non-labor expenses shall be invoiced to the County in the following manner:

- 1) Travel expenses including airfare and car rental shall be invoiced at cost, without mark-up and with approved documentation;
- 2) Lodging shall be invoiced up to the per diem rate according to the GSA rates established at www.gsa.gov;
- 3) Meals and incidentals shall be invoiced at the GSA per diem rate (no receipts are required);
- 4) Mileage shall be invoiced at the federally published rate;
- 5) Field documents and other equipment/supplies shall be invoiced at cost only; no markup allowed and with approved documentation, and
- 6) Other required non-labor expenses as may be applicable to the project and pre-approved by the County shall be invoiced at cost only; no markup allowed and with approved documentation.

CFR 200 Compliance Language

1. **Subcontractors** – If subcontractors are to be included in the proposal, all terms and conditions must be disclosed including method and reason for selection, subcontractor compensation, and subcontractor billing rate. At the County's request, provide all internal sub-contractor documentation for federal reimbursement review.
2. **Procurements** – While assisting the County with project procurements or in the event the vendor must procure additional resources post-contract award, the awarded Proposer will strictly adhere to 2 CFR 200 procurement rules. This includes adhering to the strictest provisions of Federal, State, and Local procurement Rules, Regulations and/or Ordinances, etc.

3. **Vendor Billing** – The winning vendor will be engaged in direct project work, therefore, indirect billing is not anticipated and must be pre-approved by the County. All direct project costs will be billed to specific project codes established by the County. Vendor invoices will be categorized by: project code and must include:

- Name,
- Position
- Billing rate
- Total hours, and
- Costs

Invoices must include specific project time and expense backup to include concise employee comments of tasks accomplished which must be appropriate to the position and billing rate.

All inclusive – The above 2 CFR 200 requirements have been identified as being the most relevant provisions which will affect the County and vendor while executing the project. However, the vendor is responsible for complying with 2 CFR 200 in its entirety throughout the project lifecycle.

Section - G

SOLICITATION OFFER & AWARD

RICHLAND COUNTY GOVERNMENT COLUMBIA SOUTH CAROLINA 29224-1002

**SOLICITATIONS, OFFERS AND AWARDS
(SUPPLIES, GOODS, EQUIPMENT, SERVICES)**

*****SOLICITATION INFORMATION*****

1. SOLICITATION: # RC-651-P-2016	4. Description: Consulting & Representation Services-Disaster Rec
2. ISSUE DATE: 10-29-2015	6. Pre-Solicitations Conference: None
3. CONTACT INFORMATION SHOWN BELOW	Time: n/a
PROCUREMENT AGENT: Cheryl Patrick, CPPB	Day: n/a
Fax (803) 576-2133	Date: n/a
Email: patrickc@rcgov.us	
5. SUBMIT SOLICITATIONS TO: RICHLAND COUNTY GOVERNMENT OFFICE OF PROCUREMENT AND CONTRACTING 2020 HAMPTON STREET SUITE 3064 (Third Floor) COLUMBIA SOUTH CAROLINA 29204-1002	Location: n/a

6a. Submission Deadline: Day: **Monday** Date: **November 16, 2015** Time: **3:00pm Local Time**

7. Submit Sealed Solicitations: One (1) Original - Four (4) Copies and at least one electronic of the original by: Compact Disc (CD) or Flash Memory Data Storage Device (Flash Drive).
Additionally: Five (5) hard copies of "Attachment A - RC-651-2016" in a Separate Sealed Envelope.

8. Firm Offer Period: Three hundred sixty-five (365) calendar days

9. This solicitation consists of Section "A" through Section "G" to include all addendum's

OFFEROR BUSINESS CLASSIFICATION (TO BE COMPLETED BY OFFEROR)

10. Check Appropriate Boxes	<input type="checkbox"/> Partnership <input type="checkbox"/> Individual <input type="checkbox"/> Corporation <input type="checkbox"/> Sole Proprietorship Trading under Trade Name of:				
<input type="checkbox"/> African-American Female (AAF)	<input type="checkbox"/> Hispanic Female (HF)	<input type="checkbox"/> White Female (WF)			
<input type="checkbox"/> African-American Male (AAM)	<input type="checkbox"/> Hispanic Male (HM)	<input type="checkbox"/> Other:			
<input type="checkbox"/> Asian Female (AF)	<input type="checkbox"/> Native American Female (NAF)				
<input type="checkbox"/> Asian Male (AM)	<input type="checkbox"/> Native American Male (NAM)				

11. All deliveries must be FOB Destination and Payment Terms will be a minimum of Net 30

12. OFFER: In compliance with above, the undersigned agrees, if this Solicitation is accepted within the period specified in above, to furnish any or all requested in this solicitation as and specified.

13. Name and address of Entity (Type or print): e-mail: Telephone #: Fax #: Federal Identification #:	14. Name & Title of Agent Authorized to sign the Solicitations. (Type or Print):
	15. Signature of Agent & Date
	16. Subscribed and sworn to me This day of My commission expires: (Title) (Must be notarized by a Notary Public)
	SEAL

AWARD (TO BE COMPLETED BY RICHLAND COUNTY GOVERNMENT)

17. Approval Date:	18. Award:	19. Contract #:
20. Contracting Officer: Cheryl D. Patrick, CPPB	21. Signature:	22. Award Date:

ATTACHMENT B --- QUESTIONS AND ANSWERS:

QUESTION: On page 24 of the RFP in the Proposal Requirements Sections it states, "The proposal shall include:

Statement of Qualifications: A signed letter of transmittal which includes:

1. A description of the firm...
2. The firm's past experience...
3. The firm's proposed strategy..."

Would the County prefer having items 1 -3 all within the letter of transmittal or would the County like to see a letter of transmittal followed by items 1 - 3 in the body of the proposal?

ANSWER: The County would like to receive a Letter of Transmittal followed by Items 1, 2, and 3 in the body of the submitted Proposal.

QUESTION: Can Richland County provide a copy of your standard contract to review before the bid is due? The General Conditions that are on your website are General Conditions for the RFP itself but the definition of Prime Contract indicates there will be separate contract with terms and conditions.

ANSWER: The County does not have a standard contract. Contracts vary depending on the commodity or services being procured. The successful Proposer will work with the Procurement and Legal departments to develop a contract.

QUESTION: Under Section F Requirements, C. Specific Duties, VII Disaster Debris Monitoring Services, Pages 23, lines 3, 7 & 16. The County refers to using both Automated Debris Management Systems (which has the acronym ADMS) and using Advanced Disaster Management Simulator (also ADMS) technology. There are numerous Automated Debris Management Systems available on the market which provide paperless electronic ticketing, bar coding, GPS, etc. However, Advanced Disaster Management Simulator Technology is a proprietary technology of Environmental Tectonics Corporation (ETC) geared towards advanced training of emergency management personnel. Is it the County's intention that proposers utilize an Automated Debris Management System (to provide paperless ticketing, etc.) and provide training to County personnel using the Advanced Disaster Management Simulator or was the County's intention that the contractor provide only and Automated Debris Management System?

ANSWER: It is not the County's intention that any proprietary software must be utilized. The software is referenced merely as an example of the type of software technology the County envisions the successful Proposer to utilize. The successful Proposer may be required to provide training to County employees depending on what type of disaster has been declared. Reference to "Automated Debris Management Simulator" in Section F - Requirements Subsection VII, Item 16 of the Scope of Work on Page 23 of the RFP is hereby deleted from the RFP.

QUESTION: The following question relates to RFP RC-651-P-2016: 2 CFR Section 200.320 states that price must be a factor to be considered when evaluating proposals, and Richland County states in the RFP that the requirements of 2 CFR 200 relating to procurement must be strictly followed. However, price is not one of the evaluation factors for the RFP as set forth on page 25. Please explain how the County will consider price, as required by the applicable federal procurement regulations, when price is not one of the formal evaluation factors?

ANSWER: Richland County has chosen a Procurement by Competitive Proposals procurement approach as outlined under 2 CFR 200.320 (d) as Procurement by Sealed Bids is not feasible for these types of services. CFR 200.320 sub-section (3) states, "The non-Federal entity must have a written method for conducting technical evaluations of the proposals received and for selecting recipients." The County's technical evaluation criteria satisfies this requirement as outlined on page 25 of the RFP. CFR 200.320 (d) subsection (4) then states "Contracts must be awarded to the responsible firm whose proposal is most advantageous to the

program, with price and other factors considered." Nowhere under CFR 200.320 (d) does it state that pricing must be part of the selection criteria, only that it be considered for final contract award. As stated in the County's selection criteria (page 25) "The County will enter into negotiations with the firm deemed as the highest ranked proposer. Should the County be unable to negotiate and execute a contract with the highest ranked proposer, negotiations will immediately commence with the second-highest ranked proposer." Since neither the total fee nor the number of hours by position can be accurately estimated at this time, the County intends to rank proposers based on the selection criteria on page 25 and then negotiate hourly rates with the highest ranked proposer upon a review of all of the pricing provided by all firms submitting proposals in response to the RFP. If the County is unable to successfully negotiate advantageous rates with the highest ranked proposer, the County will commence negotiations with the second ranked proposer and subsequent proposers as needed until successful negotiations are completed. In this manner, price will be considered as part of the contracting process thereby satisfying the requirements of 2 CFR 200.320 (d).

QUESTION: May we add additional labor categories to the list on page 26?

ANSWER: You may add "Other" line item categories to the **Attachment A – "Hourly Labor Rates and Reimbursable Project Expenses"** worksheet; however please note any additions as well as fees listed in the categories currently stated on page 26 are subject to negotiations as described in the previous question above - ("Since neither the total fee nor the number of hours by position can be accurately estimated at this time, the County intends to rank proposers based on the selection criteria on page 25 and then negotiate hourly rates with the highest ranked proposer upon a review of all of the pricing provided by all firms submitting proposals in response to the RFP").

QUESTION: Does the County intend to make awards to multiple firms or a single award?

ANSWER: As stated in the County's selection criteria (page 25) "The County will enter into negotiations with the firm deemed as the highest ranked proposer."

QUESTION: Approximately how much FEMA Public Assistance funding does the County anticipate receiving?

ANSWER: We have no idea; it depends on the type of declared disaster and what services will need to be performed.

QUESTION: Given the tight time constraints for responding to this RFP as well as the compelling and urgent nature of the requirements, does the county expect contractors to conduct full and open competition in the selection of the subcontractors or is a justified sole source selection acceptable?"

ANSWER: The County expects full and open competition as per the County's normal procurement processes.

QUESTION: Section C, General Conditions; Section 29: Would the county consider capping the indemnity at the value of each individual work assignment? Also would the county consider deletion of "tortuous acts" and limiting Offeror's "acts" to "intentional acts?"

ANSWER: No and No.

QUESTION: Page 8 of the RFP; Evaluation; 1. General, states that our response may be shared with "other agencies and consultants at the discretion of the county." Please provide a list of possible Agencies and/or Consultants for review.

ANSWER: There is no definitive list of agencies or consultants. As stated, "at the discretion of the county". Any such sharing will depend on the type of declared disaster and what services will need to be performed.

QUESTION: Is there an anticipated date oral interviews or presentations may occur?

ANSWER: No oral interviews or presentations are being contemplated. As stated in the County's selection criteria (page 25) "The County will enter into negotiations with the firm deemed as the highest ranked proposer."

END OF ATTACHMENT "B" -- THE QUESTION & ANSWER PERIOD HAS EXPIRED.

**EXHIBIT B:
CONTRACTOR TECHNICAL RESPONSE TO RFP NO. RC-651-P-2016
(176 pages)**



Richland County, South Carolina

Consulting and Representation Services - Disaster Recovery

RC-651-P-2016

Proposal | Electronic | November 2015

Request for Proposals (RFP): RC-651-P-2016
Consulting and Representation Services – Disaster Recovery

Proposal Due Date: November 16, 2015

Submitted by:

Tetra Tech, Inc.

2301 Lucien Way, Suite 120

Maitland, FL 32751

Phone: (321) 441-8518

Fax: (321) 441-8501

For questions regarding this submittal, please contact:

Mr. Jonathan Burgiel

Phone: (407) 342-2282

jonathan.burgiel@tetrattech.com

For all contract-related matters, please contact:

Ms. Betty Kamara

Phone: (407) 803-2551

betty.kamara@tetrattech.com

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November 13, 2015

Ms. Cheryl Patrick, CPPB
Procurement Director
Richland County Government
2020 Hampton Street, Suite 3064
Columbia, SC 29204

Subject: REQUEST FOR DISASTER CONSULTING AND REPRESENTATION SERVICES - RICHLAND COUNTY

Dear Members of the Evaluation Committee,

Tetra Tech, Inc. is pleased to submit this proposal to provide disaster recovery project management consulting services to Richland County (County). Our team of disaster recovery experts offers a unique integration of disaster response and recovery management services and is well suited to assist the County for the following reasons:

- **Unmatched Federal Disaster Grant Management Experience.** Tetra Tech is the nation's leading post-disaster grant management consulting and engineering firm. We have been the leading consulting firm on every major flood disaster the last 15 years, including disasters in Hays County/Wimberley, TX (2015); Boulder County, CO (2013); State of Vermont (2012); Nashville, TN (2012); and Memphis, TN (2011). We have assisted our clients with obtaining and/or managing over \$12 billion in post-disaster grants from FEMA PA, FEMA 404/406 HMGP, HUD CDBG-DR, NRCS, and FHWA. We are intimately familiar with obtaining post-disaster grants for our clients and helping them successfully utilize and document these grants to meet federal grant program requirements.
- **Midlands-Based Team Ready to Continue Supporting Richland County's Post-Disaster Needs.** Tetra Tech has successfully provided diverse post-disaster services to support Richland County in response to the 1,000-year flood. These services include FEMA reimbursement support, preparing bid packages for the County's road repairs, managing the County's well testing/disinfection program, and developing a strategic vision to help the County obtain future FEMA HMGP and HUD CDBG-DR disaster grants, in some cases directly from HUD. As we have demonstrated over the past several weeks, we have a full-service team of post-disaster professionals on the ground ready to continue assisting Richland County. We will hit the ground running with no learning curve required. We are committed to continuing to provide quality services to the County.
- **Nation's Largest Full-Service Disaster Recovery Firm.** Tetra Tech is the only firm in the country that can provide FEMA reimbursement and FEMA/HUD/NRCS disaster grant support combined with engineering capabilities to offer full-service disaster support solutions. Tetra Tech and our teaming partners have access to over 13,000 staff that can support the County's post-disaster needs. Whether it is helping Richland County obtain reimbursement from FEMA for its flood-related costs, obtaining additional FEMA HMGP or HUD CDBG-DR disaster grant funds that will be available in coming months, or developing cost estimates and bid specs for damaged assets, Tetra Tech has the full range of staff to support the County in any of its disaster-related needs.
- **Local Presence.** Tetra Tech has teamed with local partners Thomas & Hutton, DESA, 4D Engineering, and Chao & Associates, Inc. These firms have an in-depth understanding of the County and its post-disaster needs. Together, our team can cover any of the County's post-disaster needs.

Tetra Tech would be honored to serve as the County's disaster management debris services provider. For questions regarding this response, please contact the representatives listed below.

Technical Representative:

Mr. Jonathan Burgiel
407-342-2282 | jonathan.burgiel@tetrattech.com

Contractual Representative:

Ms. Betty Kamara
407-803-2551 | betty.kamara@tetrattech.com

Sincerely,

Tetra Tech, Inc.

A handwritten signature in blue ink that reads 'Jonathan Burgiel'.

Jonathan Burgiel

Vice President

CERTIFICATE

TETRA TECH, INC.

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

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

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



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

(Seal)



DESCRIPTION OF THE FIRM AND STAFF QUALIFICATIONS

FIRM DESCRIPTION

Tetra Tech, Inc. – Prime Firm



Tetra Tech, Inc.⁽¹⁾ (Tetra Tech) is a leading provider of specialized management consulting and technical engineering services worldwide. Founded in 1966, Tetra Tech is focused on assisting our clients in conceiving, creating, and executing innovative solutions in the areas of water, energy, environmental, and infrastructure consulting. With a team of over 250 dedicated

emergency management, disaster recovery and grant management specialists supported by more than 13,000 other professionals working in over 100 disciplines, Tetra Tech is the largest firm delivering emergency management, disaster response and recovery, and community resilience solutions in the country.

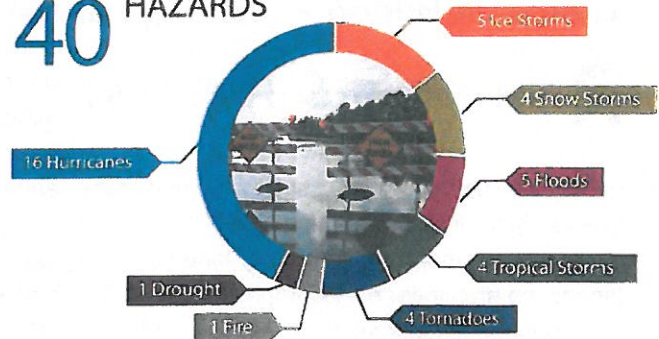
Since its founding, Tetra Tech has substantially increased the size and scope of its business. Today, Tetra Tech has annual revenues over \$2.5 billion and has over 350 offices worldwide, including offices in Aiken, South Carolina; Atlanta, Georgia; and Raleigh, North Carolina as well as a team of approximately a dozen disaster recovery and disaster grant management specialists currently working in Columbia, South Carolina in support of Richland County's (County) disaster recovery effort.

Our service portfolio includes the full spectrum of emergency management services, including mitigation, preparedness, response, recovery, and comprehensive grant management services. Specific areas of focus include infrastructure hardening and protection, security planning, major incident and disaster operations planning, training and exercises, community mitigation and resilience, incident policy and procedure development, roadway and drainage system assessments, and comprehensive disaster recovery (including financial recovery management, obtaining disaster grant funding, and long-term, resiliency-focused recovery planning). Clients include a diverse base of public and private sector organizations throughout the United States and internationally.

Tetra Tech has a number of offices in the Carolinas and a team of disaster recovery and grant management specialists currently working in Columbia, South Carolina in support of Richland County's disaster recovery effort.

Tetra Tech has served over 250 state and local government clients in response to over 40 declared presidential disasters with over \$12 billion in disaster grants obtained, managed, and/or recovered on our clients' behalf. Our staff has experience in maximizing assistance to our clients by working to obtain funding from every source available after disaster has struck. As a result of working on response to nearly every major natural disaster occurring in the United States in the last dozen years, Tetra Tech also has broad and deep experience with strategic planning, coordination of recovery efforts, and technical assistance. Tetra Tech will offer recommendations and solutions to the broad range of issues that will be encountered by Richland County.

ACTIVATED FOR
40 HAZARDS



Throughout the course of the hundreds of debris management and grant management projects that our staff has administered for state and local governments across the United States, our team has developed a unique

⁽¹⁾ The BDR Division of Leidos is now Tetra Tech, Inc.

Section 1: Description of Firm and Staff Qualifications

understanding of the Federal Emergency Management Agency (FEMA) organization and other regulatory agencies' policies and procedures. Our team maintains strong relationships with many of the lead federal coordinating officers, debris specialists, Public Assistance (PA) coordinators and officers, and other staff. Our team also understands the duties and responsibilities of emergency management personnel at the state and local level, which helps us build strong relationships. Our team has worked with hundreds of local government emergency management agencies and dozens of state emergency management organizations following catastrophic natural disasters.

Tetra Tech has served over 250 state and local government clients in response to over 40 declared presidential disasters with over \$12 billion in disaster grants obtained, managed, and/or recovered on our clients' behalf.

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

Over the past 20 years, our grant management experts have assisted clients with applying for and retaining grant funds, even after closeout and audit processes. Our team has extensive experience assisting local and state governments with managing and documenting projects eligible for federal funding through the FEMA PA, Section 404/406, and Department of Housing and Urban Development Community Development Block Grant-Disaster Recovery (CDBG-DR) Grant Programs with dollar values as large as \$136 million for a single project, including multiple, large programs for the States of Florida, Connecticut, North Carolina, South Dakota, Vermont, and Virginia. *In addition, Tetra Tech has supported clients affected by every major flooding event in the last five years.*

Our team has extensive experience assisting local and state governments with managing and documenting projects eligible for federal funding through the FEMA PA, Section 404/406, and HUD CDBG-DR Programs with dollar values as large as \$136 million for a single project.

To complement our abilities, supplement our expertise, and expand the capacity of qualified resources made available to the County on a local level with an in-depth knowledge of Richland County, Tetra Tech has teamed with a number of local and nationally recognized firms. These firms provide us with the diverse set of resources and flexibility the County contract will require.

Thomas & Hutton – Teaming Partner



Thomas & Hutton (T&H) is a privately held professional services company founded in 1946 by two former U.S. Army Corps of Engineers Officers, Hue Thomas and Joseph Hutton. To provide

quality services and project support to their public and private clients, their technical competencies include civil, environmental, structural and marine engineering; land surveying; land planning; landscape architecture; geographic information systems (GIS); and construction administration. *One of T&H's particular areas of expertise is HUD CDBG grant application, administration, management, and implementation assistance for numerous cities and counties across the State of South Carolina.*

One of T&H's particular areas of expertise is HUD CDBG grant application, administration, management, and implementation assistance for numerous cities and counties across the State of South Carolina.

T&H has more than 200 employees across six offices in Georgia and South Carolina. They can provide local knowledge of the area including the unique aspects of working with wetlands and various permitting and regulatory requirements. They have strong relationships with local, state, and federal agencies, which helps expedite projects.

ICF International – Teaming Partner



ICF Incorporated, LLC (ICF) is a professional services consulting firm. They are dedicated to tackling the economic, social, energy, and environmental issues facing communities. From their origins as the Inner City Fund, ICF has become one of the top-tier multidisciplinary consulting firms in the nation with leading practices in housing, community and economic development, environmental protection, and disaster recovery. They are a public firm (NASDAQ:ICFI) with over \$1 billion in annual revenue in 2014. ICF offers financial stability, resources, personnel, and technology that can help Richland County rebuild.

ICF has been a primary technical assistance and training consultant for HUD's community development programs for more than 25 years as well as to cities and states throughout the US. ICF's staff created HUD's CDBG training for state and local government staff. Based on their CDBG knowledge and hands-on experience, ICF staff was tapped to write HUD's guidance on disaster recovery. ***From 2006 to 2009, ICF managed the Katrina Disaster Recovery, the largest CDBG-DR program in U.S. history.*** At the project's peak, ICF led a team of 2,300 contracted staff working under the direction of the State of Louisiana to disburse more than \$8 billion in CDBG-DR funds to homeowners and rental landlords. ICF created a start-to-finish case management system to accept grant applications from homeowners; collect information; determine eligibility; and calculate awards for valid applications based on ownership, occupancy, storm damage, pre-storm property value, repair/replacement costs, and duplication of benefits; and disburse funds to applicants.

DESA – Teaming Partner



DESA, Inc. is a well-established, seasoned construction management and business services firm located in Columbia, South Carolina. Founded in 1986 by Diane E. Sumpter, DESA is a small, woman- and minority-owned firm with a solid commitment to South Carolina's communities. Throughout every project, DESA's primary goal is to exceed its clients' expectations. For more than 28 years, they have proven this commitment by providing trained, certified, and skilled professionals that do a quality job within budget and completed on time.

DESA offers a professional approach to construction management and engineering. With a dedicated and experienced team, DESA has proven its ability to provide a broad spectrum of services to clients in federal, state, and local governments as well as the private sector.

4D Engineering – Teaming Partner



4D Engineering is a woman-owned small business with a strong passion for engineering, the environment, and the construction process. Their goal is to provide superior client-focused engineering

solutions that are comprehensive in nature. 4D Engineering believes an exceptional product can be provided in an economical way and takes pride in efficiency and client-focused solutions.

Chao & Associates – Teaming Partner



Chao & Associates, Inc. specializes in civil engineering, structural engineering, and land surveying. Our staff includes professional engineers, designers, land surveyors, planners, technicians, and administrative personnel committed to client satisfaction. In addition, Chao & Associates is a South Carolina Department of Transportation-certified disadvantaged business enterprise (DBE). With this status, they can help their clients meet their goals on new projects in this regard. Chao & Associates is licensed to perform engineering services within the State of South Carolina.

STAFF QUALIFICATIONS

Tetra Tech offers an unprecedented team of experts with expertise in finance, economics, engineering, and business as well as hands-on experience in the field. Our team brings together a unique combination of emergency planning, disaster recovery, and grant program expertise from some of the largest and most complex disasters in U.S. history. Our team has in-depth knowledge of funding sources, including the FEMA PA Program, Individual Assistance (IA) Program, Hazard Mitigation Grant Program (HMGP), HUD CDBG, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), Office of Inspector General (OIG), and many others. We guide our clients through the complexities of program procedures and requirements, which often are not consistently interpreted by local, state, and federal government agencies.

The Tetra Tech Team includes many familiar faces and staff that have been providing technical support to Richland County on a number of post-disaster activities. Our project team's in-depth knowledge and understanding of Richland County allows Tetra Tech to provide efficient and cost-effective services with no learning curve.

Our team offers experienced disaster management and claims professionals who are adept at helping organizations recover quickly by applying proven methodologies in disaster management. Along with disaster management, we have expertise in insurance claims as well as how PA, HMGP, insurance, and HUD claims/grants interplay with one another. Our top priority is to facilitate the process, orchestrating a rapid and effective recovery.

In addition to our extensive in-house resources, we have teamed with strategic local partners that will provide additional resources to support the County's project. Tetra Tech's South Carolina staff and local subconsultants will allow us to staff up quickly and provide unequalled experience.

The individuals selected for this project not only have national expertise from having worked on every major disaster in the past decade, but also hands-on experience working on prior Richland County projects. Our team includes many familiar faces, such as our proposed principal in charge, **Mr. Jonathan Burgiel**, who has been in the County and assisting with post-disaster activities for the last few weeks. Mr. Burgiel brings over 30 years of solid waste and disaster recovery experience and currently manages the business operations of all Tetra Tech disaster efforts, including project staffing, logistics, grant administration and agency reimbursement support, and program accounting/oversight. Mr. Burgiel served as principal in charge and was instrumental in the State of Vermont's reimbursement following the historic 100-year flood in 2012.

Also included on our team are several other familiar faces, such as **Mr. James Warner, PE; Mr. Eric Byrne, PE; Mr. John Culbreath, PE; Mr. Thad Leugemors, PMP; and Ms. Lisa Muzekari, PE**, all of whom have experience working with the County.

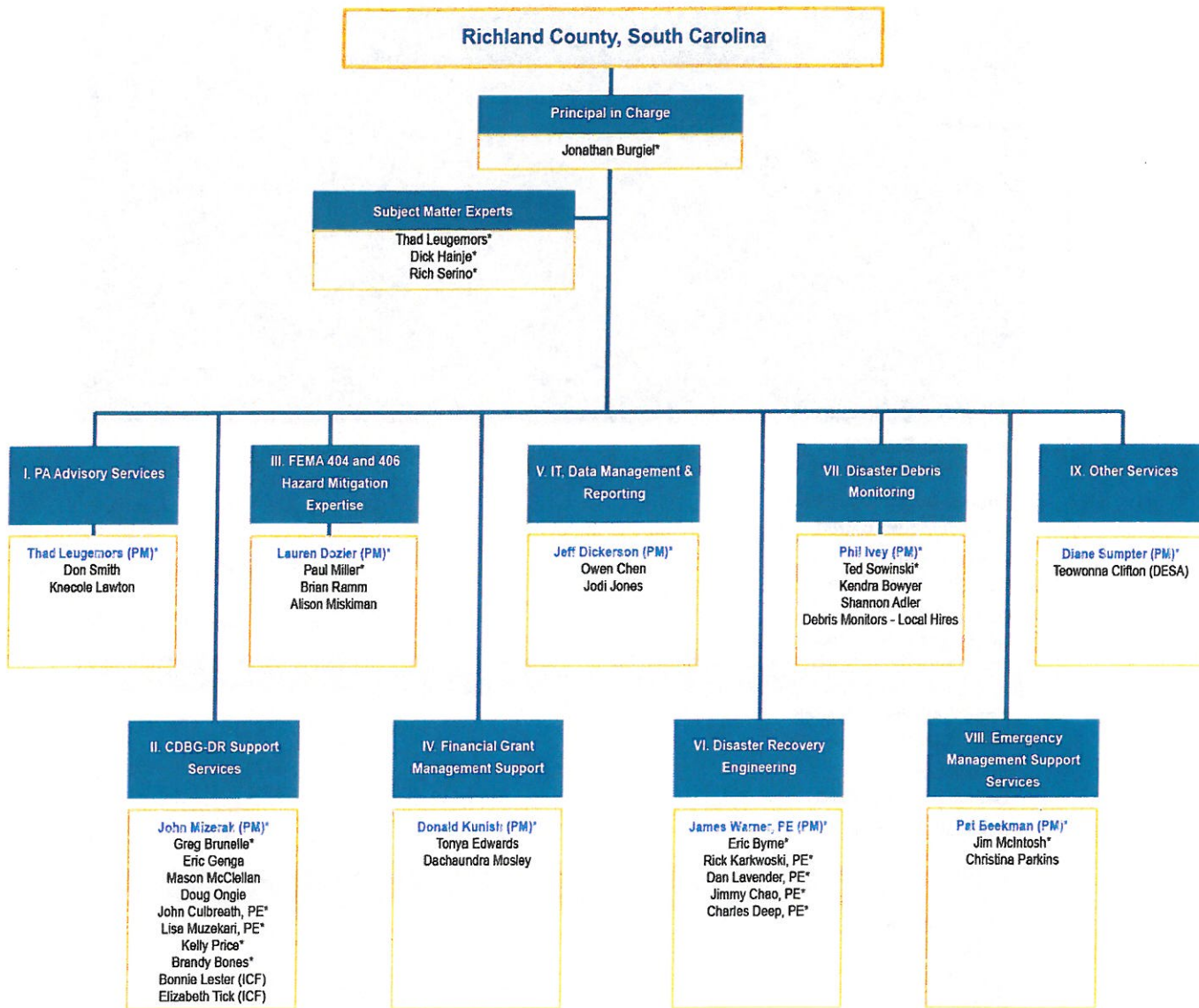
Our team also brings the experience of having completed multiple emergency preparedness and response and recovery projects within the states of South Carolina and North Carolina, including several communities in the County. As a result, our staff has an in-depth understanding of how emergency response and recovery works in the Carolinas.

Additionally, Tetra Tech is recognized for its ability to quickly and effectively respond to disaster grant administration and program management projects. Following many of the nation's worst disasters, the Tetra Tech team mobilized hundreds, and in some cases, thousands of staff across the nation. In many cases, Tetra Tech has responded to its clients within 24 hours of receiving notice-to-proceed and fully staffed projects within seven days. ***We are committed to providing a consistent and coordinated team to successfully complete this proposed project and affirm our ability to commence full operations immediately after notification of award.***

Exhibit 1-1 shows our proposed project team organizational structure. Exhibit 1-2 shows our staff's experience with the County's scope of work areas. ***Résumés for our project managers (PMs) and other key staff have been included at the end of this section.*** Résumés for the additional staff listed in our proposal can be provided upon request.

Section 1: Description of Firm and Staff Qualifications

Exhibit 1-1: Team Organizational Chart



*Denotes key staff that we have included a resume for.

Section 1: Description of Firm and Staff Qualifications

Exhibit 1-2: Staff Experience

Staff Name/Role	I. FEMA PA Advisory Services	II. CDBG-DR Support Services	III. FEMA 404 & 406 Hazard Mitigation	IV. Financial and Grant Management Support	V. IT, Data Management & Reporting Support	VI. Disaster Recovery Engineering Services	VII. Disaster Debris Monitoring Services	VIII. Emergency Management Support Services	IV. Other Disaster Recovery Services
Jonathan Burgiel Principal in Charge	■	■	■	■	■	■	■	■	■
Thad Leugemors, PMP Subject Matter Expert	■	■	■	■	■	■	■	■	■
Richard Hainje Subject Matter Expert	■		■	■		■	■	■	■
Richard Serino Subject Matter Expert	■		■	■		■	■	■	■
I. PA Advisory Services									
Thad Leugemors, PMP Project Manager	■	■	■	■	■	■	■	■	■
Don Smith Senior PA Consultant	■		■			■			■
Knecole Lawton PA Consultant	■		■	■		■			■
II. Community Development Block Grant Support Services									
John Mizerak Project Manager		■			■				■
Greg Brunelle Senior Consultant	■	■	■	■	■	■	■	■	■
Erik Genga Senior Consultant		■		■	■				■
Mason McClellan Senior Consultant		■		■	■				■
Doug Ongie Consultant	■	■	■	■	■	■			■
John Culbreath, PE Engineering Consultant		■	■	■		■			■
Lisa Muzekari, PE Engineering Consultant		■	■	■		■			■
Kelly Price Senior Consultant, ICF International		■		■	■	■			■
Brandy Bones Senior Consultant, ICF International		■		■	■	■			■

Section 1: Description of Firm and Staff Qualifications

Staff Name/Role	I. FEMA PA Advisory Services	II. CDBG-DR Support Services	III. FEMA 404 & 406 Hazard Mitigation	IV. Financial and Grant Management Support	V. IT, Data Management & Reporting Support	VI. Disaster Recovery Engineering Services	VII. Disaster Debris Monitoring Services	VIII. Emergency Management Support Services	IX. Other Disaster Recovery Services
Bonnie Lester Senior Consultant, ICF International		■		■	■	■			■
Elizabeth Tick Senior Consultant, ICF International		■		■	■	■			■
III. FEMA 404 and 406 Hazard Mitigation Expertise									
Lauren Turner Project Manager	■		■	■	■	■		■	■
Paul Miller Senior Consultant	■	■	■	■				■	■
Brian Ramm Consultant	■		■	■		■	■		■
Alison Miskiman Consultant		■	■	■	■				■
IV. Financial and Grant Management Support									
Donald Kunish, CEM Project Manager	■	■	■	■	■	■	■	■	■
Tonya Edwards Senior Consultant	■		■	■					■
Dachaundra Mosley Consultant				■	■				■
V. Information Technology, Data Management and Reporting Support									
Jeff Dickerson Project Manager	■				■		■		■
Owen Chen Consultant	■				■		■		■
Jodi Jones Senior IT Consultant, ICF International		■			■				■
VI. Disaster Recovery Engineering Related Services Support									
James Warner, PE Project Manager				■	■	■			■
Erik Byrne, PE Senior Engineer		■	■	■	■	■			■
Rick Karkowski, PE, PH, CPSWQ, D.WRE Senior Civil Engineer, T&H		■	■	■	■	■			■

Section 1: Description of Firm and Staff Qualifications

Staff Name/Role	I. FEMA PA Advisory Services	II. CDBG-DR Support Services	III. FEMA 404 & 406 Hazard Mitigation	IV. Financial and Grant Management Support	V. IT, Data Management & Reporting Support	VI. Disaster Recovery Engineering Services	VII. Disaster Debris Monitoring Services	VIII. Emergency Management Support Services	IV. Other Disaster Recovery Services
Daniel Lavender, PE Engineer, DESA				■	■	■			■
Jimmy Chao, PE Senior Civil Engineer, Chao & Associates				■	■	■			■
Charles Deep, PE, LEED, AP BD+C Senior Civil and Environmental Engineer, 4D Engineering				■	■	■			■
VII. Disaster Debris Monitoring Services									
Phil Ivey Project Manager	■			■	■		■		■
Ted Sowinski Operations Manager	■		■	■	■		■		■
Kendra Bowyer Supervisor	■			■	■		■		■
Shannon Adler Scheduler	■			■	■		■		■
VIII. Emergency Management Support Services									
Pat Beekman Project Manager				■	■			■	■
Jim McIntosh Senior Consultant	■			■	■			■	■
Christina Parkins Consultant		■		■	■			■	■
IV. Other Disaster Recovery Services									
Diane Sumpter Project Manager, DESA									■
Teowonna Clifton Community Outreach, DESA									■

Section 1: Description of the Firm & Staff Qualifications

Résumés



EXPERIENCE SUMMARY

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

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

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

RELEVANT EXPERIENCE

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

- South Carolina 1,000 Flooding Event – Comprehensive Disaster Recovery Services – Richland County, South Carolina
- Hays County/City of Wimberley, Texas – Severe Flooding Disaster Recovery Assistance
- New Jersey Department of Environmental Protection (NJDEP) – Hurricane Sandy Disaster Vessel Recovery Program
- State of Connecticut – Hurricane Sandy Disaster Debris Program
- State of Louisiana – Hurricane Isaac Disaster Debris Program Management
- City of New Orleans, Louisiana – Hurricane Katrina Residential Demolitions
- Bastrop County, Texas – Wildfires
- City of Cedar Rapids, Iowa – Severe Flooding

Principal-in-Charge (October 2015–November 2015)
Richland County South Carolina | Comprehensive Post-Disaster Flood Support Services

Following the State of South Carolina’s 1,000-year flooding event that took place from October 1–5, 2015, Mr. Burgiel led a team of Tetra Tech staff to provide comprehensive disaster recovery services to Richland County

EDUCATION

University of Central Florida
Master of Business Administration, 1989

Tufts University
Bachelor of Arts, Economics, 1984

AREA OF EXPERTISE

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

GRANT EXPERIENCE

- FEMA PA
- HMGP

DISASTERS

- 4241 SC Flooding
- 4223 TX Flooding
- 4193 CA Earthquake
- 4106 CT Winter Storm
- 4087 Hurricane Sandy
- 4084 Hurricane Isaac
- 4029 TX Wildfires
- 4024 Hurricane Irene
- 1791 Hurricane Ike
- 1786 Hurricane Gustav
- 1780 Hurricane Dolly
- 1679 FL Tornados
- 1606 Hurricane Rita
- 1609 Hurricane Wilma
- 1602 Hurricane Katrina
- 1595 Hurricane Dennis
- 1561 Hurricane Jeanne
- 1551 Hurricane Ivan
- 1545 Hurricane Frances
- 1539 Hurricane Charley

YEARS OF EXPERIENCE

30 years

immediately following the historic flooding event. Services included but were not limited to FEMA PA reimbursement support, procurement package development for over 270 road and bridge repairs, well testing and disinfection program management, a post-disaster outstanding needs assessment, flood mitigation planning support, grant funding strategic plan development, and coordination and technical support activities among the County, State and FEMA agencies.

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

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

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

Principal-in-Charge (April 2012–May 2013)

State of Vermont | Federal Grant Management Services

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

Senior Management (September 2008–January 2009)

Harris County, Texas | Hurricane Ike Disaster Debris Program Management

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

Senior Management (September 2004–September 2009)

City of Orlando, Florida | Disaster Debris Program Management

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

Senior Management (February–April 2007)

Volusia County, Florida | Groundhog Day Tornado Disaster Recovery and Storm Debris Removal

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

Senior Management (August 2004–2005)**City of Boca Raton, Florida | Hurricane Frances Disaster Recovery and Debris Cleanup Management**

Following Hurricane Frances, Mr. Burgiel supervised the responsive deployment of support teams, assisted with staging operations, and managed scheduling, dispatching, and logistics operations for the field inspectors assigned to storm debris cleanup.

Senior Management (August 2005–October 2006)**Miami-Dade County, Florida | Hurricanes Katrina and Wilma Disaster Recovery and Debris Management**

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

Senior Management (August 2004)**Polk County, Florida | Hurricane Charley Program Management and Disposal Site Monitoring Assistance**

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



EXPERIENCE SUMMARY

As a program execution manager for the Tetra Tech Financial Recovery Services (FRS) Division, Mr. Thad Leugemors is experienced at developing and managing both post-disaster and non-disaster related Federal Emergency Management Agency (FEMA) projects. From January 2012 to June 2013 Mr. Leugemors led onsite project teams that assisted the state of Vermont with managing both the FEMA Public Assistance (PA) Program and Hazard Mitigation Grant Program (HMGP) following the devastation of Tropical Storm Irene. Mr. Leugemors has also successfully developed and managed several FEMA projects, including a \$102 million HMGP grant for Galveston County, Texas, to purchase up to 1,200 properties on the hard-hit Bolivar Peninsula in the wake of Hurricane Ike. In addition to managing disaster-specific PA and HMGP grants, Mr. Leugemors has extensive experience in FEMA Hazard Mitigation Assistance (HMA) grants. His extensive disaster recovery and mitigation experience started with Hurricane Katrina in 2006 and includes work with the New York State Emergency Management Office.

Prior to his disaster recovery experience, Mr. Leugemors worked in construction management and public administration. As housing manager for the Seneca Nation of Indians, he created and implemented a Department of Housing and Urban Development (HUD) and tribally funded program to provide affordable housing to low income tribal members with focus on low-income elders and families with children. Mr. Leugemors delivered over 75 units and over \$1 million in home improvements with an operational cost of less than four percent of the program budget.

RELEVANT EXPERIENCE

**Subject Matter Expert (October 2015–November 2015)
Richland County South Carolina | Post-Disaster Flood Support Services**

Following the State of South Carolina’s 1,000-year flooding event that took place from October 1–5, 2015, Mr. Leugemors has been providing subject matter expert services to Richland County including but not limited to FEMA PA reimbursement support, procurement package development for over 270 road and bridge repairs, grant funding strategic plan development, and coordination and technical support activities among the County, State and FEMA agencies.

**Project Manager (December 2013–December 2014)
Boulder County, Colorado | PA Consulting**

In December 2013, Mr. Leugemors deployed to Boulder County, Colorado, to spearhead their FEMA PA, HMGP, and CDBG-DR programs.

Deputy PA Officer (April 2012–June 2013)

YEARS OF EXPERIENCE

14 years

AREA OF EXPERTISE

- Damage Assessments
- Program Administration and Management
- Financial Compliance
- Procurement Activities
- Project Closeout
- Audit Procedures

GRANT EXPERIENCE

- \$850M FEMA Public Assistance
- \$35M FEMA Severe Repetitive Loss Program
- \$210M FEMA Hazard Mitigation Grant Program
- FHWA Emergency Relief

TRAINING/CERTIFICATIONS

- Project Management Professional
- NYS Building Code Enforcement Certified
- IS 630: Introduction to the PA Process
- IS 631: PA Ops 1
- IS 632: Introduction to the Debris Process in PA

EDUCATION

State University of New York
Bachelor of Arts, Pre-Law

Vermont Emergency Management | Tropical Storm Irene PA Program Management

As a result of the success and professionalism of the VEM HMGP project, in April of 2012 VEM tasked our firm to assist with Hurricane Irene PA program management. Mr. Leugemors developed a plan and team to supplement VEM PA staff. In addition, Mr. Leugemors personally provided highly technical PA policy guidance to the highest levels of state government.

HMGP Team Management (January 2012–June 2013)**Vermont Emergency Management | Tropical Storm Irene HMGP Program Management**

In January 2012, Mr. Leugemors deployed to Vermont and was tasked with developing and implementing a plan to assist Vermont towns to develop and submit technical HMGP grant applications within a limited timeframe. The success of this effort led Vermont Emergency Management to task the firm to assist with additional HMGP application rounds, implement HMGP projects, and develop Vermont Emergency Management staff capabilities.

Hazard Mitigation Lead (September 2011–February 2012)**Virginia Department of Transportation (VDOT) | Hurricane Irene PA Program Management**

Mr. Leugemors deployed to VDOT within days of the event and assisted with the initial damage assessment (IDA). He then assigned and is currently managing a PA and FHWA consulting staff to manage this important state agency's recovery process.

Hazard Mitigation Lead (April 2010–February 2012)**City of Virginia Beach, Virginia | Hurricane Irene PA Program Management**

Mr. Leugemors also assisted the City of Virginia Beach with their IDA immediately following Irene. He then assigned a PA consulting team to manage the recovery process for the City.

Hazard Mitigation Lead (February 2009–September 2011)**Galveston County, Texas | Hurricane Ike HMGP (Section 404) Program Management**

Mr. Leugemors completed three HMGP applications, including the single largest HMGP application in FEMA Region VI history with a \$102 million federal share.

Hazard Mitigation Lead (September 2009–December 2009)**Port of Galveston, Texas | Hurricane Ike PA Grant Administration**

Mr. Leugemors assisted with project worksheet writing, version writing, appeals, and audit and closeout preparation for this critical public facility that is a large contributor to the area economy.

ADDITIONAL DISASTER RECOVERY EXPERIENCE**DR 4023 CT, Hurricane Irene**

- Town of Stratford, CT; PA team management

DR 1887 SD, Severe Storms

- Completed Large Project Closeout for State of South Dakota

DR 1840 FL, Severe Storms, Flooding, Tornadoes and Strait Line Winds

- Daytona Beach Florida; Grant Consultant – Completed US DOT TIGER Grant Application

DR 1813 MA, Severe Winter Storm and Flooding

- Paxton Municipal Light District; PA Consultant – Closeout Prep
- Ashburnham Municipal Light Plant; PA Consultant – Closeout Prep
- Templeton Municipal Light Department; PA Consultant – Closeout Prep

DR 1780 TX, Hurricane Dolly

- City of Weslaco; PA Consultant – PW Appeal Writing

DR 1692 NY, Severe Storms and Inland and Coastal Flooding

- New York State Emergency Management Office; State TAC assigned to several sub-grantees in Rockland County – PW Writing

DR 1603 and 1607, Hurricanes Katrina and Rita

- City of New Orleans; PA Consultant – PW Version Writing
- Sewerage and Water Board of New Orleans – PW Version Writing, PW Appeal Writing FEMA Severe Repetitive Loss (SRL) Grant Program



EXPERIENCE SUMMARY

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

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

While serving as regional administrator, Mr. Hainje was responsible for creating a long-term community recovery (LTCR) process for FEMA Region VII. Mr. Hainje was also the director of operations for Hurricane Charley, which struck Florida in 2004. He was responsible for the entire Florida operations division, which at the time was the largest deployment in FEMA’s history. Following the four hurricanes that struck Florida, Mr. Hainje served as director of emergency housing, which was the largest emergency housing operation in more than a decade.

Due to the devastating effects of Hurricane Katrina in 2005, Secretary Chertoff chose principal federal official (PFO) teams for the 2006 hurricane season. Mr. Hainje was asked by Secretary Chertoff to serve as the deputy Principal Federal Official for the Mid-Atlantic States. Mr. Hainje was involved with every aspect of preparation for all of the states from Georgia to Delaware. In preparation for the 2006 hurricane season, Mr. Hainje led major hurricane exercises in FEMA Region IV and FEMA Region III.

Mr. Hainje also led the response, recovery, and mitigation for the historic 2008 Midwest flooding event. At the peak, Mr. Hainje was in charge of over 1,000 FEMA employees deployed to this event, briefed the Midwest governors and the president of the United States, as well as many U.S. senators and congresspersons.

EDUCATION

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

Killian College
Associate of Science, Fire Science, 1994

AREA OF EXPERTISE

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

GRANT EXPERIENCE

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

TRAINING/CERTIFICATIONS

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

YEARS OF EXPERIENCE

30 years

RELEVANT EXPERIENCE

Financial Recovery Services Projects

Senior Technical Advisor (October 2013-December 2014)

Boulder County, Colorado | Full Services Disaster Grant Management Consulting

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

Senior Management Oversight (January 2012-October 2013)

State of Vermont | Hurricane Irene FEMA HMGP Application, Administration, and Implementation

In the wake of Hurricane Irene, the State of Vermont Emergency Management Department engaged our team to assist with its mitigation process. This included consulting services to evaluate the feasibility of submitting an application for the buyout of substantially damaged or destroyed structures and the elevation of less damaged structures under the FEMA Hazard Mitigation Grant Program (HMGP). Within 48 hours, Mr. Hainje and our team of experts deployed to the State of Vermont Emergency Operations Center (EOC) to manage all aspects of these processes. Beginning with applicant outreach and program setup, the project team collected, reviewed, and offered technical assistance to applicants on their HMGP applications. As a result of the quality and timeliness of our team's work on the HMGP applications, the State is obtaining our team's assistance with a number of FEMA-PA related issues, including grant management of the State's Waterbury Office Complex, which was severely flooded.

Principal in Charge (August 2010 – March 2013)

State of South Dakota | FEMA PA Closeout Services

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

Principal in Charge (July 2010 – September 2013)

Port of Galveston, Texas | Federal Grant Administration

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

Senior Advisor (January – September 2011)

Texas Department of Transportation | Comprehensive FEMA PA and Federal Highway Administration

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

Senior Management Oversight (February 2013-January 2014)

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

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

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

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

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

EXPERIENCE SUMMARY

Mr. Serino has over 40 years of experience in public service in both strategic and direct operational roles. He is a proven leader with a track record of building and sustaining coalitions, developing and articulating a clear vision, and holding teams accountable for success in achieving results. Mr. Serino has extensive leadership skills and has taken action on emergency medical, emergency management, emergency preparedness, and homeland security issues at local, state, federal, and international levels. He has substantial practical and academic leadership development, and a track record of cultivating and mentoring leaders in public service

FEATURED RELEVANT EXPERIENCE**Deputy Administrator****Federal Emergency Management Agency (FEMA), Washington, DC**

- Served as Chief Operating Officer of FEMA and oversaw a \$25 billion annual budget; direct internal headquarters and regional operations for FEMA's 15,000 person workforce
- Worked with FEMA leadership, designed and implemented a Whole of Community Approach to Emergency Management and Foster Innovation and Learning as two strategic imperatives for FEMA; also helped to shift emergency management culture to focus on survivors (rather than on victims)
- Implemented numerous common sense innovations, such as using tablet-computers to sign disaster survivors up for assistance or using Civil Air Patrol photos to allow survivors to see if their house had been damaged during an event
- Created a FEMA Think Tank to solicit ideas from across the whole of community for how we can better serve disaster survivors
- Instituted FEMA Stat program to use a data driven approach to achieving their operational metrics
- Focused on employee success by requiring that 100% of FEMA employees have an individual development plan
- Expanded hiring of Presidential Management Fellows by over 800%
- Developed and instituted FEMA Corps; a program that gives 18-24 year olds the opportunity to serve their nation as emergency managers for one year
- Responded to dozens of federally declared disasters including Hurricanes Isaac, Earl, Irene, and Sandy; flooding around the nation, especially in North Dakota and the North East; the tsunami in American Samoa; and tornadoes across the mid-west and south including Alabama, Mississippi, Georgia, and Joplin

YEARS OF EXPERIENCE

40

AREA OF EXPERTISE

- Multi-Jurisdictional Emergency Response Systems
- Homeland Security
- Facilitation
- Training and Exercises
- Homeland Security
- Emergency Medical Services
- Public Health Preparedness
- Hazardous Materials Incidents

EDUCATION

- Naval Postgraduate School, Center for Homeland Defense and Security, Monterey, CA
Executive Leadership Program
2006-2007
- Harvard University, School of Public Health and Kennedy School of Government, Cambridge, MA
National Preparedness Leadership Initiative 2004-2005
- Harvard University, Kennedy School of Government, Cambridge, MA
Program for Senior Executives in State and Local Government 2000
- Boston University Metropolitan College, Boston City Hospital, Boston, MA
Paramedic Program 1978-1979
- Boston State College, Boston, MA
Public Safety Program 1971-1975

**Assistant Director, Emergency Medical Services (EMS) and Emergency Preparedness 2007-2009
Boston Public Health Commission, Boston, MA**

- Directed and oversaw public health preparedness policy and programs for major urban center with resident population of nearly 600,000 and daytime population of more than 1 million
- Led development of innovative plans and built response capacity for chemical, biological, and radiological incidents in Metro-Boston
- Directed significant, cutting-edge public health emergency preparedness initiatives including the Boston Metropolitan Medical Response System, the Boston Medical Reserve Corps
- Oversaw the DelValle Institute for Emergency Preparedness – an innovative, full-service, interdisciplinary institute that delivers free and low-cost training to emergency responders as well as community leaders and stakeholders

**Chief of Department, Emergency Medical Services 2000-2009
Boston Emergency Medical Services, Boston, MA**

- Directed all aspects of uniformed emergency medical response organization with over 450 employees responding to more than 100,000 calls for service annually
- Developed and articulated vision and strategic intent for execution of \$49 million annual budget and more than \$4 million in federal homeland security and preparedness grant funds
- Advocated for EMS and public health preparedness issues with state and federal partners
- Served as EMS commander during citywide emergencies including hazardous materials incidents, aviation emergencies, natural disasters, evacuations, and mass-casualty incidents
- Served as medical incident commander during 2004 Democratic National Convention, a designated National Special Security Event
- Oversaw planning and execution of EMS operations for high-threat planned events including Boston's Fourth of July, the Boston Marathon, and Boston's First Night
- Founded and directed the DelValle Institute for Emergency Preparedness
- Facilitated multi-jurisdictional interdisciplinary tabletop and full-scale exercises

Superintendent-in-Chief, Boston Emergency Medical Services 1996-2000

- Directed and oversaw all day-to-day uniformed EMS operations
- Created Special Operations Command and Special Events Division to meet challenges posed by CBRNE issues and logistical and operational requirements of high-threat, planned events

U.S. Department of Defense, Domestic Preparedness Program, Washington, DC**Instructor/Advisor, National Faculty Member 1998-2009**

- Developed and advised on curriculum for Senior Officials Workshop on Weapons of Mass Destruction (WMD) preparedness and response (Nunn-Lugar-Domenici Program)
- Instructed senior officials and first responders in over 30 cities on WMD preparedness
- Advise on installation preparedness and provide instruction to Army, Navy, and Marines worldwide

**U.S. Navy, Bureau of Surgery and Medicine, Office of Homeland Security, Washington, DC
Program Instructor 2002-2005**

- National and International Program Instructor and EMS subject matter expert for Disaster Vulnerability Analysis, Training, and Exercise Program
- Led U.S. Navy installation leaders through full-spectrum analysis of facility and operational security policies, plans, and procedures
- Advised U.S. Navy leaders on medical response issues related to CBRNE threats



EXPERIENCE SUMMARY

Mr. Mizerak has worked for more than 19 years in both the public and private sectors, managing and providing a wide variety of services related to community planning and economic development.

He has worked with communities on a variety of issues related to natural hazards and disaster recovery efforts, including the State of New York's New York Rising Communities Reconstruction program and Dauphin County, Pennsylvania. Both of these projects have involved the utilization of Community Development Block Grant Disaster Recovery (CDBG-DR) project following Hurricane Irene and Tropical Storm Lee in 2011. As part of the work for the State of New York, Mr. Mizerak has worked with communities to develop strategic community reconstruction plans that will allow the communities to recover from the disasters as well as build more resilient communities. The focus of these plans were to use a public process to identify priority recovery and resiliency projects and then develop implementation strategies for using the CDBG-DR funding. In Dauphin County, Mr. Mizerak worked with the County staff to develop their required Action Plan in order to accomplish the long-term recovery and restoration of infrastructure and housing, and economic revitalization within the County.

While leading key agency programs in Pennsylvania's Department of Community and Economic Development, Mr. Mizerak was responsible for managing a state-level grant program, managing the Commonwealth's National Flood Insurance Program (NFIP) efforts, and helped to develop new policy for 15 state agencies and 7 offices of the Governor. He also was the lead staff managing the State's Planning Board and Interagency Team on Land Use.

He has worked in local community development offices, giving him first-hand experience with resolving issues faced by elected officials, planning commission members, the general public, and private developers. He has been involved with the development of comprehensive plans, the entire approval process for new development and redevelopment projects, and assisted residents through complex regulatory and policy issues related to the development process. These included building codes, zoning, and floodplain regulations.

Throughout his career, Mr. Mizerak has worked with state, regional, county and local governments as well as private companies to identify and implement their community and economic development priorities.

RELEVANT EXPERIENCE

Economic Development Program Manager, Tetra Tech, Inc. – Harrisburg, PA

Mr. Mizerak manages Tetra Tech, Inc.'s Economic Development Program Practice Area. In this position, he works with public- and private-sector clients to identify and implement their economic development projects. These efforts include identifying and prioritizing a community's infrastructure improvements, economic development

EDUCATION

MPA, Public Administration
Shippensburg University,
1993

BS, Public Administration
Shippensburg University,
1992

AREAS OF EXPERTISE

- CDBG-DR program
- Community Reconstruction and Resiliency Plans
- Community and Economic Development Strategies/Plans
- Public Funding Strategies
- Community Outreach
- Policy Development
- Redevelopment Projects
- Training

YEARS OF EXPERIENCE

19

opportunities, disaster recovery and resiliency projects, and other initiatives that focus on the collective support necessary to complete a project. Once projects have been identified, Mr. Mizerak assists with the development of financing strategies to leverage local, state, federal, and private funding for project implementation.

Utilizing experts and design professionals from Tetra Tech's comprehensive service areas, Mr. Mizerak manages the entire continuum of community and economic development projects. This continuum may include performing highest-and-best-use analyses to identify optimum use of a site; performing market analysis in a community or region to understand the development potential; developing public funding strategies, securing funding, and managing drawdown; preparing economic impact analyses to identify and quantify the impacts of future development or redevelopment; and assisting clients with interfacing with the local, state, and federal agencies for the various reviews of any required approvals related to successful project development and implementation.

NY Rising Communities Reconstruction Program Mid-Hudson Valley/Catskills Region, New York – 2013-2014. Mr. Mizerak is working with several communities in the Mid-Hudson/Catskills Region on the development of reconstruction plans following devastating impacts resulting from Hurricane Irene and Tropical Storm Lee. This work involves all traditional aspects of community planning, including the review of existing documentation and information; the development of a mission statement and goals and objectives; public outreach to key stakeholders; identification, evaluation, and prioritization of projects; feasibility evaluation of all proposed projects; and final plan preparation.

Climate Change Economic Vulnerability Tool and Pilot Project, North Kingston, Rhode Island. Developed an economic vulnerability assessment tool for the State of Rhode Island that provided a guide and scaling methodology for local officials to identify potential threats and impacts to the local economy from climate change. Mr. Mizerak helped to develop the overall approach, methodology and assessment Tool which will assist communities of varying scales and conditions in developing feasible action-oriented initiatives that respond to unique local threats from climate change. Project work included the development of a step-by-step guide for local planners to accurately identify potential threats from climate change, assess their impacts on economic assets and the overall local economy, and develop solutions to increase resilience and economic health. The assessment tool was tested via a pilot project in one Rhode Island community and was designed to be replicated in other communities by scaling and adapting to unique local conditions.

Previous Employment

Vice President - Development Services, Delta Development Group, Inc. Mr. Mizerak was a Vice President of the largest division within the company. He provided strategic direction to staff to successfully deliver results to the clients and accomplish the company's priorities. He directed staff and monitored the management of approximately 30 projects annually valued at approximately \$5 million. He worked as project manager with some of the company's largest and longest-standing clients to prepare strategic plans, and develop strategies for successful project implementation. The client base included state agencies, county governments, colleges and universities, private companies, local governments, municipal authorities, and non-profit organizations.

Policy Manager - Pennsylvania Department of Community and Economic Development Governor's Center for Local Government Services Mr. Mizerak managed the Department's Statewide Land Use Planning and Technical Assistance Program and National Flood Insurance Program. He was responsible for establishing and implementing these programs' priorities for the utilization of the annual multi-million dollar budget for land use and community and economic development planning projects. He developed a project-level monitoring system to ensure that projects were moving forward, and ensured that grant funds were being used appropriately and in accordance with program guidelines. He also worked with other Commonwealth agencies to leverage funding for planning projects.

Mr. Mizerak managed the Pennsylvania Interagency Team on Land Use, which consisted of 15 state agencies and multiple divisions within the Office of the Governor. It was responsible for the development and coordination of state agency policy and funding for local planning, facility, infrastructure, and economic development projects.



Gregory T. Brunelle CDBG-DR Senior Consultant

EXPERIENCE SUMMARY

Gregory Brunelle has 20 years of public safety experience, and has served at the local, county, and state levels of government in operational and senior executive positions. He joined Tetra Tech in 2013 after serving for more than 6 years at increasing levels of responsibility with the New York State Office of Emergency Management (NYS OEM), culminating in his appointment as acting director. Mr. Brunelle began working in the NYS OEM as deputy director of preparedness, overseeing the office's training and exercise and planning activities and assisting with the development of legislation that resulted in the restructuring of state's public safety agencies to create the NYS Division of Homeland Security and Emergency Services (DHSES). While serving as the deputy director of operations, he led the state emergency operations center (EOC) and served as the deputy state coordinating officer during the response to Hurricane Irene and Tropical Storm Lee. A year later, in the immediate aftermath of Hurricane Sandy, Mr. Brunelle was deployed to lead the state's response and recovery efforts for Long Island. Other positions that he has held include director and deputy director of the Jefferson County (New York) Office of Fire and Emergency Management, for whom he served as the county's fire coordinator, 911 coordinator, and emergency manager. He was also deployed to serve alongside emergency managers from across New York State to assist with the response coordination to the terrorist attacks of 9/11. Mr. Brunelle began his career as a volunteer firefighter and advanced emergency medical technician.

As Vice President of Emergency Management and Community Resilience for Tetra Tech, Mr. Brunelle has assisted with the development of the EM/CR practice, coordinating business development for the Preparedness Practice, and serves as both a project management and senior subject matter on dozens of planning, exercise, response and recovery initiatives across the nation. His role and responsibilities have continued to expand as the EM/CR practice has rapidly grown. In 2014 he was assigned by Tetra Tech's executive leadership to lead the EM/CR integration across the entirety of the organization, working alongside practice leaders from across Tetra Tech's disciplines, ensuring clients receive truly comprehensive, customized solutions that fully integrate Tetra Tech's scientific, engineering and design capabilities.

RELEVANT EXPERIENCE

New York Rising Community Redevelopment Program Served as Deputy Project Manager for the 9 communities assigned to Tetra Tech by the NYS Governor's Office of Storm Recovery and directly served as Community Coordinator for 2 of the communities following Hurricanes Irene/Lee and Sandy. The project involved the development of long-term, resiliency-focused recovery plans via the identification of implementable infrastructure and community projects based upon risk assessments, community vision, and funding opportunities.

EDUCATION

MS, Security Studies, Naval Postgraduate School, 2010

MA, Organizational Psychology, Capella University, 2002

BA, History and Sociology, SUNY Fredonia, 1994

AREAS OF EXPERTISE

Team Leadership & Project Management

Organizational Change Management

Crisis and Disaster Leadership

Emergency Management

Homeland Security

EOC and Field Operations

DSCA/Civilian EM Interface

Long Term Recovery & Resiliency Planning

REGISTRATIONS/ AFFILIATIONS

Member, New York State Emergency Managers' Association, 2001-current

Member, National Emergency Managers' Association, 2008-current

KEY TRAINING/ CERTIFICATIONS

ICS/NIMS 700, 800, 100, 200, 300, 400

FEMA State Directors' Course (E257)

YEARS OF EXPERIENCE

21

Monroe County (NY) Interoperable Communications Exercise Support Served as the Principal-in-Charge of a multi-year, on-going exercise and planning support project to enhance Monroe County's communications plans, standard operating guidelines and training programs via plan development, training and exercise development/implementation.

Broome County (NY) Continuity of Operations Plan Served as the Principal-in-Charge of the Broome County COOP development.

Missouri Emergency Management Agency Served as a Senior Subject Matter Expert to provide EOC re-design assessment and recommendations.

Mt. Sinai Health System Ebola Virus Disease (EVD) Training (New York City) Served as the Principal-in-Charge of the delivery of PPE donning and doffing training to nearly 5,000 employees of the Mt. Sinai Health System during the 2014 Ebola Virus Disease (EVD) outbreak.

Cook County (IL) THIRA Support Served as a Senior Subject Matter expert to facilitate the emergency management group's input to the city/county Threat Hazard Identification Risk Assessment (THIRA) process.

2014 NY-NJ-CT-PA RCPT Exercise Served as a Senior Subject Matter expert and on-site exercise facilitator during the 2014 Regional Catastrophic Planning Team (RCPT) functional exercise which utilized a 10kt Nuclear Device detonation scenario. As the New Jersey EOC facilitator, ensured that the New Jersey state agencies and New Jersey State Police OEM leadership team actively engaged in the exercise and facilitated Command and General Staff meetings..

Long Beach (NY) Community Rating System (CRS) Update Served as the Principal-in-Charge during the assessment and re-application of Long Beach, NY's CRS program.

Previous Experience

New York Office of Emergency Management, Acting Director, 1st Deputy Director & Deputy Director of Operations, and Deputy Director of Preparedness. While serving with the NYS OEM, Mr. Brunelle provided leadership for approximately 300 employees and was responsible for overseeing core program activities, human resources, and budget management, which included a \$15 million annual operating budget and tens of millions of dollars in annual grants/assistance payment management. Mr. Brunelle led state emergency operations for various crises and served as deputy state coordinating officer for disasters, including serving as coordinator for the state's response to Hurricane Sandy for Nassau and Suffolk Counties and providing lead coordination of New York's response to Hurricane Irene and Tropical Storm Lee.

Jefferson County Office of Fire and Emergency Management, Watertown, New York, Director and Deputy Director. Mr. Brunelle served for 6 years with the Jefferson County Office of Fire and Emergency Management. He was the deputy director from 2001 to 2005 and director from 2005 to 2007, and while in these positions, he also served as the county's fire coordinator, 911 coordinator, and emergency manager. In addition, he participated on the regional counter-terrorism task force, the U.S. Coast Guard's Area Maritime Security Committee, and as an executive board member of the Northern New York Chapter of the American Red Cross. In partnership with the Fort Drum Garrison Command, he assisted with the development and execution of force protection exercises, ensuring the participation and integration of the surrounding communities. Mr. Brunelle served in field and EOC activities in various locations across the state during times of disaster, including response to the state EOC and NYC Mayor's Office of Emergency Management following the 9/11 terrorist attacks.

Samaritan Health System, Watertown, New York, Director, Patient and Family Services and Medical Social Worker. Mr. Brunelle led the social services department of the Samaritan Health System, which included 24 employees in a 309-bed acute care regional medical center and 272-bed nursing home. As the designated coordinator of disaster preparedness, Mr. Brunelle developed, implemented, and facilitated disaster mitigation and response activities for Samaritan Medical Center, Samaritan Keep Home and E.J. Noble Hospital-Samaritan.

John Culbreath, PE | CDBG-DR Senior Consultant/Sr. Engineer

John Culbreath has 16 years of engineering experience with the planning and design of industrial parks, subdivisions, and commercial developments, including roadway infrastructure, water and wastewater distribution infrastructure, water and wastewater treatment facilities, storm drainage, retention, sediment pond design, electrical distribution infrastructure, and communication infrastructure. His primary focus is economic development. He is responsible for the preparation and submittal of construction and operating permit applications to regulatory agencies. Duties also include project management, preparation of specifications, cost estimates, site evaluation engineering reports, environmental site assessments, master plans, and associated studies for all aspects of site engineering. John is also integrally involved in funding mechanisms for his clients on a federal, state, and local level. His areas of expertise include industrial site certification; industrial and commercial site development; municipal and residential site development; roadway design; traffic studies; transportation and land planning; railroad engineering; master plans and studies; and water and wastewater infrastructure.

Education

University of South Carolina – B.S. in Civil Engineering, 1999

Professional Registrations

Professional Engineer in SC

Professional Associations

South Carolina Economic Developers Association, American Society of Civil Engineers, Committee of 100 – Central South Carolina Alliance

Project Experience

ECONOMIC DEVELOPMENT PROGRAMS/GRANTS/OTHER PROGRAMS

The Thomas & Hutton team has extensive experience with the funding mechanisms that power economic development in the State of South Carolina. The team has assisted in securing over \$200 million in government assistance at state and local levels for construction of roadways and water and sewer systems to serve industrial parks and sites within South Carolina. We work with our County partners to assist in securing various grants including: Federal Economic Development Administration (EDA) Grants, Federal Community Development Block Grants (CDBG), American Recovery and Reinvestment Act (ARRA) and South Carolina Rural Infrastructure Authority Grants. Working with these agencies on these projects included assisting the local stakeholders with grant agreements/applications, understanding allowable costs/grant expenses, assisting with financial management/accounting records/audit/requests for payments, procurement/bidding and award, contract administration and project progress updates/reporting/monitoring, and project/grant closeout. These projects include the following:

- ZF Transmissions, Laurens County, SC
- Walgreens Distribution Facility, Anderson, SC
- Bridgestone ORR Tire Manufacturing Facility, Aiken, SC
- Volvo Cars Manufacturing Facility, Berkeley County, SC
- Owings Industrial Park – Water and Wastewater Improvements, Owings, SC
- Old Laurens Road and New Frontage Road Improvements, Laurens County, SC
- Orangeburg County, US Highway 301 Water System Improvements, Orangeburg County, SC
- Chester County, SC Highway 99 Industrial Park, Great Falls, SC

Laurens County, Owings Industrial Park – Water and Wastewater Improvements, Owings, SC,

In 2013, the Laurens County Development Corporation and Laurens County retained the services of Thomas & Hutton Engineering to provide services related to preparing and administering the Rural Infrastructure Grant. We prepared the application for submittal and the County was awarded \$350,000 in construction funding for a wastewater pump station and force main and water line infrastructure to serve the Owings Industrial Park-Phase II. Services provided preparation of application, coordination of additional funding and documentation, conversations with SCDOC personnel, and administering the subsequent funding.

Aiken County, Project Hercules, Graniteville, SC,

In 2012, Bridgestone Tires announced they were going to build their new manufacturing plant in Aiken County, bringing with it a \$1.2 billion investment and 850 new jobs. Major water, sewer, and roadway infrastructure improvements were part of the incentive package that ultimately convinced Bridgestone to locate the new plant in Aiken. Current Thomas and Hutton employees acted as Project Manager, Project Engineer, and Lead Designer for the design and permitting of these proposed infrastructure improvements. Services provided preparation of application, coordination of SCDOC and EDA funding and documentation, conversations with SCDOC and EDA personnel, and administering the subsequent funding based on agency documentation requirements.

Responsibilities included assisting Aiken County in providing civil design services, such as stormwater, water, and wastewater design. The detailed work included four miles of roadway improvements, new water infrastructure including a 500,000 gallon elevated water tank, approximately 12,000 linear of 12-inch and 16-inch water main improvements and approximately 4,800 linear feet of 12-inch and 18-inch wastewater gravity main improvements to serve the facility and the surrounding industrial park. This project also included obtaining the necessary construction permits from the South Carolina Department of Health & Environmental Control (SCDHEC), the South Carolina Department of Transportation (SCDOT), and the local utility providers.

South Carolina Department of Commerce (SCDOC) and Bridgestone requested construction of the infrastructure improvements be completed in 12 months on a very aggressive timeline utilizing six different contractors working at the same time. *

INDUSTRIAL & COMMERCIAL SITE DEVELOPMENT – SANTEE COOPER LOAN PROCESS

Calhoun County, Calhoun County Speculative Building, St. Matthews, SC, Provided planning and engineering services related to the development of a 50,000 Square Foot (SF) Speculative Building to be located within the I-26 Industrial Park in Calhoun County, South Carolina. Thomas & Hutton is coordinating with the County, Santee Cooper, and Tri-County Electric Cooperative in preparation and submittal of the **Santee Cooper Loan Application Grant process**. As part of the civil engineering services, Thomas & Hutton is providing a conceptual plan showing approximate locations of proposed land uses for the site. The uses shown were according to direction provided by the Owner and included land uses, lots, streets, ponds, and other related features within the site boundary. The building should be approved for construction in September 2014.

Kitty's Landing Speculative Building Planning, Bluffton, SC, Provided planning and engineering services related to the development of a 40,000 Square Foot (SF) Speculative Building to be located in Bluffton, South Carolina. Thomas & Hutton coordinated with the County and Santee Cooper preparation and submittal of the **Santee Cooper Loan Application Grant process** and provided a conceptual plan showing approximate locations of proposed land uses for the site. The uses were in accordance to direction provided by the Owner and included land uses, lots, streets, ponds, and other related features within the site boundary. The project should be approved in August and proceed to design and construction with completion first of 2015.

Aiken County, Sage Mill Industrial Park Speculative Building – Planning, Design, and Construction, Aiken, SC, Provided Owner Representative, surveying, geotechnical investigation, engineering services, and permitting related to the Mass Grading Improvements within the Sage Mill Industrial Park to serve a future Speculative Building. This project encompassed an approximately twenty-two (22) acre site and a mass grading pad to serve a 100,000 SF Speculative Building. Thomas & Hutton coordinated with the County and Santee Cooper preparation and submittal of the **Santee Cooper Loan Application Grant process**. T&H was retained to provide Owner's Representative, supplemental geotechnical & topographic surveys, and construction services for the Speculative Building. T&H is the first point of contact for matters related to the Architect and General Contractor, will review all construction reports and coordinate proper permitting through the local or state agencies with the Architect and General Contractor, and will review and approve scheduled pay applications from the Architect, Geotechnical Special Testing Firm, and Contractor.

* **Prior Experience with Previous Employer(s)**

Lisa Muzekari, PE | CDBG-DR Senior Consultant

Lisa Muzekari is a Senior Project Manager with 22 years of experience in environmental engineering. She has managed a practice group focusing on environmental health and safety compliance and solid waste management and is recognized in her field for providing environmental assessments, permitting, planning, and compliance strategies for municipal and private clients. Lisa's experience includes water, wastewater, air, environmental planning, permitting and compliance, industrial and hazardous waste, air modeling, and safety and emergency planning. She is responsible for various phases of engineering projects, from conception and planning to design. Lisa's areas of expertise includes air permitting/modeling; environmental assessment; stormwater management; spill prevention control and countermeasures plans; CERCLA/RCRA hazardous waste; process safety management plans; risk management programs; water, wastewater, and reuse water studies; and solid waste evaluations.

Education

University of South Carolina - M.S. in Civil Engineering, 1992

University of South Carolina - B.S. in Civil Engineering, 1991

Professional Registrations

Professional Engineer in SC, NC, GA

Professional Associations

Water Environment Association of South Carolina, Water Environment Federation, Carolinas Air Pollution Control Association

Project Experience

Air Permitting and Dispersion Modeling

Various Clients, Air Permit Application Packages including permit forms, emission calculations, process descriptions, and dispersion modeling results were compiled for over 100 industries and municipalities. The Aermol, ISC2, ISC3, and Screen models were utilized in performing the air dispersion modeling.

Stormwater Pollution Prevention Plans

Developed Stormwater Pollution Prevention Plans (SWP3s) for over 75 regulated facilities. The Stormwater Pollution Prevention Plans included site assessments, identification of potential pollutant sources, development of best management practices, monitoring requirements, visual assessments, and development of management procedures to maintain site compliance. Stormwater Pollution Prevention Plans were developed in accordance with Industrial General Permits in SC, NC, and GA.

Spill Prevention Control and Countermeasures Plans

Developed Spill Prevention Control and Countermeasures Plans (SPCCs) for numerous facilities in the Southeast. The SPCC plans were developed to address petroleum/oil storage and handling operations of the facility. The SPCC Plans provided the written documentation of the site-specific measures (procedural and structural) the facility was to implement to prevent or minimize any discharge of petroleum/oil into the waters of the United States. The SPCC Plans were prepared to meet the requirements of the revised SPCC Regulation (40 CFR 112).

Process Safety Management Plans

Developed Process Safety Management Programs for over 30 facilities. Prepared written programs, performed compliance audits, completed process hazard analysis, developed standard operating procedures, and evaluated and documented mechanical integrity program.

Emergency Action Plans

Developed Emergency Action Plans for the following entities:

- Greenwood Commissioners of Public Works
- Hilton Head Public Service District
- City of Bennettsville, SC

Risk Management Programs

Developed Risk Management Programs in accordance with 40 CFR 68 for the over 30 facilities. The Risk Management Programs addressed Prevention Programs, Management Programs, and Hazard Assessment Programs. Off-site consequence analyses were performed utilizing the Degadis air dispersion model to determine the extents of possible release scenarios. RMP Programs were developed for chemicals including chlorine, sulfur dioxide, and ammonia. *

Stormwater Management

Richland County, Industrial and High Risk Runoff Program, Columbia, SC, Development of program for Richland County to control Industrial and High Risk Runoff. Richland County holds a NPDES Phase I Permit. *

City of Hartsville, Stormwater Utility, Hartsville, SC, Development of financial requirements for the development of a stormwater utility for the City of Hartsville in order to comply with the upcoming requirements of NPDES Phase II permitting. *

Source Water Assessment Programs

Beaufort Jasper Water & Sewer Authority, Okatie, SC, Developed a Source Water Assessment Program for the Beaufort Jasper Water & Sewer Authority to locate potential contaminant sources for their wells and surface water source. The project included the coordination between the BJW&SA and the City of Savannah SWAPs. *

City of Bennettsville, SC, Developed a Source Water Protection Program for the City of Bennettsville Water Treatment Plant to locate potential contaminant sources for their wells and surface water source. *

Water, Wastewater and Reuse Water Plans and Studies

Chester County, Countywide Wastewater System Study, Chester, SC, Preparation of an engineering study to address the existing wastewater infrastructure and potential future growth countywide in determining alternatives for expansion of the wastewater collection system and treatment facilities. The study included preliminary cost estimates for proposed expansion of the existing system, population projections, and collection system mapping. *

Clarendon County, Countywide Wastewater Study, Manning, SC, Preparation of an engineering study to analyze alternatives to create a regional sewer system in Clarendon County, including the consolidation of existing municipal systems. The study included preliminary cost estimates for various alternatives, as well as population and flow projections. *

Water Distribution/Treatment and Associated Projects

Beaufort Jasper Water & Sewer Authority, Regional Water System Feasibility Study, Sheldon Township, SC, Conducted a feasibility study for a new regional water system for Sheldon Township for the Beaufort Jasper Water & Sewer Authority. The study was performed to determine the most cost effective method of providing potable water and fire protection to the Sheldon Township area of northern Beaufort County. *

Charleston Water System, Raw Water Intake Model, Charleston, SC, Developed a Fortran Model to hydraulically analyze the raw water intake system for the Water Treatment Plant for the Charleston Water System. *

Edgefield County Water & Sewer Authority, Preliminary Engineering Report (PER) Water Distribution System Improvements, Edgefield, SC, Prepared a PER for improvements to the Edgefield County Water Distribution System. *

Wastewater Collection/Treatment and Associated Projects

Aiken County Public Service Authority, Preliminary Engineering Report (PER) Sludge Composting Facility at Horse Creek Pollution Control Facility, North Augusta, SC, Prepared a PER for a sludge composting facility at the Horse Creek Pollution Control Facility. Additional air permitting services were provided for a sludge dryer. *

* Prior Experience with Previous Employer(s)



Kelly Price

Senior Fellow

ICF International

EXPERIENCE OVERVIEW

Ms. Price is a Senior Fellow with ICF with 24 years of professional experience in planning and housing and community development programs. She worked in local government community development for six years prior to joining ICF in 1996. Ms. Price has hands-on expertise in planning, development/design, implementation and monitoring of community development activities at the local level. She currently manages large, multi-task technical assistance (TA) projects for the U.S. Department of Housing and Urban Development (HUD) and state clients. Ms. Price provides direct TA to states and localities on CDBG (including DR), HOME and the Neighborhood Stabilization Program (NSP), as well as planning processes, program design, disaster recovery and environmental review. She designs and delivers training courses across the country as well as handbooks and other tools on a wide range of HUD's housing and community development programs and effective program design and implementation topics. Ms. Price is considered a national expert in CDBG having written HUD's CDBG trainings, speaking at national conferences and sought out by states and localities for guidance.

PROJECT EXPERIENCE

Technical Assistance Project Lead, HUD, OneCPD/ Community Compass, 2009–Present. Ms. Price currently leads all of ICF's CPD TA grant-funded work from HUD. She interfaces with HUD headquarters and field offices and grantees receiving TA and conceptualizes work plans. She supervises a four person TA support team to ensure that work plans, budgets, and reporting are all carried out in a timely, compliant and efficient manner. She also oversees all project teams on individual TA engagements to ensure that all engagements and deliverables are of the highest quality. Topics range from organizational development to financial management to program redesign, and involve teams of highly skilled subject matter experts whose activities must be coordinated. Several of these engagements have been large, highly complex such as Cook County IL, State of Michigan (NSP), Providence RI, and Somerville MA. Also assists with the development of written products and tools for grantees to increase capacity to run and oversee CPD grant programs.

Team Leader, HUD for Dauphin County, PA, Hurricane Sandy, 2014. Ms. Price assisted the County with addressing gaps in its financial management and related systems to ensure approval of its certification to HUD for DR funds and provided policy guidance on project eligibility and duplication of benefits.

Team Leader, HUD for State of NY, Hurricane Sandy, 2014. Ms. Price worked with an interdisciplinary team to guide the Governor's Office and other parties through possible program design and implementation issues associated with a resiliency retrofit fund that using CDBG-DR funds.

Accomplishment Highlights

- Policy advisor on the Louisiana CDBG-DR program
- Advised New York Governor's Office on its use of CDBG-DR funding for resiliency retrofit fund
- Provided policy guidance to the State of New York on the use of CDBG-DR for resiliency programs
- Currently providing policy support to the New Jersey environmental review management work being carried out by ICF in support of the NJ disaster recovery programs

Education

- M.U.R.P., Coursework, University of Virginia and Virginia Tech (Joint Program), Northern Virginia Campus, 1997–1999
- B.S., College of Charleston, Charleston, SC, 1991

Certifications and Training

- Numerous trainings on range of CD/housing topics
- HOME certified administrator



Policy Support/Training Lead, State of NJ, Department of Environmental Protection, Hurricane Sandy, 2014. Ms. Price provides policy and training support to the team managing the NJ DR environmental review process. She developed a comprehensive training plan and reviews training materials. Ms. Price provides guidance as issues arise around what level of environmental review, review of tier 2 checklists prepared by other contractors and eligibility of projects with various issues.

CDBG Training & Policy Support, State of LA, Hurricane Katrina, 2006–2008. Ms. Price served as a key policy advisor on the Louisiana Disaster Recovery programs, providing guidance and training on CDBG, Section 3, Davis-Bacon labor standards and environmental review.

Project Manager, Commonwealth of Kentucky, Department for Local Government, 2002–Present. Led the team that totally re-wrote and enhance the Commonwealth of Kentucky's CDBG Administrators Handbook and developed the state's first official CDBG Certified Administrator testing program. Annually update the handbook and related program tools for the State. Develop curricula and deliver multiple annual training sessions, including training for new administrators to become certified and training on specialized advance topics for already certified individuals. Also, developed new CDBG monitoring systems that included a Microsoft Access database, checklists and a handbook for KY CDBG staff. Also conducted training for grantees on compliance. Also led a small team that provided start-up guidance to KY on its NSP including policy TA and several training sessions across the state. She updates the handbook and provides multiple trainings annually in addition to on-call policy guidance.

Project Manager, South Carolina Department of Commerce, 2000–Present. Updated and revised the state's CDBG Implementation Manual and Resource Manual. Each year, design and deliver annual trainings for state recipients and administrators on the implementation of CDBG-funded projects and special topics such as timeliness, rehabilitation management, procurement and environmental review. Also helped guide the State through a major program redesign, providing ongoing policy and implementation support. Continues to provide training annually for state grantees on various CDBG and related topics.

Team Member, HUD for Arkadelphia, AR, and Midwest City and Oklahoma City, OK, Various TORNADOS, 1997–1999. For these communities, analyzed the housing and/or commercial markets, designed housing repair and rebuilding programs, helped secure waivers of program regulations and to form public-private partnerships and secure funding, and developed strategic plans and processes for local implementation of the recovery programs.

EMPLOYMENT HISTORY

ICF International	Senior Fellow	2012–Present
	Vice President	2002–2012
	Project Manager	1999–2002
	Senior Associate	1997–1999
	Associate	1996–1997
City of Alexandria, VA, Office of Housing	Housing Analyst	1994–1996
City of Charleston, SC, Department of Housing and Community Development	Deputy Director	1993–1994
	Projects Officer	1992–1993
	Specialist	1991–1992



Brandy Bones, PMP Manager

ICF International

EXPERIENCE OVERVIEW

Ms. Bones is a manager at ICF with 10 years of experience working on HUD housing programs including CDBG, CDBG-DR, HOME, NSP and Choice Neighborhoods. She is experienced in program and project implementation, policy and procedures development, and data tracking, analysis, and reporting. She recently completed writing the State of Oregon's HUD National Disaster Resilience Competition application and is currently assisting the State of New Jersey and Pennsylvania on the design and implementation of their CDBG-DR programs.

PROJECT EXPERIENCE

CDBG-NDR Grant Writer, State of Oregon, 2015. Ms. Bones was the Grant Writer for the State of Oregon's Phase 1 and Phase 2 application to HUD for CDBG National Disaster Resilience funding. She was re-engaged to serve as the Grant Writer for the Phase 2 application after Oregon advanced to Phase 2. The funding will support innovative resilience projects and programs in two rural coastal communities and requires the State and local communities to adopt policy changes and implement activities that plan for the impacts of extreme weather and climate change and rebuild affected areas to be better prepared for the future.

Superstorm Sandy CDBG-DR Program, New Jersey Division of Community Affairs (DCA), 2014–Present. Ms. Bones assists DCA to implement a \$3.29 billion CDBG-DR program to help homeowners, tenants, landlords, developers, and local governments recover from damaged sustained from Superstorm Sandy. She worked with the State's CFO to create budget forecasts and reporting tools across all CDBG-DR programs so the State can accurately track financial and performance metrics against planned schedules. She is developing policies, procedures, and process flows for to assist DCA with delivering Language Access Services to Limited English Proficient (LEP) individuals and outreach to low and moderate income persons. Ms. Bones is providing CDBG-DR expertise to DCA's subrecipient, the NJ Department of Environmental Protection (DEP) to support their implementation of the Blue Acres Buyout Program including writing URA policies and procedures to handle voluntary acquisitions of properties that are tenant-occupied.

CDBG-DR Program, Pennsylvania Department of Community and Economic Development (DCED), 2015 – Present. Ms. Bones is working with DCED to update its unmet needs analysis and based on the analysis, determine how best to allocate its \$57 million in CDBG-DR funding, update its existing CDBG-DR policies and procedures manual, and conduct CDBG-DR training.

Choice Neighborhoods, HUD, 2015 – Present. Ms. Bones helped develop Choice Neighborhoods Inform, an online reporting tool where Choice Neighborhood Implementation

Accomplishment Highlights

- Developed written policies and procedures for management and implementation of Road Home Homeowner Assistance Program in Louisiana and Blue Acres Buyout Program in New Jersey
- Assisted in development of HUD's CDBG-DR Toolkits used by CDBG-DR grantees and subrecipients
- Wrote State of New Jersey's Language Access Plan for Superstorm Sandy CDBG-DR program which outlined delivery of services to Limited English Proficient individuals

Education

- M.B.A. University of Florida, 2015
- B.A., Political Science with honors, *magna cum laude*, Colgate University, 2005

Certifications and Training

- Certified HOME Program Specialist—Regulations, 2010
 - PMP, PMI, 2010
-



grantees enter reporting metrics on a quarterly basis. The system also generates reports to help HUD and grantees track progress towards implementing their Transformation Plans. She also developed content for and oversaw the delivery of a Choice Neighborhoods Performance Measurement webinar series which helped Choice Neighborhoods grantees develop an approach to performance measurement and management of neighborhood revitalization projects and programs.

Disaster Recovery Playbook, NY-NJ-CT-PA Regional Catastrophic Preparedness Grant Program (RCPGP), 2012. Ms. Bones was Principal Author of Disaster Recovery Playbook for city officials and administrators to use in the event of a regional disaster. The playbook included a program catalog providing detailed summaries of 60 different types of programs that can be funded using CDBG-DR funding and how each should be adapted to distinct localities and geographies; a guide to the various waivers that HUD may grant for CDBG-DR grantees and how each can be used in conjunction with various disaster recovery programs; and a list of additional resources.

The Road Home Program, Baton Rouge, LA, 2006–2009. Ms. Bones was Deputy Policy and Planning Director for the Road Home program, a CDBG-DR program designed to help residents of Louisiana affected by Hurricane Katrina or Rita get back into their homes. She worked directly with the client on the program design and implementation of the Homeowner Assistance program, a multibillion-dollar program that afforded eligible homeowners up to \$150,000 in compensation for their losses. She was responsible for developing and writing policies, plans, and procedures to ensure effective implementation of the homeowner program and ensure that CDBG requirements were met and reflected in all aspects of program implementation.

CDBG-DR Toolkits, HUD Community Planning and Development (CPD), 2012. Ms. Bones assisted with the development of CDBG-DR Toolkits for grantees consisting of (1) Disaster Impact and Unmet Needs Assessment Toolkit and (2) Program Design and Implementation Toolkits for five commonly implemented CDBG-DR programs including Homeowner Rehabilitation program, Buyout program, Small Business Loan and Grant program, and Small Rental Rehabilitation program.

Electronic Health Records Program, City of Philadelphia Public Health Department, 2013–2014. As a Solutions Consultant for Philadelphia's Public Health Department work on an IT project to migrate all of the city's health records to an electronic health record system, Ms. Bones created MS Visio workflows and policies and procedures; developed change management plan; and created the Business Continuity Downtime Recovery Response Plan for all Public Health Centers if and when Electronic Health Record system goes offline. She managed a project to obtain a Learning Management Content and Learning Management Systems for Public Health Human Resources Department and its 500+ employees.

NSP Technical Assistance Grant, HUD CPD, 2009–2012. Ms. Bones served as Program Manager overseeing TA to assist NSP grantees to implement successful and compliant programs to redevelop abandoned and foreclosed properties and revitalize their communities. Activities included providing TA to grantees, developing and maintaining a website, delivering webinars, producing written products, and planning and executing Problem Solving Clinics. She led internal organizational restructuring of ICF's administration and finance functions of four federal grants with a value of \$28.5 million, which streamlined and decreased administrative costs. She ensured that all HUD work plans for NSP projects remained on time and within budget.



Basically CDBG Manual Update, HUD CPD, 2011. Ms. Bones updated the Basically CDBG Manual to reflect latest regulatory guidance and policies. She wrote a full day of additional training on the NSP and CDBG-DR rules and regulations including a written chapter and training slides.

CDBG and HOME Program Trainer, HUD CPD, 2010–Present. Ms. Bones conducts Basically CDBG, Building HOME, and HOME Resale and Recapture Requirements and trainings.

HOME Program State Guidebook, HUD CPD, 2007. Ms. Bones worked on HOME program guidebook to help states' HOME program staff manage rental housing development projects where there is an ongoing affordability obligation. Guide focuses on application review, project selection, underwriting, drafting written agreements, various subsidy approaches, HOME compliance and long-term monitoring of development projects.

NSP Internal Auditor (2010 – 2012), City of Los Angeles Housing Department (LAHD). Ms. Bones served as internal monitor for LA's \$100 million NSP2 program conducting quarterly on-site visits to monitor the operations of LAHD and their nonprofit partner, Restore Neighborhoods LA, Inc. (RNLA). She ensured that program is in compliance with NSP rules and requirements and program design is sound. She served as an NSP expert answering program and regulatory questions and providing written recommendations, tools and templates to assist LAHD with program implementation. She also wrote competitive procurement and contracting policies and procedures for LAHD's subrecipient.

EMPLOYMENT HISTORY

ICF International	Manager	2014–Present
City of Philadelphia Public Health Department	Solutions Consultant	2013–2014
ICF International	Expert Consultant	2013–2014
	Manager	2011–2012
	Senior Associate	2009–2010
	Associate	2006–2008
	Research Assistant	2005–2006
HelloWallet	Consultant	2009
Brookings Metropolitan Policy Program	Consultant	2008
Colgate University Career Services	Peer Advisor	2002–2005
Thomas B. Fordham Foundation	Education Policy Intern	2004



EXPERIENCE SUMMARY

Ms. Lauren Dozier assists clients in the administration of federal grant programs for disaster recovery and mitigation. Her extensive understanding of the grant administration process, eligibility requirements, regulations, and policies across many federal programs allows clients to maximize reimbursement. She provides oversight throughout the grant administration period and is intimately familiar with such steps involved as application development, environmental review, project and process monitoring, closeout, and audit activities.

Ms. Dozier has assisted clients with applying for funding from multiple federal grant programs and financial recovery programs, such as the Hazard Mitigation Grant Program (HMGP), Severe Repetitive Loss Grant Program (SRL), Flood Mitigation Grant Program (FMA), and the Public Assistance (PA) Program.

RELEVANT EXPERIENCE

Project Controller (March 2014–Ongoing)

Boulder County, Colorado | FEMA HMGP Program

Ms. Dozier assists in project research, public meetings, policy monitoring, and project control for the Boulder County HMGP Project.

Hazard Mitigation Specialist (April 2011–Ongoing)

Galveston County, Texas | FEMA SRL Elevation (220 properties) Grant Development and Support

Ms. Dozier led and executed the grant application submittal process. She defined, developed, and documented procedures for implementing the elevation process, helped to organize and facilitate training for support development, and led the research of pertinent local laws, codes, and ordinances. Ms. Dozier established a database for application processing, budget analysis, grant obligation, quarterly report reviews, and grant closeout activities and developed performance assessments for the evaluation of engineering reviews of eligible structures for Repetitive Loss (RL) and SRL properties situated in Galveston County, TX.

Project Manager (May 2010–Ongoing)

City of Virginia Beach, Virginia | FEMA SRL Elevation (9 properties) Administration

Ms. Dozier led project research and application development of eligible SRL properties, where she assisted in the grant application submittal process. She defined, developed, and documented procedures for implementing the elevation process and initiated and maintained all homeowner and City involvement in grant activities for elevation of nine homes in Virginia Beach, Virginia.

EDUCATION

East Carolina University
Bachelor of Science, Criminal Justice, Concentration in Security Studies, 2009

East Carolina University
Master of Science, Homeland Security (*expected graduation 2016*)

AREA OF EXPERTISE

- Grant Application Development
- Grant Management
- Program Administration
- Benefit Cost Analysis
- Feasibility and Effectiveness
- Project Research
- Floodplain Management
- Environmental and Historical Compliance
- Data Management
- Applicant and Homeowner Outreach and Intake
- Project Analysis and Scoping

GRANT EXPERIENCE

- FEMA HMGP
- SRL Grant Program
- FMA Grant Program

TRAINING/CERTIFICATIONS

- IS-10.A: Animals in Disaster
- IS-11.A: Animals in Disaster: Community Planning
- IS-30: Mitigation E-Grant systems for the Sub-Grant
- IS-31: Mitigation E-Grant for the Grant Applicant
- IS-100 Introduction to the Incident command System
- IS-212 Introduction to Unified Hazard Mitigation Assistance

YEARS OF EXPERIENCE

5 years

Project Manager (January 2010–Ongoing)**Gwinnett County, Georgia | FEMA HMGP Program Administration (11 properties)**

Ms. Dozier led project research and application development of eligible HMGP Properties for Acquisition, where she led and executed the grant application submittal process. She defined, developed, and documented procedures for implementing the acquisition process and initiated and maintained all homeowner and County involvement in grant activities for application development and submission of 11 homes in Gwinnett, Georgia.

Hazard Mitigation Specialist (May 2010–2012)**Galveston County, Texas | FEMA HMA HMGP Acquisition (600 properties) Program Administration and Management**

Ms. Dozier developed complete, accurate, well-documented, and compliant project procedures for force account labor reimbursement. She conducted research and prepared concise replies to a wide variety of implementation queries and assisted project management for the buyout and elevation project for hurricane-damaged properties in unincorporated areas of Galveston County, TX.

Hazard Mitigation Specialist (June 2011–January 2012)**Port of Galveston, Texas | Hazard Mitigation Plan Administration**

Ms. Dozier assisted in project research, public meetings, strategy development, and creation of a Hazard Mitigation Plan for the Port of Galveston Texas.

Hazard Mitigation Grant Specialist (January 2012 – April 2012)**State of Vermont Emergency Management | Hazard Mitigation Grant Program Technical Assistance**

Ms. Dozier played a critical role in HMGP subapplicant intake, and assisting subapplicants in developing hazard mitigation grant applications. She assisted in project scoping and eligibility and feasibility during the application development process. Ms. Dozier also ensured that all applications were completed accurately and complied with environmental and historical requirements and met state and federal requirements according to 44 CFR.

Project Coordinator and Logistics (September 2011 – December 2011)**City of Virginia Beach, Virginia | FEMA PA**

Post disaster, Ms. Dozier served as a project coordinator and assisted in overseeing project set up and logistics. Ms. Dozier was able to set up financial systems and provide technical and logistical support for the PA team. She also provided support for the applicant review of financial records and financial audit.

Planner (December 2009–March 2010)**Currituck County, North Carolina | Hazard Mitigation Plan Update**

Ms. Dozier completely updated the County's Hazard Mitigation Plan to comply with federal requirements. Her efforts included collecting and presenting data for both natural and manmade disasters to be included in the project update, creating a public survey to engage citizens and local stakeholders in plan participation, and organizing, advertising, and facilitating community meetings for adoption of the plan.



EXPERIENCE SUMMARY

Mr. Miller is a goal oriented strategic thinker and planner, a highly competent manager and leader with extensive experience in mitigation planning, disaster recovery, and homeland security. Mr. Miller has 25 years of dedicated service in the New Jersey State Police has afforded him the opportunity to serve in numerous assignments that have provided a sound base in both leadership and management skills. Mr. Miller held the position of Bureau Chief of the Recovery Bureau within the Emergency Management Section, Homeland Security Branch of the New Jersey State Police. His career was initiated as a general road duty Trooper and has progressed through the ranks acquiring knowledge and experience in many facets of the New Jersey State Police to include emergency management, disaster response and recovery, homeland security and special operations.

For years, Mr. Miller has been responsible and accountable for maintaining a motivated and effective workforce environment that affords every individual equal opportunity and a workplace that is consistent with his five core guiding values; Respect, Leadership, Integrity, Teamwork, and Communication. He has amassed a considerable amount of knowledge, skills and abilities leading others to perform at their full potential while maintaining a friendly and productive work environment.

Mr. Miller possesses extensive experience in disaster response and recovery as well as creating and being responsible for the first NJ State Hazard Mitigation Plan. He's held the title of NJ State Hazard Mitigation Officer for two years and was responsible for obtaining funding for federal mitigation planning and project grants to include acquisition projects throughout the state. He has extensive knowledge in leading, planning, directing, and coordinating response and recovery operations within the state; preparing time-sensitive significant documents and reports for the State Director and Governor; assessing unforeseen developments, additional hazards, new phenomena, and difficulties encountered and recommending changes in direction and approach. He has the proven ability to improve operations during disaster recovery which included accelerated reimbursement to applicants within the FEMA/State Public Assistance Program, as well as developing the nation's first accelerated mitigation "buy out" program in conjunction with FEMA. Mr. Miller has served as the State Coordinating Officer for four federal disasters to include Hurricane Irene. He was designated as the NJ State Police liaison to the law enforcement working group during his deployment to New Orleans disaster response for Hurricane Katrina and NJ resource request coordinator in New York City during the September 11th Terrorist attack.

YEARS OF EXPERIENCE

28

AREA OF EXPERTISE

- Hazard Mitigation and Recovery Planning and Implementation (HMGP, SRL, CDBG-DR)
- Homeland Security
- Response and Recovery Operations
- Exercise Design and Implementation

TRAINING/CERTIFICATIONS

- Certified Floodplain Manager
- NJ Police Training Commission Certified Instructor
- NJ Standard Teaching Certificate in Health and Physical Education
- Incident Command System Courses – ICS100, IS-100Hcb, ICS 200
- FEMA Professional Development Series

EDUCATION

FBI National Academy Graduate, Quantico, VA, June 2009

M.A. Masters Degree in Education, Seton Hall University, South Orange, New Jersey May 1990

B.S. Health, Physical Education and Recreation, Trenton State College, Trenton, New Jersey May 1986

RELEVANT EXPERIENCE

Senior Disaster Mitigation and Recovery Planner, Tetra Tech, Morris Plains, New Jersey

- Project manager for NJ home acquisition and elevation projects to include federal funding sources (HMGP, SRL, CDBG-DR).
- Responsible for state, county and local mitigation plan development to include: public outreach, vulnerability assessments and mitigation actions, objectives and projects and stakeholder outreach/coordination to include FEMA and Economic Development agencies.
- Liaison to federal, state, county and local emergency management entities and personnel as well as the private sector.

Adjunct Instructor, 2011 to 2013, Kean University, Union, New Jersey

- Instruct courses for the Health, Physical Education and Recreation Department.

Bureau Chief, Emergency Management Section, 2011 to 2012, New Jersey State Office of Emergency Management

- Appointed by the Governor as the State Coordinating Officer for four declared federal disasters, reporting directly to the Governor's Authorized Representative.
- Responsible for the statewide recovery and reimbursement efforts of four declared federal disasters to include Hurricane Irene totaling over a half billion dollars.
- Serve as first point of conflict resolution for all employees within Bureau.
- Supervise and oversee the administrative and operational functions of multiple units to include the Mitigation, Preparedness, Exercise and Training Units.
- Responsible for the preparedness, functionality and safe operations of the State Emergency Operations Center to include emergency notification and recall.

Administration Officer, Homeland Security Branch, 2007 to 2011, New Jersey State Police

- Responsible for the proper management and operations of the Emergency Management Section and Special Operations Section, reporting directly to the Deputy Superintendent of Homeland Security.
- Coordinated and integrated with federal, state, county and local officials regarding Homeland Security planning, training, exercising and emergencies.
- Liaison for Homeland Security Branch for national and state level exercises.
- Performed periodic inspections of Homeland Security Branch operational locations.
- Coordinated testing of Homeland Security Branch emergency activation/recall system.

Preparedness/Mitigation Unit Head, 2005 to 2007, New Jersey State Office of Emergency Management

- Appointed by the Governor as the State Hazard Mitigation Officer.
- Maintained, updated and implemented the State Hazard Mitigation Plan.
- Supervised, managed and ensured proper spending of over \$30 million dollars within federal mitigation funding sources to include HMGP, PDM, FMA, RFC and SRL.
- Coordinated with federal, state, county and local partners to ensure compliance with a myriad of grants to include structural, improvement and planning projects.
- Coordinated and conducted training throughout the state.
- Initiated and implemented new partnerships and consolidated resources.
- Inspected mitigation projects throughout all phases of completion.
- Appointed as Mitigation Officer for federally declared disasters within the state.
- Managed multiple state agencies and personnel within the State Emergency Operations Center Support Room during disasters and exercises.

Emergency Management North Region Coordinator, 2003 to 2005, New Jersey State Office of Emergency Management

- Supervised, coordinated and taught emergency management related courses to emergency managers and first responders throughout the state.
- Managed and coordinated disasters, emergencies, and exercises within the northern half of the state



EXPERIENCE SUMMARY

Mr. Kunish is a Certified Emergency Manager with 16 years of experience. As the former Deputy Bureau Chief for the Florida Division of Emergency Management, he was responsible for managing Florida's Hazard Mitigation Planning and Grant Programs, Statewide Emergency Management All-hazards Planning, Training and Exercise Programs; updating the State's Comprehensive Emergency Management Plan to include Emergency Support Functions, Terrorist Incident Response, Wildfire Operations, Pandemic, Emergency Repatriation, Severe Weather Events, Tropical Cyclone, Mass Migration and Radiological Emergency Management Plan Annexes; providing technical assistance to local, state or private agencies on preparedness planning, and domestic preparedness planning, including public and animal health related issues; developing and maintaining budgetary and strategic planning tasks, reports and updates to ensure all applicable grants, contracts, and training applications are processed in a timely manner; and promoting preparedness, response, mitigation and recovery initiatives with public outreach to include public speaking, internet-based formats, and other published materials.

Mr. Kunish also served as the Plans Section Chief for the Florida State Emergency Response Team (SERT). His specific duties included providing the SERT with operational awareness of emergency and disaster situations; compiling the SERT's anticipated and expected actions for future operational periods; and ensuring available disaster data is utilized to produce situation and flash reports, geographic data layers, and event timelines.

Mr. Kunish has experience in planning, responding, training, exercising, and research in multiple disaster situations and simulations. Training and exercise support has been provided by Mr. Kunish to his clients over the past three years as a core responsibly in his position as a debris contractor and monitor as a client services manager. Additional responsibilities included locating, surveying, and submitting debris management sites for his clients. Mr. Kunish has compiled actual damage assessments from past hurricanes and compared the aggregated data to damage estimates generated by the HAZUS hurricane module (run with the National Hurricane Center's storm data.) This analysis provided very similar results between the actual damage observed and modeled.

RELEVANT EXPERIENCE

Project Manager (October 2015–November 2015)
Richland County South Carolina | Post-Disaster Public Assistance Flood Support Services

Following the State of South Carolina's 1,000-year flooding event that took place from October 1–5, 2015, Mr. Kunish has been providing FEMA PA

EDUCATION

University of Florida
Bachelor of Arts, Sociology, Minor in Education

AREA OF EXPERTISE

- Project Management
Disaster Response
Disaster Recovery
Hazard Mitigation
Emergency Operations
Hazardous Material Planning

TRAINING/CERTIFICATIONS

- Certified Emergency Manager
Florida Professional Emergency Manager
FEMA Professional Development Series
OSHA 40 Hour Construction Safety
O-400 Incident Commander
ICS-100 through ICS-400 Incident Command System
G-202 Debris Management
G-137 Exercise Program Manager
Homeland Security Exercise and Evaluation Program (HSEEP) Exercise Evaluation
Construction Quality Management (CQM)

YEARS OF EXPERIENCE

16 years

reimbursement support services to Richland County related to Category B, Emergency Protective Measures, force account labor, equipment, and materials, and countywide road and bridge damages. Mr. Kunish has also been the chief designer of Richland County specific disaster data management and reporting.

Project Control Specialist (October 2013–Ongoing)

Boulder County, CO | Public Assistance Consulting

Following the flood disaster that impacted Boulder County in September 2013, our team was selected to manage the county's claims development and administration. Mr. Kunish is currently providing programmatic and application support for the FEMA Public Assistance (PA) Grant Program, Hazard Mitigation Grant Program (HMGP), and the Community Development Block Grant Program.

Senior PA Specialist (September - Ongoing)

Napa County, California | South Napa Earthquake (FEMA-4193-DR-CA)

As the deputy director of post disaster programs, Mr. Kunish directly supports project operations on the Napa County public assistance (PA) project. Of particular importance is his implementation of Tetra Tech's RecoveryTrac™ system, which provides real-time information regarding project worksheet (PW) formulation, development, and obligation, and serves as the data backbone of Tetra Tech's PA projects.

Senior PA Specialist (September - Ongoing)

City of Napa, California | South Napa Earthquake (FEMA-4193-DR-CA)

Following the South Napa earthquake, Mr. Kunish has been directly supporting project operations for the City of Napa PA project. Mr. Kunish assisted with the implementation of Tetra Tech's RecoveryTrac™ system, which provides the City of Napa with real-time information regarding project worksheet (PW) formulation, development, and obligation.

Project Manager (December 2013–September 2014)

Livingston Parish, LA | Hurricane Katrina CDBG Buyout and Demolition

The Parish utilized CDBG-DR funding to buyout and demolish 30 homes in order to redeveloped neighborhoods and eliminate blight that they were experiencing, Mr. Kunish was involved in ensuring compliance CDGB regulations, supporting participant outreach and monitored reporting requirements.

Project Manager (December 2013–Ongoing)

Galveston County, Texas | HMGP and SRL Assistance

Mr. Kunish assisted Galveston County with its HMGP and Severe Repetitive Loss (SRL) programs following Hurricanes Ike and Gustav, which devastated the county with storm surge. Mr. Kunish served as the project manager in the implementation of the SRL Program, where 125 houses were elevated to mitigate their risk to future flooding. Mr. Kunish also managed the closeout of 150 properties that were bought with funding under the HMGP.

Project Manager (August–September 2012)

Livingston Parish, Louisiana | Hurricane Isaac Debris Removal

Mr. Kunish served as project manager, where he oversaw and managed the debris collection, segregation, and final disposal to include management of burn pits and coordination with recycling and landfill disposal options.

Project Manager (August–September 2011)

City of Minot, North Dakota | Souris River Flooding - Emergency Levee Removal

The Souris River flooding displaced over 2,100 households in the City of Minot, North Dakota. To combat the flood waters, emergency levees were placed in strategic locations throughout Ward County. Mr. Kunish oversaw this project, which consisted of removing the emergency levees and returning the material used to borrow locations for future use. This was completed with over 150 trucks and multiple loading and cleanup crews.

Project Manager (April–July 2011)

Lamar and Limestone Counties, Alabama | Tornadoes Private Property Debris Removal Program Management

The devastation of the 2011 Alabama tornadoes required the activation of the private property debris removal program in Lamar and Limestone Counties. Mr. Kunish served as project manager, where he managed and oversaw the verification of the amount and type of debris to be removed from private property, assigned and managed debris removal crews, and managed final disposal of debris.

Deputy Bureau Chief and various other positions (February 1998 – February 2011)**State of Florida – Division of Emergency Management | Day to Day Emergency Management Operations**

Over the span of 13 year, Mr. Kunish's career with the Division covered many emergency management practice areas. Prominent experience during his State of Florida tenure included; administration of the Florida Hazardous Materials Program, administration of the State's Mitigation Bureau that encompassed the hazard mitigation planning program, the State's Hazard Mitigation Plan, the Hazard Mitigation Grant Program and the Hazard Mitigation Assistance (formerly RL, SRL and PDM) Program. Mr. Kunish also worked with the State's growth management programs (including CDBG) to represent the emergency management perspective. This interaction help support Mr. Kunish's involvement in the production of Florida's Regional Evacuation Studies.

Plans Section Chief (April–August 2010)**State of Florida – State Emergency Response Team | Deepwater Horizon Oil Spill**

The State Emergency Response Team was activated for a record of 120 days in response to the Deepwater Horizon Oil Spill. Mr. Kunish was instrumental in ensuring Florida maintained a current common operating picture, planned for future operations, and instituted the battle rhythm of the State Emergency Operations Center. At the height of the response, Florida's reconnaissance mission utilized 2 fixed wing aircraft, 5 helicopters, 35 ground teams, and 30 water teams to identify the impacts of the spill.

Plans Section Chief (May–December 2009)**State of Florida – State Emergency Response Team | H1N1 Pandemic**

The H1N1 pandemic presented the emergency management community with significant challenges and required contingency planning to prepare for the effects of a pandemic flu event. The Plans Section provided multiple platforms for sharing information with the public and the emergency management community. As one of the platforms, Mr. Kunish coordinated a weekly conference call and webinar that included hundreds of local emergency managers, health officials, and the State Surgeon General to facilitate information sharing across all levels of government.

Incident Management Team Commander (April–August 2008)**State of Florida – State Emergency Response Team | Tropical Storm Fay**

The Incident Management Team was responsible for all emergency management-specific field operations for Tropical Storm Fay that resulted in over \$100,000,000 in PA funding. This included organizing, scheduling, conducting, and reporting results to the SERT from all preliminary damage assessments; managing and coordinating all State Emergency Response County Liaisons; managing all Florida Division of Emergency Management Regional Coordinators; and providing public information services.

Incident Management Team Commander (February 2007)**State of Florida – State Emergency Response Team | Lake County, FL Groundhog Day Tornadoes**

The 2007 Groundhog Day Tornadoes killed 21 people and damaged over 1,100 homes. Mr. Kunish commanded Florida's Incident Management Team that was responsible coordinating the initial state-level response, implementation of recovery programs, and the coordination between Lake County and the State Emergency Operations Center.



EXPERIENCE SUMMARY

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

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

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

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

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

RELEVANT EXPERIENCE

ADMS/GIS Application Manager (October 2015–November 2015)

Richland County South Carolina | Flood Support Services

Following the State of South Carolina’s 1,000-year flooding event that took place from October 1–5, 2015, Mr. Dickerson managed the logistics and deployment of ADMS and GIS technology to Richland County to support disaster specific damage data collection and management.

ADMS Application Manager (February 2014–May 2014)

States of Georgia and South Carolina | Winter Storm Pax Disaster Debris Program Management

YEARS OF EXPERIENCE

20 years

AREA OF EXPERTISE

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

DISASTERS

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

TRAINING/CERTIFICATIONS

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

EDUCATION

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

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

ADMS Application Manager (October 2013–December 2013)

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

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

ADMS Application Manager (October 2013–December 2013)

City of Rapid City, South Dakota | Severe Winter Storm Disaster Debris Program Management

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

ADMS Application Manager (April 2013–June 2013)

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

Mr. Dickerson managed the logistics and deployment of ADMS technology, including over 100 handheld devices for nearly 27,000 hazardous limb and tree removals and over 15,000 tons of debris. RecoveyTrac™ GIS services provided the City with a real-time data feed of the debris operations that was integrated into the City's emergency operations management portal.

ADMS Application Manager (August 2012–July 2013)

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

Mr. Dickerson managed the logistics and deployment of ADMS technology, including over 120 handhelds units used by the Parish to expedite the recovery process collecting over 225,000 cubic yards of debris. Detailed pickup locations and damage reports were used extensively to keep community leaders informed of progress

ADMS Application Manager (September 2011–June 2013)

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

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

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

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

Following a severe winter storm, Mr. Dickerson managed the logistics and network infrastructure to support the project work for over 11 state, county, and local clients. His responsibilities included coordinating logistics activities and supporting and developing custom data and mapping applications.

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

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

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

Data Operations Manager (September 2008–September 2011)**City of Houston and Harris County, Texas | Hurricane Ike Debris Removal Monitoring**

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

Data Operations Manager (August 2005–October 2006)**Miami-Dade County, Florida | Hurricanes Katrina and Wilma Disaster Recovery and Debris Management**

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

Quality Control Manager (September 2004–October 2007)**Escambia County, Florida | Hurricane Ivan Comprehensive Disaster Program Management**

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



Mr. Warner has been employed in the engineering field since 1989. He has worked from the ground level up as a CAD production specialist to his current position as project manager. He has a broad range of design, permitting and management experience in federal, state and private civil engineering projects. His experience ranges from roadways (from local, rural sections to urban, sections); stormwater master drainage systems; commercial, industrial, military and residential developments; utility systems (water mains, force mains, gravity sanitary sewer systems, and reclaimed water mains); and numerous small site development plans.

EXPERIENCE

Municipal/Public Civil Engineering

Richland County, South Carolina - Provide FEMA Public Assistance Support for infrastructure damaged by historic flooding to include procurement package development for over 270 road and bridge repairs.

Port Authority NY and NJ, - John F Kennedy International Airport (JFK) Flood Mitigation Controls: Design report (Stage 1) proposed Stage III and Construction Admin. Incorporate flood control features (Back Flow Prevention) on both air and public side of airfield to reduce effects of storms like Sandy (FEMA 406 Program)

Port Authority NY and NJ, - Provide FEMA Mitigation Support for infrastructure damaged by Hurricane Sandy (FEMA 406 Program) – JFK, LGA, EWR, Teterboro Airports, New York and New Jersey Marine terminals.

Civil Site Plan Support - (over 25) for public utility complexes, water treatment plants, wastewater treatment plants and public fire stations for the Cities of, Orange City, North Port, New Smyrna Beach, Deltona, Miami Beach and Marion County (in over 20 counties).

Major Water/Wastewater Infrastructure Civil Support Projects

Cypress Lake Alternative Water Supply Facility, Tohopekaliga Water Authority, Florida: Project Civil Engineer Design concepts and provide permitting input to the site plan and development needs for the water treatment facility. Provide input and coordination for the Preliminary Design Report for the Civil and site planning aspects of the project. (2014)

Ohio County Water Treatment Plant, Ohio County Water District, Cromwell, Kentucky: Project Civil Engineer Design responsible for the site/civil engineering aspect of this project. The new WTP will treat water from the Green River with conventional coagulation/sedimentation with membrane filtration and a split treatment with GAC for disinfection by product reduction. The new WTP also includes a clear well for storage and disinfection contact time, a high service pump station, solids handling and an operation building. The chemical feed facilities at the new WTP include sodium permanganate, aluminum chlorohydrate, powdered activated carbon, chlorine dioxide, chlorine, and hydrofluosilicic acid.

Major Water/Wastewater Infrastructure Civil Support

JFK-Flood Mitigation Controls (Back Flow Prevention), New York: Project Civil Site Engineer providing conceptual engineering and cost estimating for the Stage One Port Authority Report. Funding coordination with FEMA. Mr. Warner participation included leading the civil, engineers to identify BFP and alternate locations at the facility to maximize coverage and providing the greatest value for the facility

LaGuardia Airport Pump Houses / Port Authority of NY & NJ / Queens, New York: Project Civil Site Engineer providing site inspection, data assessment, project scoping, and cost estimating of the FEMA

Education:

B.S., University of Central Florida, 1999

Registrations/Certifications:

Professional Engineer, Florida, No. 61871

Professional Engineer, Georgia, No. PE032950

Professional Engineer, Alabama No. 29318-E

Professional Engineer, Ohio No. 80057

Professional Engineer, Texas No.120764

LEED® Accredited Professional 10304589-AP-BD+C

Georgia Soil and Water Conservation Commission, Level II Certified Design Professional No. 0000068891

Professional Affiliations:

Florida Engineers Society

National Society of Professional Engineers



406 mitigation measures for four of the five pump stations at LaGuardia Airport – Pump Houses 1, 2, 3, and 6. The work included vetting the potential scope of work at each pump house with various departments within the Port Authority that included Engineering, Aviation Line Department, LaGuardia Airport, and the Office of Emergency Managements. Mitigation items identified included floodwalls (permanent and temporary), valved flood drains, remote back-up switches, generator connections with transfer switches, and revising the power feeds to have dedicated power for the pump houses.

JFK-AirTrain-Howard Beach Station / Port Authority of NY & NJ / Howard Beach, New York:

Project Civil Site Engineer providing damage inspection, project worksheet development, and conceptual engineering and cost estimating required for FEMA Public Assistance and FTA Resiliency Assistance. Mr. Warner participated with the team of electrical, mechanical, civil, structural and environmental engineers to identify a combination of mitigation items. The scope of work identified options to protect this facility from future flooding included rerouting floor drain discharge points, installing pressure relief valve and floor drain in the mechanical room, installing temporary floodwall system, sealing conduits and wall penetrations, and installing elevator sump pump with backup power supply.

Port Newark Administration Building 260 Flood Mitigation / Port Authority of NY & NJ / Port Newark, New Jersey:

Project Civil Site Engineer providing evaluation of flood mitigation opportunities at Building 260 which is the primary administration building for all of Port Newark that includes offices, conference rooms, locker rooms and restrooms, service garage area, equipment and materials storage, and Port Authority Police Department Substation. The scope of work included providing concepts for flood barriers at specific locations around the building, sealing wall cracks and waterproofing exterior walls, valving floor drains, sealing conduit penetrations and gaps, and elevating electrical equipment and storage areas.

Holland Tunnel Flood Protection / Port Authority of NY & NJ / New York and New Jersey:

Project Civil Site Engineer providing development of flood protection measures for the Holland Tunnel on the New York and New Jersey sides of the Hudson River. Mr. Warner was the assistant project manager responsible for leading a team of engineers (electrical, mechanical, structural and civil) in performing site inspections, preparing scopes of work for FEMA 406 mitigation and related cost estimates, collaborating with various Port Authority departments (Engineering, TB&T, and OEM) and FEMA/States of NY and NJ, tracking and reconciling review comments, and successfully providing a mitigation scope of work acceptable to all parties. The team identified a series of measures to protect the Holland Tunnel system of portals, ventilation buildings, pump rooms, fire protection systems, and mechanical and electrical equipment areas.

JFK International Airport Cut and Cover Tunnel and PanAm Road / Port Authority of NY & NJ / Jamaica, NY:

Project Civil Site Engineer providing services that included identifying a scope of work and preparing cost estimates for flood protection measures for the tunnel system that includes pumps and mechanical control and electrical equipment. The work included inspections of the facilities, preparation of a scope of work and vetting the scope of work through various Port Authority departments (Engineering, Airport Line Department, JFK, and OEM), preparing cost estimates for the various elements of the scope, and responding to requests for additional information from the Port Authority departments, FEMA, and the state of NY.

Teterboro Airport Lighting Vault and Generator Building / Port Authority of NY & NJ / Teterboro, NJ:

Project Civil Site Engineer providing evaluation of the proposed priority protective measures and the development of flood mitigation recommendations under the FEMA 406 program. Mr. Warner was a member of a team of civil, structural and electrical engineers to review and evaluate the Airport's proposed protection measures of Jersey barrier walls and earthen structures to protect the vault and generator. The Team also facilitated the development of a long-term mitigation strategy

Richard Karkowski, PE, PH, CPSWQ, D.WRE | Disaster Recovery Engineer

Rick has 25 years of experience in planning, analyzing, designing, permitting, constructing, operating, and maintaining water resources-related projects, including stormwater drainage systems, flood control projects, and water quality systems. He is experienced in the application of all types of hydrologic, hydraulic, and water quality models.

Education

University of Florida - B.S. in Civil Engineering (High Honors), 1989

Professional Registrations

Professional Engineer in GA, SC, NC, FL

Professional Hydrologist

Certified Professional in Stormwater Quality

Diplomate, Water Resources Engineer

Project Experience

Stormwater System Inventory and Assessment, Augusta, GA, Project Manager for the stormwater system inventory and assessment in the Rocky Creek Watershed for August, Georgia. Services include geodatabase consulting and development, closed pipe and upland ditch inventory and assessment, geodatabase population, conventional survey, receiving stream documentation and geomorphic assessment, outfall documentation and screening, stream cross section monitoring, and rain gage installation and monitoring.

Base-wide Stormwater Management Study, Savannah, GA, Project Manager for the base-wide stormwater management plan for the combined 165th Airlift Wing and Combat Readiness Training Center of the Georgia Air National Guard at the Savannah/Hilton Head International Airport. Tasks include data collection, field surveys, database development, hydrologic and hydraulic modeling, and stormwater master planning.

Crane and Gills Creek FEMA Flood Study, Richland County, SC, Project Manager and Senior Water Resources Engineer for the FEMA flood study of the Crane and Gills Creek watersheds. The study includes the conversion of the outdated, effective flood models (HEC-2) to the modern HEC-RAS modeling program to reproduce the effective flood study water surface elevations. The HEC-RAS models were corrected and updated to modern FEMA modeling standards and procedures. The model input was revised including recent LIDAR topography, field data, and other changes in conditions since the original flood study was incorporated in the model input. The project includes Crane Creek, North Branch Crane Creek, Beasley Creek, Gills Creek, Lightwood Knot Creek, Jackson Creek, Little Jackson Creek, and Eightmile Creek. The hydraulic models include over 58 miles of stream, 68 road crossings, and 12 dams/lakes. The revised modeling was coordinated with FEMA and will become incorporated in revised hazard mitigation maps.

Hollingshed Creek Watershed Management Plan, Richland County, SC, Project Manager and Principal Investigator for the preparation of a watershed management plan for the Hollingshed Creek Watershed. The project includes coordination of stakeholder involvement, data collection and analysis, watershed assessment, water quality modeling and development of management and improvement solutions.

Warner Drive Drainage Improvement Study, Richland County, SC, Project Manager/Engineer for the drainage improvement study of two nearly fully developed basins. The Warner Drive study included the analysis a 157-acre basin and the Danbury Drive study included the analysis a 163-acre basin. The study included data collection, field reconnaissance, watershed and sub-basin mapping, existing conditions hydrology and hydraulics modeling, presentation of preliminary findings, improvement options listing and screening, selected improvements hydrology and hydraulic modeling, opinion of probable construction costs, presentation of final findings and recommendation.

Lakewood-Pirateland Swash Drainage Basin Study, Horry County, SC, Project Manager/Engineer for the drainage improvement study of the approximately 1,560-acre fully developed basin along US Highway 17 Business between Myrtle Beach and Surfside Beach. Structural flooding of several businesses and homes was recorded in the past. To date, the study included the development of a hydraulic and hydrologic model and identification of drainage issues, alternatives analysis, and recommendations improvements.

Request for FEMA Letter of Map Revision (LOMR), East Edisto Phase 1, Dorchester County, SC, Project Manager and Lead Engineer for the LOMR flood study for the 6,500-acre East Edisto Phase 1 master plan area. The East Edisto Phase 1 LOMR Study includes the floodplain mapping revisions spread over four Flood Insurance Rate Maps (FIRMs) panels in Dorchester County, SC. The study included the hydrologic analysis of the approximate 46-square mile watershed using HEC-HMS. The hydrologic analysis accounted for the complicated, interconnected system of man-made canals and natural wetland sloughs. The study included the hydraulic analysis of approximately 23 miles of stream and canals using HEC-RAS.

CR-787 Island Expressway Bridge over Wilmington River, Hydraulic and Hydrological Study, Chatham County, GA, PI 0007128, Senior Water Resources Engineer for the review and oversight of the hydraulic and hydrological study of the replacement bridge for the existing Islands Expressway Bridge over the Wilmington River. Duties included assisting in the development of the design standards, calculations methodologies, and assistance in the modeling for the bridge analysis. Performed quality control and assurance checks on the design methodology and was responsible for ensuring that applicable hydraulic and hydrologic principles, methodologies, and equations were followed. Duties also included HEC-RAS modeling, scour calculations, report presentation, and coordination with the bridge engineer.

Forest Acres Drainage Improvements Phase 1, City of Charleston, SC, Project Manager and Engineer for the analysis and design of the initial (Phase 1) improvements to the Forest Acres and 5th Ave Drainage Basins in the West Ashley area of the City of Charleston. The project includes conceptual, preliminary, and final design of the basin's main outfall system. The proposed Phase 1 improvements include over 2,500 linear feet of box culvert improvements and 2,000 linear feet of channel improvements in the 450-acre watershed.

Request for FEMA Letter of Map Revision (LOMR), Ridgeville Commerce Park, Dorchester County, SC, Project Manager and Lead Engineer for this LOMR flood study for the 1,036-acre Ridgeville Commerce Park. The LOMR study included the hydrologic analysis of the 20.3-square mile Timothy Creek watershed using HEC-HMS and the hydraulic analysis of 3.1 miles of stream using HEC-RAS. The project successfully coordinated the re-mapping of the approximate flood plains (Zone A) to the more accurate Zone AE, including base flood elevations (BFEs).

Ridgeville Commerce Park Stormwater Master Plan, Dorchester County, SC, Project Manager and Lead Engineer responsible for the development of the stormwater master plan for the proposed 1,036-acre Ridgeville Commerce Park. The master plan included the analysis of the 3,500-acre watershed assessment of the proposed conditions for the 15 independent development parcels and the development of a phased stormwater management system that meets local, state, and federal requirements.

Stormwater Ordinance and Design Manual, Jasper County, SC, Lead Engineer and Principal Consultant/Author for the County's revisions to its Land Development Regulations for stormwater management and the development of a comprehensive Stormwater Management Design Manual. The Design Manual includes sections for standards, permit requirements, design criteria, analysis/design guidelines, green infrastructure practices (including LID practices), stormwater management practices, and stormwater management plan development guidance.

Drainage Study Update for Springfield Canal, Savannah, GA, Lead Engineer for the update to the drainage study of the 5,600-acre Springfield Canal Watershed. The update included incorporating completed improvements to the XP-SWMM stormwater model and developing detailed flood plain, flood depth, and flood duration mapping to assist in the prioritization of future drainage improvements.

Indefinite Delivery/Indefinite Quantity (IDIQ) Annual Contract, Various Locations, NC, Program Manager for the indefinite delivery/indefinite quantity annual contract for the USACE Wilmington District. Oversaw the planning, assignment, performance, and completion of 37 individual task orders for projects included flood control, site designs, beach renourishment design, dredging design, construction oversight, dredge material management master planning, disaster response (Hurricane Floyd) and GIS development. (* previous employer)

Daniel M. Lavender, PE

Disaster Recovery Engineer

EXPERIENCE SUMMARY

A professional engineer, Mr. Lavender utilizes more than six years' experience of design and project management on a wide range of civil construction projects. With over ten years of AutoCAD experience, Mr. Lavender has proven to be proficient in the design and drafting of site layouts, major downtown redevelopments, GIS mapping, and complex utility and infrastructure coordination within right-of-ways. Mr. Lavender has been a trusted manager for projects such as sewer line rehabilitation, pump station modifications and rehabilitation, Sanitary Sewer Evaluation Studies (SSES) downtown redevelopments, parks and recreation, and water flow and drainage design.

Mr. Lavender has been responsible for permitting projects with SCDOT, SCDHEC, SCHEC-OCRM, Richland County, City of Columbia, and many other entities throughout South Carolina.

A sample of relevant projects that Mr. Bell has been involved in during his professional career are listed below:

RELEVANT EXPERIENCE

Richland County Road Project, Columbia, SC – The scope of the project was the survey, plans, specifications, drainage calculations, utility coordination, cost estimates, and other required deliverables. Mr. Lavender was responsible for the complete design and deliverables for three of the five-road project with QA/QC review and input from Mead & Hunt, the contractor. Upon delivery of the drawings/specs for the roads, the County indicated they were satisfied with the team's work and consistency between all of the roads designed.

City of Goose Creek – Downtown Redevelopment, Goose Creek, South Carolina – Design Engineer on multi-phase redevelopment project for the City of Goose Creek along Thomason Boulevard, Brandywine Boulevard, Etiwan Avenue, and Central Avenue, consisting of complex utility coordination and relocation (water, sewer, gas, electric, cable, phone), storm water management, roadway design, sidewalk and greenway design, permitting, preparation of bid documents, and construction coordination with the contractor, City, County, and SCDOT.

City of Anderson – Downtown Redevelopment, Anderson, South Carolina – Design Engineer of downtown streetscape project for the City of Anderson consisting of complex utility coordination and relocation, storm water management, roadway design, sidewalk and greenway design, permitting, preparation of bid documents, and construction coordination with the contractor, City, County, and SCDOT.

EDUCATION

B.S., Civil Engineering; Minor: Environmental Engineering, Clemson University

AREAS OF EXPERTISE

- Transportation/Roadway Design
- Complex Utility Coordination
- Site Design and Urban Development
- Stormwater/Drainage Design
- Water/Sewer Infrastructure Design
- Permitting
- Scheduling & Construction Management

LICENSES/CERTIFICATIONS

- Licensed Professional Engineer: SC# 31538
- E-Certified Erosion Prevention & Sediment Control Inspector (CEPSCI)
- NAASCO Manhole Assessment Certification Program (MACP)
- NAASCO Pipeline Assessment Certification Program (PACP)
- NAASCO Lateral Assessment Certification Program (LACP)
- OSHA 10 Hour Training for General Construction Safety
- Management Certification - PMI Program, Georgia Institute of Technology

MEMBERSHIPS

- American Society of Civil Engineers (ASCE)
- Water Environment Federation (WEF)
- Water Environment Association of SC (WEASC)
- Society of American Military Engineers (SAME)

Town of Moncks Corner – Downtown Redevelopment, Moncks Corner, South Carolina – Design Engineer of a downtown streetscape project and sidewalks project for the Town of Moncks Corner consisting of complex utility coordination and relocation, storm water management, roadway design, sidewalk and greenway design, permitting, preparation of bid documents, and construction coordination with the contractor, City, County, and SCDOT.

Town of Turbeville – Downtown Redevelopment, Turbeville, South Carolina – Assisted the Design Engineer in the design and modifications of a downtown streetscape project and sidewalks project for the Town of Moncks Corner consisting of complex utility coordination and relocation, storm water management, roadway design, sidewalk and greenway design, permitting, and construction coordination.

Baker Motor Company - Site Layout, Charleston, South Carolina - Designed earthwork and site layout for new dealership for Baker Motor Company in Charleston, SC. Given predesigned building footprint, Mr. Lavender studied the existing site and laid out the proposed driveway, parking lots, building location/orientation, and designed a full bid set of drawings and specs for construction to include all utility connections, storm drainage details and calculations, and all specs necessary to obtain permits.

Richland County Recreation Commission - Phase II Bond Projects, Richland County, South Carolina - Served as the Owner's representative for the planning and construction of several projects to include new lighted tennis courts, a gymnasium, a technology center, baseball dugouts and a new concession building at an existing park, and a new recreational park with baseball fields and a concessions/pressbox/restroom building. Assisted the Recreation Commission in the selection of the design team, maintained the project schedule and budget, actively worked with the architect and engineers during the conceptual and design development phase, reviewed and approved all pay applications, RFIs, and submittals, prepared front end documents for bidding, and managed the construction to close-out.

City of Columbia – 48” and 54” Gravity Sewer Line Rehabilitation, Columbia, South Carolina – As part of the City of Columbia's Mentor-Protégé Program, DESA served as the protégé to URS Corporation and offered construction management services to include site observation and administration. Mr. Lavender coordinated and led all construction meetings and distributed minutes for all meetings, observed and tracked all construction activities through daily photograph logs and activity reports, reviewed submittals, and maintained as-builts throughout the duration of the project.

City of Columbia – Canal Water Treatment Plant Improvements, Columbia, South Carolina – As part of the City of Columbia's Mentor-Protégé Program, DESA served as the protégé to URS Corporation and offered construction management services to include site observation and administration. Mr. Lavender coordinated and led all construction meetings and distributed minutes for all meetings, observed and tracked all construction activities through daily photograph logs and activity reports, reviewed submittals, and maintained as-builts throughout the duration of the project. In addition to extensive utility work and vertical construction, the entire site and connecting roads required new concrete and asphalt paving as well as landscaping.

City of Columbia – SSES Manhole Assessments, Columbia, SC – As a part of a citywide Sanitary Sewer Evaluation Study (SSES), Mr. Lavender located, mapped, and performed Level 2 inspections on over 800 manholes in accordance with the NAASCO Manhole Assessment Certification Program (MACP). This included recording all descriptive and numerical information, defect details, and associated pole camera photographs for all manholes. Extensive training and application of SCDOT traffic control measures were required throughout this contract.

C. Jimmy Chao, P.E.

Senior Civil Engineer

EXPERIENCE SUMMARY

Mr. Jimmy Chao has over 30 years of engineering project management, design, and construction supervision experience in both civil and structural engineering projects. Mr. Chao is a registered Professional Engineer in South Carolina, North Carolina, Georgia, Kentucky, Florida, Alabama, Texas, Virginia, and Pennsylvania. Additionally, he is a licensed building inspector and general contractor within South Carolina. He holds a Bachelor's degree in hydraulic engineering and a Master's degree in structural engineering from the University of South Carolina. Furthermore, Mr. Chao is a member of the American Society of Civil Engineers, the National Society of Professional Engineers, and the Society of American Military Engineers. In 2009, he was named Civil Engineer of the Year by the South Carolina Section of the American Society of the Civil Engineers. Typical projects that Mr. Chao has been involved in during his professional career are listed below.

EDUCATION

B.E., 1978, Chung Yuan University, Taiwan
M.S., 1983, Univ. of SC
Currently studying for PH.D., Univ. of SC

LICENSES/CERTIFICATIONS

- Licensed Professional Engineer – SC, NC, PA, VA, AL, GA, KY, FL, TX

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers (ASCE)
- National Society of Professional Engineers
- American Concrete Institute
- Institute of Transportation Engineers

RELEVANT EXPERIENCE

Superload Bridge Load Ratings through South Carolina – Performed bridge-rating analysis for 27 bridges in the state of South Carolina to transport a 2,000,000 lbs superload. Bridges are built with various superstructure types: flat slab, CIP concrete Tee-beams, standard prestressed AASHTO girders, rolled steel beams and steel plate girders, and various substructure and foundation types: Hammer-Head, CIP concrete columns, prestressed piles, steel H-piles, spread footings and drilled shafts. Bridges include both river crossings and highway crossings.

Main Street Beautification, Columbia, SC – Project manager for a six blocks down town Main St. streetscaping effort. Main Street is the primary business corridor leading from State Capital to City Hall. Project includes complete face lift on hardscaping, replacement of 12' deep sanitary services, installation of communication duct banks and recommending maintenance ordinance. The project currently extends from Gervais Street north to Laurel Street, a distance of approximately 3000 feet and will ultimately extend an additional 1500 feet to Elmwood Avenue.

Goldstone Drive Bridge Inspection/Load Rating, Lexington County – Project Manager responsible for inspection, evaluation, and load rating of bridge over Rawls Creek. Concrete deck bridge with total length of 90-feet, consisting of 6 – 15' spans. Our services included physical inspections of the bridge as well as the development of calculations noting the ability of the bridge components to withstand the anticipated wheel loadings while not sustaining any permanent damage.

Resurfacing/Reconstruction for 22 roads, Richland County - Responsible for field verification, design, plans and specifications production.

Martin Luther King Park Bridge – Design, Project Management, and Construction Administration for a pedestrian bridge in Martin Luther King Park including two alternative designs and full construction documents for the City of Columbia.

4D ENGINEERING

Charles W. Deep, P.E., LEED AP BD+C

President

PROFESSIONAL REGISTRATION

Registered Professional Engineer in the State of South Carolina – No. 27381

Registered Professional Engineer in the State of North Carolina – No. 36010

Registered Professional Engineer in the State of Georgia – No. 37661

LEED Accredited Professional since May 2006 Specialized in Building Design and Construction

EDUCATION

Master of Engineering in Civil and Environmental Engineering

Double Specialization in Water Resources and Geotechnical Engineering, Cum Laude

Graduated May 2008

University of South Carolina

Columbia, South Carolina

Bachelor of Science in Civil and Environmental Engineering

Graduated in December 2005

University of South Carolina

Columbia, South Carolina

SPECIALTIES

Project Planning, Site Development, Innovative Stormwater Solutions, Hydraulic Modeling, Utility Design, LEED Design & Documentation, Low Impact Development, Multi-phase Construction Planning, and Construction Administration for Residential, Commercial, and Institutional projects of all types and sizes.

PROFESSIONAL EXPERIENCE (REPRESENTATIVE)

Experienced with all types of projects ranging from small commercial sites to large and complex phased developments, such as a 600 million dollar expansion project spanning over 4 phases and 6 years of effort.

Whispering Pines Pond Dam Evaluation – Evaluation and recommendations for repairs and improvements for a 2 acre pond in Northeast Columbia, South Carolina.

Harlem Heights Watershed Study – Analysis of a 275 acre community in the City of Columbia to determine and design improvements to remedy some of the flooding in the neighborhood.

County Wide Watershed Program Assessment for Richland County – A comprehensive long term plan prepared to provide a “Road Map to the Future” for Richland County’s stormwater program for the next 25 years including programmatic, water quality, stormwater infrastructure, and floodplain management focus areas.

Rocky Branch SSES – Coordination of field data collection, data and construction QA/QC, and permitting for the Sewer System Evaluation Study of Rocky Branch basin consisting of more than 650 manholes and 196,000 LF of sewer main located in Columbia, SC.

Crane Creek Projects – SCDHEC 319 grant funded water quality improvement projects to four facilities located in the Crane Creek Watershed. Water quality improvements through the design and implementation of rain gardens or bioswales at Killian Park, W.J. Keenan High School, Forest Heights Elementary School, and North Springs Park in Richland County, SC.

Cherokee Indian Hospital Expansion - Design of all sediment & erosion controls in addition to the Storm Drainage System for a new 70,000 SF hospital expansion on a 15 acre site and for a 10 acre offsite fill area where 400,000 cubic yards of material was wasted from the onsite excavation. The offsite fill area required the design of a deep storm sewer line under 50 feet of fill material.

Harrah's Cherokee Valley River Casino & Hotel Design Build - Development of a series of site development packages including a clearing package, a rough grading package, a utilities package, and a final grading & paving package for a new 150,000 sf Casino and 300 room Hotel tower in Murphy, NC.

Museum Pavement Repair – Design of pavement repairs for various failed areas around the SC State Museum parking lots and drives located in Columbia, SC.

PSUS Design Build - Civil site design for a new 6,000 sf utility service center located on a greenfield site at Fort Jackson, SC.

St Paul Lutheran Church Reconstruction – Design for the reconstruction of a fellowship hall and sanctuary for St Paul Lutheran Church which was burned down in 2013 including a new covered drop off area and fire access road around the new facility.

Calhoun Building Storm Repair – Repair design for an existing storm drainage line in a critical area located just outside of the Calhoun Judicial Court Building. The design included several options and recommendation of the most feasible option for the contractor to implement. This project was time sensitive and was completed on an expedited schedule.

Harrah's Cherokee Flood Study Update – Detailed hydraulic analysis of Soco Creek along the entire property and beyond in both directions to better define the floodway limits along the Creek for future planning purposes.

The projects listed below were performed under a previous employer

Mountainbrook Water Quality Improvements - Conceptual redesign of various water quality improvements for the Mountainbrook neighborhood along Leesburg Road including constructed stormwater wetlands, water quality units, underground detention, and upgrade of two undersized culvert crossings.

Richland County Rehabilitation Projects – Construction management of various residential rehabilitation projects for the County on an on call basis including emergency repairs and substantial rehabilitation projects, which were all performed with HUD approval and documentation.

Federal Law Enforcement Training Center Emergency Action Plans – Updating emergency action plans for 10 of the buildings on the facility and development of emergency action plans for 2 new buildings. Work included detailed field inspection and development of the emergency action plan for each building.

Federal Law Enforcement Training Center SWPPP – Preparation of an Industrial SWPPP for the 125 acre facility including a comprehensive site stormwater inspection, preparation of a detailed site map, and preparation of the Notice of Intent permit application.

Three Creek Crossings - Hydraulic study and construction plans for the replacement of 5 undersized culverts including a dual 3'x4' box culvert, dual 60" pipes, and dual 48" pipes in multiple locations each with wetland impact permitting to increase shoulder width and improve the safety of each location.

Calhoun Building Drainage Improvements – Waterproofing and installation of 3 subsurface drainage and sump pump systems to draw groundwater away from the building on the Capital Complex in Columbia, SC.

Replacement of Two Bridges in Jasper County –Hydraulic calculations and scour analysis for replacement of two tidally controlled bridges over Bees Creek and Euhaw Creek in Jasper County, SC.

Columbia Canal VE Analysis – Comprehensive analysis of the entire Columbia Canal dam structure including evaluation of the existing condition, development of a remediation plan, and development of a long term maintenance plan to protect the future water supply source for the City of Columbia.

EXPERIENCE SUMMARY

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

FEATURED RELEVANT EXPERIENCE

Deputy Project Manager (March 2014–July 2014) **Boulder County, Colorado | Flooding Disaster Debris Program Management**

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

Operations Manager (February 2013–January 2014) **New Jersey Department of Environmental Protection | Hurricane Sandy Waterways Debris Removal Program Management**

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

Project Manager (October 2013–December 2013) **City of Rapid City, South Dakota | Winter Storm Atlas Debris Program Management**

Mr. Ivey served as project manager during our team's response to the City of Rapid City, South Dakota, following the severe winter storm that crippled the entire western half of the state for nearly two weeks. Mr. Ivey managed the

YEARS OF EXPERIENCE

10 years

AREA OF EXPERTISE

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

DISASTERS

- 4155 SD Winter Storm
- 4145 Colorado Floods
- 4086 Hurricane Sandy
- 4084 Hurricane Isaac
- 4024 Hurricane Irene
- 1791 Hurricane Ike
- 1780 Hurricane Dolly
- 1735 OK Winter Storms
- 1679 FL Tornadoes
- 1609 Hurricane Wilma
- 1602 Hurricane Katrina
- 1595 Hurricane Dennis
- 1551 Hurricane Ivan

TRAINING/CERTIFICATIONS

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

monitoring of the removal of over 100,000 cubic yards of debris and the mitigation of hazards caused by 8,020 hanging limbs or leaning trees.

Operations Manager (November 2007–November 2013)

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

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

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

Project Manager (August 2012–November 2012)

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

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

Project Manager (August 2011–December 2011)

Henrico County, Virginia | Hurricane Irene Disaster Debris Program Management

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

Quality Assurance (June 2011–July 2011)

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

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

Deputy Project Manager (September 2008–September 2011)

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

Mr. Ivey was instrumental in helping the firm to quickly establish debris removal protocols, assign and direct debris haulers to zones, and keep city residents informed of the progress of the debris effort. The debris removal operation was a monumental effort involving approximately 1,000 personnel and the daily removal of 250,000 cubic yards of debris from the city.

Project Manager (April 2011–June 2011)

City of Raleigh, North Carolina | Tornado Disaster Program Management

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

Project Manager (November 2009–December 2009)

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

Mr. Ivey was responsible for the removal of hazardous leaners and hangers over 2 mountains (totaling 63 miles). Mr. Ivey mapped every tree over this 63-mile span and informed the Arkansas Game and Fish Commission about future replanting.



Tetra Tech

Ted Sowinski Debris Monitoring Operations Manager

EXPERIENCE SUMMARY

Mr. Ted Sowinski has worked for numerous communities providing disaster recovery operations support. Mr. Sowinski has intimate deep understanding of all aspects of emergency debris removal monitoring, including debris collection and disposal, field operations and logistics, project staffing, training, and supporting documentation management.

FEATURED RELEVANT EXPERIENCE

Project Manager (February 2014–April 2014) **Colleton County, South Carolina | Winter Storm Pax Disaster Debris Program Management**

Mr. Sowinski served as project manager in Colleton County, South Carolina, in response to Winter Storm Pax. Mr. Sowinski worked closely with the County's debris hauling firm to establish primary areas of concern, debris management site locations, and project scheduling. Mr. Sowinski also worked closely with the County's G.I.S. personnel to establish debris removal tracking maps and reporting infrastructure.

Operations Manager (November 2012–January 2014) **New Jersey Department of Environmental Protection | Hurricane Sandy Waterways Debris Removal Program Management**

Mr. Sowinski supervised the implementation of our automated debris management system (ADMS), RecoveryTrac™, through all phases of operations, including truck certifications, load collection, load disposal, and unit rate collections, along with monitor recruitment, training, and supervision. Mr. Sowinski also assisted in the quality assurance (QA)/quality control (QC) checks to ensure that the client received the proper documentation to satisfy all Federal Emergency Management Agency (FEMA) requirements. This program covers a large portion of the New Jersey Southeastern Coast and waterways and includes the removal of storm debris and vessels from New Jersey waterways.

Operations Manager (October 2012–December 2012) **State of Connecticut | Hurricane Sandy Disaster Debris Program Management**

Following Hurricane Sandy, Mr. Sowinski managed field operations and logistics, trained monitors for duties such as tower monitors and right-of-way, vegetative, and construction and demolition debris collection monitors, organized the staffing of monitor positions, and tracked the progress of the debris collection.

YEARS OF EXPERIENCE

6 years

AREAS OF EXPERTISE

- Disaster Debris Management
- Right-of-Way Debris Removal
- Disposal Operations
- Private Property Programs
- Hazardous Tree Removal
- FEMA Public Assistance Category A Documentation and Eligibility Requirements

DISASTERS

- 4166 SC Winter Storm
- 4087 Hurricane Sandy
- 4080 Hurricane Isaac
- 4046 Winter Storm CT
- 4024 Hurricane Irene
- 1917 Tornado OK
- 1791 Hurricane Ike

TRAINING/CERTIFICATIONS

- Professional Safety Training
- ADMS–Operations Professional

EDUCATION

Air Force Community College
Associates Degree,
Radiologic Technology

Field Supervisor (September 2012–December 2012)**City of New Orleans, Louisiana | Hurricane Isaac Disaster Recovery Services**

Mr. Sowinski served as a field supervisor in the City of New Orleans, where he managed the leaner and hanger debris removal program. He was responsible for supervising and training field staff, scheduling monitors to assigned crews, and QA/QC of tickets and other field documents.

Operations Manager (October 2011–April 2012)**Connecticut Department of Transportation, Town of West Hartford, Connecticut | Winter Storm Alfred Disaster Management Support Services**

Mr. Sowinski served as an operations manager for Connecticut's State Parks and the Town of West Hartford following Winter Storm Alfred. Mr. Sowinski managed debris and hazardous tree removal operations and supervised the debris monitors and field staff.

Field Supervisor (August 2011–December 2011)**Henrico County, Virginia | Hurricane Irene Disaster Debris Program Management**

Following Hurricane Irene, Mr. Sowinski served as a field supervisor to oversee the removal of debris and hazardous trees from county-maintained roads. He was responsible for training and supervising debris monitors in the field.

Field Supervisor (September 2008–September 2010)**Bolivar Island/City of Galveston, Texas | Hurricane Ike Disaster Debris Program Management**

Mr. Sowinski served as a field supervisor for the private property debris removal program that consisted of over 2,600 right-of-entry properties and assisted with the management of the removal of over 30,000 salt water-killed trees.

Field Supervisor (December 2007–May 2008)**City of Norman, Oklahoma | Winter Storm Disaster Debris Program Management**

Following the severe winter storms in 2007, Mr. Sowinski served as a field supervisor, where he was responsible for the monitoring and documentation of debris removal program and the removal of hazardous branches and leaning trees.



Patrick Beekman Emergency Management Project Manager

EXPERIENCE SUMMARY

Mr. Patrick Beekman is a seasoned homeland security and emergency management professional with over 32 years of experience. Mr. Beekman is a principal leader of teams tasked with developing a range of emergency management programs for public and private sector clients nationwide. Mr. Beekman's specific areas of expertise include developing regional emergency response and recovery plans; disaster response; incident command; exercise design, execution, and evaluation; and program management of large, complicated projects.

Prior to joining our team, Mr. Beekman served as the director of homeland security for Union County, North Carolina. In addition, Mr. Beekman served in line positions as a rifle platoon leader, rifle company commander, infantry battalion commander, and executive officer of a regiment during his 20-year career with the United States Marine Corps.

As the former director of homeland security for Union County, North Carolina, he was responsible for managing all budgets, programs, capital improvement projects, studies, and policies for nine departments. During his tenure, Mr. Beekman oversaw the reorganization of the Emergency Communications/E-9-1-1 department, including a rewrite of all of their policies, procedures, and protocols; led the passage to build a new, fully-interoperable 800-MHz communication system and a \$7.2 million state-of-the-art emergency operations center (EOC)/E-9-1-1 center; and oversaw the complete rewrite of the county's emergency operations plan (EOP), mitigation plan, continuity of operations (COOP)/continuity of government (COG) plan, pandemic influenza plan, and numerous emergency response plans, all in accordance with the Incident Command System (ICS), which is an integral part of the National Incident Management System (NIMS).

FEATURED RELEVANT EXPERIENCE

Program Manager (October 2015–November 2015) Richland County South Carolina | Post-Disaster Flood Needs Assessment

Following the State of South Carolina's 1,000-year flooding event that took place from October 1–5, 2015, Mr. Beekman has worked with Richland County to develop a comprehensive needs assessment to include a review and analysis of existing post-disaster data and information, identification of outstanding post-disaster needs, recommendations for mitigating these outstanding needs and a plan for implementation of these recommendations.

Program Manager and Subject Matter Expert (December 2013–

YEARS OF EXPERIENCE

32 Years

AREAS OF EXPERTISE

- State Homeland Security Strategies
- National Planning Scenarios
- Investment Justification Process
- Emergency Management
- Homeland Security
- Training and Exercise Development
- Urban Areas Security Initiative (UASI) Compliance
- Target Capabilities Assessments

TRAINING/CERTIFICATIONS

- Federal Emergency Management Agency (FEMA)-Certified Instructor of Homeland Security for Local Governments and WMD Awareness Course
- Certified Instructor of ICS 100 and ICS 200
- HSEEP-Certified
- Hazardous Materials (HAZMAT) Operations Level

EDUCATION

Miami University
Bachelor of Arts, Political Science,
1980

June 2014)**Preparedness Planning | Metropolitan Washington Council of Governments (MWCOG)**

Mr. Beekman served as program manager for MWCOG, where he was responsible for updating and developing plans for the District of Columbia Homeland Security and Emergency Management Agency. This task and change order included updating the District Response Plan and developing a State Operations Guide, a Field Operations Guide, and a Hospital Evacuation Plan in a very compressed timeframe.

Exercise Evaluator (January 2011–June 2014)**Preparedness Planning, Training, and Exercises | Metropolitan Atlanta Rapid Transit Authority (MARTA)**

Mr. Beekman has served as a controller/evaluator multiple times for MARTA tabletop and full-scale exercises. Additionally, Mr. Beekman provided instruction to MARTA's executive management team on FEMA's G-402/ICS for Senior Leaders.

Exercise Evaluator (May 2014)**Preparedness Planning, Training, and Exercises | Port of Los Angeles**

Mr. Beekman served as a controller/evaluator for the California Ports Cybersecurity tabletop exercise for the joint ports of Los Angeles, Long Beach, and Hueneme.

Program Manager, Lead Consultant, and Subject Matter Expert (May 2012–March 2014)**Preparedness and Recovery Planning, Training, and Exercises | Metro Atlanta UASI, Georgia**

Mr. Beekman was the program manager on the development of five annexes and one supporting plan to the Regional Evacuation Coordination Plan. The annexes included the Regional Mass Care and Shelter Annex, the Regional Reentry Annex, the Regional Emergency Public Information Annex, the Regional Volunteer Management Annex, and the Regional Disaster Recovery Annex. The supporting plan was the Regional Interoperable Communications Plan, which also included an update to the Regional Tactical Interoperability Plan. These annexes and plan focused on developing specific procedures supporting evacuation operations for the Metro Atlanta Region. In addition to leading a team of eight subject matter experts, Mr. Beekman provided subject matter expertise at critical junctures of the project and conducted training and outreach seminars for each jurisdiction for each of the annexes and plan. He also developed and was the senior controller for a three-day capstone exercise that included a two-day functional exercise and a day of five simultaneous full-scale exercises conducted in five different counties. These exercises were designed to validate strengths and identify areas for improvement for each of the annexes and plan. Finally, Mr. Beekman facilitated a senior leadership seminar for the region's senior elected officials and their staffs.

Lead Consultant and Subject Matter Expert (January 2011–February 2012)**Tactical Operations Annex | Metro Atlanta UASI, Georgia**

Mr. Beekman was the lead consultant and subject matter expert on the development of the Tactical Operations Annex to the Regional Evacuation Coordination Plan. The annex focused on developing evacuation procedures for the Metro Atlanta Region. The annex includes emergency evacuation operations, communications interoperability, traffic management, and special needs components for the Metro Atlanta UASI. Mr. Beekman provided subject matter expertise at critical junctures of the project and conducted training and outreach seminars for each jurisdiction before the functional exercise. He also developed and was the senior controller for the evacuation functional exercise to validate strengths and identify areas for improvement. Mr. Beekman facilitated a senior leadership seminar for the region's senior elected officials and their staffs. Afterwards, Mr. Beekman also facilitated an additional senior leadership seminar for each county and its municipalities to introduce the

evacuation annex and to inform elected officials about their roles and responsibilities during a regional evacuation operation.

Project Manager (April 2011–January 2012)

Tactical Interoperability Communications Planning | State of North Carolina Department of Crime Control and Public Safety, Office of Interoperability

This project involved developing tactical interoperable communication plans (TICPs) for North Carolina domestic preparedness regions (DPRs) 1–6 and reviewing or updating existing TICPs for DPRs 7–9. Mr. Beekman oversaw the delivery of these services, and gave a presentation to the North Carolina Interoperability Symposium on the lessons learned from the project. Finally, Mr. Beekman met with the deputy director of North Carolina Emergency Management to provide a report on the next steps the project team recommended the state should take to improve the state’s interoperable communications.

Lead Consultant and Subject Matter Expert (March 2010–March 2011)

Continuity of Operations Planning | Administrative Office of Illinois Courts

Mr. Beekman developed the COOP plan template that the 102 courts in the State of Illinois used to develop their individual court plans. Mr. Beekman also provided technical assistance to all the courts as they developed their plans. Mr. Beekman helped assess the completed plans, and conducted training sessions throughout the state to walk the judges and court administrative officers through the newly completed court plans.

Project Manager and Lead Planner (August 2010–March 2011)

COOP Planning, Testing, and Exercises | City of Lubbock, Texas

This project involved identifying the risks facing the city and its 45 departments and developing COOP plans to ensure city essential functions are maintained in the event of an emergency or disaster. The project also included conducting a facilities risk assessment for five critical city facilities and writing a risk and vulnerability assessment. Mr. Beekman facilitated a kickoff meeting and two planning workshops, and oversaw the development of the departmental plans.

Lead Consultant and Subject Matter Expert (November–December 2010)

Emergency Operations Center (EOC) Standard Operating Guidelines (SOG) | Gwinnett County, Georgia

Mr. Beekman was the lead consultant of SOGs for the emergency management emergency support function in Gwinnett County’s new EOC. Using his extensive operational experience, Mr. Beekman developed SOGs for EOC organization, EOC activation and deactivation, EOC access control, notification, planning, joint information center, situational awareness, situation reporting, resource management, and emergency declaration. In addition, Mr. Beekman developed checklists for key EOC personnel to follow when they first arrive to the EOC.

Lead Evaluator (September–December 2010)

Emergency Preparedness and Homeland Security Tabletop Exercise | City of Concord and Cabarrus County, North Carolina

Mr. Beekman was the lead exercise evaluator for a tabletop exercise involving a helicopter crash in a section of the stands at Charlotte Motor Speedway during NASCAR pre-race activities. The purpose of the exercise was to evaluate the speedway’s plans, policies, and procedures focusing on coordination among a number of agencies and organizations, the Unified Joint Operations Center activities, and integration with the Charlotte Medical Center. Following the exercise, Mr. Beekman led the development of the after action report.

Project Manager (July 2008–August 2010)**Regional Emergency Coordination Planning | East-West Gateway Council of Governments/St. Louis Area Regional Response System (STARRS), Missouri**

Mr. Beekman was the project manager for the development of a comprehensive Regional Emergency Coordination Plan for the East-West Gateway Council of Governments and STARRS. The plan explains how resources within the region will be shared and how local elected officials will cooperate in a catastrophic emergency. The plan also helps guide priorities for additional investments in equipment, training, and policies that are consistent with the risk assessment and a coordinated response. A key part of this project involved establishing a regional governance structure.

EXPERIENCE SUMMARY

Mr. Jim McIntosh has an extensive background in emergency preparedness, response, recovery, and mitigation. Before joining our team, he served as the emergency management specialist/deputy director for Gwinnett County, Georgia, a Metro Atlanta Region jurisdiction with 16 cities and over 842,000 residents. Mr. McIntosh also brings 12 years of first responder experience as a firefighter/emergency medical technician. In 2011, Mr. McIntosh earned a Master of Arts degree in emergency and disaster management. The combination of his experience and education allows Mr. McIntosh to deliver valuable solutions to emergency management challenges.

RELEVANT EXPERIENCE

Planner (June 2014–Ongoing)

Emergency Plan Development & Maintenance | Metro Atlanta Rapid Transit Authority (MARTA)

Mr. McIntosh is supporting the ongoing development and maintenance of MARTA's emergency plans. He is tasked with analyzing and integrating plan updates to reflect industry best practices, changes in client operation, new facilities, and feedback from training and exercises.

Planner (June 2014–Ongoing)

Sustainment Project | Metro Atlanta Urban Areas Security Initiative (UASI)

Mr. McIntosh is providing subject matter expertise and developing materials for functional and full-scale exercises, including exercise evaluation guides, scenarios, master scenario events lists, and scenario maps.

Planner (June 2014–Ongoing)

Training & Exercise Series | MARTA

Mr. McIntosh is supporting efforts to develop and deliver a tabletop and full-scale exercise for MARTA in 2014, including conducting planning meetings, supporting facilitation of the tabletop exercises, and drafting the after action report. Mr. McIntosh is also supporting development of an Authority-wide full-scale exercise.

Planner (June 2014)

Training & Exercise Development | City of Memphis, Tennessee

Mr. McIntosh supported the development tabletop exercise materials, including developing aerial maps to support the scenario.

Subject Matter Expert (November 2013–May 2014)

Ready CDC | Centers for Disease Control and Prevention (CDC)

Mr. McIntosh served as a subject matter expert for the CDC's new study to develop a program called "Ready CDC". He developed a presentation for

YEARS OF EXPERIENCE

15 years

AREAS OF EXPERTISE

- Emergency Management
- Emergency Operations and Response Planning
- Training and Exercise Program Management
- Regional Coordination
- Incident Command
- Resource Management
- First Responder Operations
- Functional Needs Support Services
- EOC Management and Operations
- NIMS Compliance
- Volunteer Management
- Functional Needs Support Services

TRAINING/CERTIFICATIONS

- Certified Emergency Manager (CEM): International Association of Emergency Managers
- Certified Emergency Manager, GEMA
- NIMS ICS: 100, 200, 300, 400, 700, 701, 702, 703, 800

EDUCATION

American Public University
Master of Arts, Emergency and Disaster Management, 2011

Auburn University
Bachelor of Science, Rehabilitation & Disability Studies, 2001

CDC personnel focusing on developing personal emergency preparedness kits.

Instructor (February 2013–May 2014)

Emergency Operations Center (EOC) Training | Gwinnett County Office of Emergency Management

Mr. McIntosh helped lead development and delivery of local EOC position-specific courses designed to educate stakeholders regarding their roles and responsibilities in an emergency. Mr. McIntosh applied adult learning concepts to the development of the courses, integrating lecture, hands-on demonstration, and assessment components in maximize learning and retention.

Program Manager (January 2012–May 2014)

All-Hazards Training & Exercise Program | Gwinnett County, Georgia

Mr. McIntosh managed the All-Hazards Training and Exercise Program for Gwinnett County according to Homeland Security Exercise Evaluation Program (HSEEP) standards. He revitalized the program in 2012, facilitated the annual multi-year training & exercise planning workshops, and maintained the multi-year training & exercise plan. Mr. McIntosh effectively demonstrated the value of an exercise program, coordinated the overall direction for the county based on established priorities, assisted with the development and facilitation of multiple HSEEP exercises, and streamlined processes and maximized available resources.

Project Manager (October 2011–May 2014)

National Incident Management System (NIMS) Compliance | Gwinnett County, Georgia

Mr. McIntosh maintained NIMS compliance for Gwinnett County, including developing an extensive resource management database, ensuring compliance with all NIMS training for thousands of employees, and ensuring compliance with local policies and procedures. Mr. McIntosh streamlined the data collection and report generation processes, which greatly increased the accuracy and effectiveness of the NIMS compliance program in Gwinnett County. Mr. McIntosh also submitted the final National Incident Management System Compliance Assistance Support Tool (NIMSCAST) report for the county each year and assisted local municipalities with the process.

Emergency Management Specialist, Deputy Director (October 2011–May 2014)

Gwinnett County Office of Emergency Management

Mr. McIntosh was responsible for disaster preparedness, response, recovery, and mitigation in this Metro Atlanta jurisdiction that included 16 cities and over 842,000 residents. He ensured compliance with all emergency management ordinances, state mandates, and federal mandates. Mr. McIntosh played an active role in all daily operations and activated, staffed, and managed the County EOC as needed. He also managed the county-wide, all-hazards Training & Exercise Program according to the HSEEP; represented the jurisdiction in complex regional planning efforts for the Metro Atlanta UASI; increased preparedness and response capabilities by implementing an EOC specialty team plan; designed position-specific curriculum for all EOC personnel, including Emergency Support Function (ESF) representatives, command and general staff, and all WebEOC users; improved NIMS compliance; and supported the revision of the emergency operations plan, its incident annexes, and EOC policies and procedures to increase relevance, efficiency, and effectiveness. Mr. McIntosh also received a commendation for performance during extended EOC activation under local, state, and federal emergency declarations.

Subject Matter Expert (April 2011–May 2014)

Community Outreach | Various Organizations in Metro Atlanta

Mr. McIntosh was routinely requested as a local subject matter expert for public speaking engagements throughout the community on topics such as personal emergency preparedness, continuity of operations,

continuity of business, and shelter operations related to Functional Needs Support Services (FNSS) and the Pets Evacuation and Transportation Standards Act (Pets Act).

EOC Operations (February 2011–May 2014)

EOC Operations | Gwinnett County, Georgia

Mr. McIntosh routinely fulfilled the duties of various positions in the Gwinnett County EOC during activations and supported incident command in the Mobile Operations Center. He has served as the EOC manager, planning section chief, operations section chief, logistics section chief, duty officer, and department liaison. He also developed an extensive course curriculum for all of the positions in the EOC. Students learned how to operate, what their roles and responsibilities were, how to integrate into the larger picture of emergency management and multi-agency coordination, and how to use the tools that were at their disposal, such as WebEOC.

Planner (February 2011–May 2014)

Emergency Management Plans | Gwinnett County Office of Emergency Management – Atlanta UASI

Mr. McIntosh was a planner for development and maintenance of multiple emergency management plans, including the local Hazard Mitigation Plan, Volunteer Management Plan, Mass Care and Shelter Plan, Debris Management Plan, Crisis Communications Plan, Closed Point of Disbursement (POD) Plan, position-specific course development for the EOC, and HSEEP-compliant Citizen Corps Exercise templates. He also routinely represented the county in Metro Atlanta UASI planning initiatives such as the Evacuation Coordination Tactical Operations Annex, Mass Care and Sheltering, Volunteer Management, Re-entry, Recovery, Interoperability, Water Purification, and Medical Surge.

Lead Planner (January 2012–October 2013)

Natural Resources Conservation Service (NRCS) Dams Emergency Action Plan | Gwinnett County Office of Emergency Management

Mr. McIntosh served as the lead planner for a revision to the county's Emergency Action Plan (EAP) for Dams. The plan was revitalized to include additional input from first responders, e-911, Department of Water Resources, and other stakeholders. The plan became much more relevant and actionable at the responder level, included job aids to increase speed of execution by decision makers, and was adopted as an annex to the EOP.

Emergency Management Liaison (February 2011–October 2011)

Gwinnett County Fire & Emergency Services

Mr. McIntosh was selected by senior staff to serve as the Fire Department representative in the Gwinnett County Office of Emergency Management. He was responsible for sustaining disaster prevention, preparedness, response, recovery, and mitigation initiatives. Mr. McIntosh was also responsible for briefing department heads on current events and local issues. He was instrumental in defining this position for the Fire Department, improving operations and developing regional coordination plans for the Atlanta area.

Homeland Security Analyst (March 2010–October 2010)

Protected Critical Infrastructure Information | U.S. Department of Homeland Security

While employed with another firm, Mr. McIntosh was tasked with the responsibility to analyze Protected Critical Infrastructure Information (PCII) and refine the initial site survey data reports, which reflected specific strengths and vulnerabilities of the given location. This project was in direct support of Homeland Security Presidential Directive (HSPD) 7 and National Infrastructure Protection Plan (NIPP).

Diane Sumpter Project Manager

EXPERIENCE SUMMARY

Diane Sumpter established DESA, Inc., a 28-year old financially-sound, viable small business with the primary focus of economic development. Ms. Sumpter is a strong advocate for the growth and development of minority businesses, providing supportive services, technical assistance and organizational development. Under her leadership, DESA has grown to include four lines of business, including construction management and engineering services and strategic communications and marketing. For all projects, Ms. Sumpter provides executive oversight to ensure the goals and service level agreements are not only met, but exceeded.

RELEVANT EXPERIENCE

DESA, Inc. Columbia, SC – As President and CEO, Ms. Sumpter is responsible for the direction, growth and development of DESA, Inc. She has a hands-on approach to dealing with day-to-day challenges of procuring new business via strategic partnerships and teaming arrangements. With such, valuable connections and networks are formed. She has significant work experience with federal agencies including Department of Defense, Department of State, Department of Commerce, Department of Energy, Department of Health and Human Services and Environmental Protection Agency.

Minority Business Development Agency Business Center, Columbia, SC – For more than 15 years, Ms. Sumpter has operated the Minority Business Development Agency Business Center – Columbia, SC, an agency of the U.S. Department of Commerce. In this role, she is responsible for assisting minority-owned businesses with revenues of \$500,000 and higher secure contracts, financing and bonding. As their strategic partner, Mr. Sumpter uses a vast knowledge and years of contacts to advise and guide minority business owners through the growth process.

Executive Oversight Experience

- Village at Rivers Edge, Columbia Housing Authority, Columbia, South Carolina
- Latimer Manor Phase VI, Columbia Housing Authority, Columbia, SC
- Elementary School 19, Richland School District Two, Columbia, South
- 48" and 54" Gravity Sewer Line Rehabilitation, Columbia, SC
- Additions and Hoist System for Broad River and Mill Creek Pump Station Additions, Columbia, SC
- Bridge Creek Elementary Richland School District Two, Columbia, SC
- Columbia Metropolitan Convention Center, Columbia, SC

EDUCATION

Master of Social Work – University of South Carolina
Bachelor of Arts, English – University of South Carolina

AREAS OF EXPERTISE

- Project Oversight
- Estimating and Budgeting
- Liaison between Owner and Community
- Small, Woman and Minority-Owned Business Inclusion Efforts
- Extensive Project Management Experience

LICENSES/CERTIFICATIONS

- Certified Economic Development Professional

TRAINING

- Minority Business Executive Program, Amos Tuck School of Business at Dartmouth

General Duties

- Oversee management and profitability within all divisions of business, with special emphasis on economic and organizational development.
- Establish guidelines for all services provided to clients (i.e. marketing, financing, procurement, business plans, etc.).
- Develop and implement appropriate quality control programs to ensure the adequacy and relevance of assessments, studies, reports and other documents provided to the client.
- Collaborate with the client to continuously improve and enhance the quality of DESA's services.
- Provide overall management guidance and responsibility regarding contracts.
- Ensure adequate and competent staff and reporting goals, as stipulated by the client, are met in a timely fashion.
- Ensure contracts are being handled in the most cost-efficient manner.

EXPERIENCE

Full-Service Capabilities

Tetra Tech has vast experience providing emergency management consulting and disaster response and recovery services to state and local government agencies. Our approach includes partnering with our clients to not only ensure the necessary plans and procedures are in place and tested before a disaster strikes but also to assist with disaster response and recovery operations as well as post-disaster grant management.

Tetra Tech has the experience, expertise, and resources to serve public and private sector clients across the entire continuum of addressing the devastating impacts of human-caused and natural events, including preparedness, mitigation, response, and recovery.

During steady-state conditions, our disaster preparedness strategies include:

- Developing and applying technology to better inform clients about the wide array of hazards they face
- Prioritizing, scoping, and implementing projects designed to mitigate risks
- Planning, training, and exercising emergency management professionals to enhance their readiness to respond

Post-disaster, Tetra Tech offers a wide range of incident management support including:

- Augmenting staff and personnel in all areas as needed
- Facilitating and monitoring rapid infrastructure repair and debris management
- Providing basic engineering and architectural consultancy services in order to evaluate a proposed projects' effectiveness for overall recovery and resilience and evaluate the cost estimates for proposed activities
- Advising and guiding clients through comprehensive financial management, community resilience, and economic re-development phases of disaster recovery

Tetra Tech offers a complete, end-to-end solution that empowers our clients to protect their most critical assets in times of chaos.

Of particular relevance is our understanding of Federal Emergency Management Agency (FEMA), Federal Highway Administration (FHWA), and other reimbursement agencies' requirements for eligibility, documentation, and reimbursement. Over the past 20 years, our grant management experts have assisted clients with applying for and retaining grant funds, even after closeout and audit processes. Our team has extensive experience assisting local and state governments with managing and documenting projects that are eligible for federal funding through the FEMA Public Assistance (PA) Program, including multiple, large PA programs for Vermont, Texas, Virginia, South Dakota, and Connecticut as well as local PA Programs for Boulder County, Colorado; Napa County, California; and the City of Napa, California. Our team also has significant experience with FHWA-Emergency Relief (FHWA-ER) federal reimbursement, having assisted over 60 clients with FHWA application, project management, and reimbursement.

Our team's activations have yielded grant program management engagements resulting in clients not only garnering grant funds but in keeping 99.8 percent of the funds received.

Our team's record of success spans over 250 state and local government clients in response to over 40 declared presidential disasters representing the recovery of more than \$12 billion in disaster grant funds. These activations have yielded grant program management engagements resulting in clients not only garnering grant funds but in keeping 99.8 percent of the funds received.

Section 2: Experience

Our team has direct experience with the following grant programs:

- FEMA PA Program
- FEMA Hazard Mitigation Grant Program (HMGP)
- FEMA Flood Mitigation Assistance Program¹
- FHWA-ER Program
- FHWA Transportation Investment Generating Economic Recovery Grant
- Natural Resources Conservation Service (NRCS) Emergency Watershed Protection
- U.S. Department of Housing and Urban Development (HUD) Community Development Block Grant Program (CDBG)

Our team's record of success spans over 250 state and local government clients in response to over 40 declared presidential disasters representing the recovery of more than \$12 billion in disaster grant funds.

During the execution of our work, Tetra Tech has gained considerable experience with all eligible project areas of grant program administration. Our experience spans the full grant cycle from application to closeout, including services related to program requirements in the following areas:

- Application guideline development
- Program outreach and marketing
- Program/project management
- Grant monitoring and administration
- Procurement assistance
- Anti-fraud, waste, abuse, and mismanagement policy compliance
- Financial management and reporting
- Environmental review/National Environmental Policy Act (NEPA) compliance
- Application review and approval
- Record keeping and reporting
- Regulatory compliance monitoring (for example, fair housing, equal employment, Davis Bacon)
- Construction monitoring and compliance
- Interim and final project inspections
- Audit/appeal assistance
- Closeout support

Tetra Tech has also acquired extensive knowledge supporting the National Flood Insurance Program's (NFIP) Community Rating System (CRS) program and authored the only application in the nation that has received a CRS Class 1 rating for Roseville, California. Tetra Tech is nationally recognized for its subject matter expertise in the fields of NFIP and CRS program implementation and evaluation.

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

Section 2: Experience

Additionally, Tetra Tech provides engineering and architecture design services, including green design and sustainability services, together with technical and program administration services for projects related to water infrastructure, buildings, transportation, and facilities. Our capabilities include:

- FEMA Grant Application Development, Implementation, and Administration
- Hazard Mitigation Planning
- Coastal Planning and Design
- Architecture
- Civil Engineering
- Geotechnical Engineering
- Structural Engineering
- Mechanical, Electrical, and Plumbing

Tetra Tech partners with our clients through all facets of the program/project planning and execution and ensures full team integration at all levels. We manage all aspects of construction projects and carefully plan projects with a focus on improving schedule performance, controlling and reducing costs, minimizing risks, and ensuring quality construction.



Extensive Project Experience Within Richland County

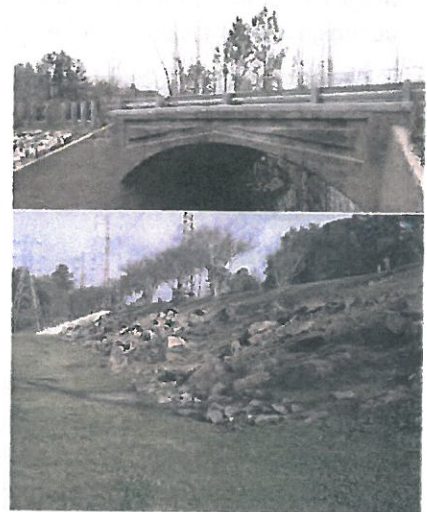
The Tetra Tech team has been a trusted partner to the County, having provided a number of engineering services. As a result, we have gained considerable knowledge of the County, its expectations, and its staff, which will allow Tetra Tech staff to hit the ground running and focus immediately on the issues at hand. A brief description of the projects and tasks our team has performed for the County is provided below:

- **Richland County Comprehensive 1,000 Year Flood Post-Disaster Consulting Services.** Tetra Tech was selected under an emergency contract to provide comprehensive disaster recovery services in response to the historic 1,000-year flood disaster of October 1-5, 2015, which caused extensive damage throughout the County and surrounding communities.
- **Richland County Stormwater Management – Mountainbrook Storm Drainage Improvements.** Retained by the County to study a problematic watershed in southeast Columbia and make recommendations to alleviate a recurring flooding situation in the Mountainbrook Subdivision. The results were compiled in an engineering report submitted to the County.
- **Richland County Public Works – County Wide Watershed Program Assessment.** A comprehensive long-term plan was prepared to provide a “road map to the future” for Richland County’s stormwater program for the next 25 years including programmatic, water quality, stormwater infrastructure, and floodplain management focus areas.
- **Richland County Public Works – Old Garners Ferry Bridge Repair.** Performed a condition assessment on the structural integrity of the existing 20-foot span bridge/arch culvert along Old Garners Ferry Road. A feasibility study and cost estimates were provided based on the findings of the investigation as well as a recommendation to repair the bridge rather than replace or remove the bridge completely.
- **Richland County Public Works – Rabon Road Spillway Repair.** Provided surveying and structural engineering for the repair of a spillway on the upstream side of Rabon Road at a location where 6 large culverts crossed the roadway.



Section 2: Experience

- **City of Columbia - Harlem Heights Watershed Study.** Provided analysis of a 275-acre community in the City of Columbia to determine and design improvements to remedy flooding problems throughout the neighborhood.
- **Columbia Housing Authority – HUD-Funded Projects.** Provided construction management services for the completion of HUD-Funded housing projects, each described as a comprehensive modernization of public housing units including asbestos abatement, new finishes, new mechanical, plumbing and electrical systems. Scope also included upgrading of site water, sewer and storm systems and new landscaping.
- **Fort Jackson - Culvert Inspections.** Provided full inspection of multiple culverts on Fort Jackson that were compromised by the flooding of October 2015. A detailed report including repair recommendations was provided for each of the assets inspected.
- **Whiley Kennedy Foundation – Whispering Pines Pond Dam Evaluation.** Provided evaluation and recommendations for repairs and improvements for a 2-acre pond in Richland, South Carolina, including a detailed report and construction contract administration during the project.



Why Choose the Tetra Tech Team

The Tetra Tech team is well suited to perform this work by virtue of our following specific experience:

- ***We Are Extremely Familiar with the Objectives of This Project.*** Tetra Tech has been providing a variety of post-disaster services to Richland County in response to the historic 1,000 year flood. These services have included FEMA reimbursement support, preparing bid packages for the County's road repairs, managing the County's well testing/disinfection program, and developing a strategic vision to help the County obtain future FEMA HMGP and HUD CDBG-DR disaster grants, in some cases directly from HUD. As a result of this experience, our team can hit the ground running and has already developed close working relationships with many of the County departments that will be involved in the long-term recovery effort.
- ***Unmatched Federal Disaster Grant Management Experience.*** Tetra Tech is the nation's leading post-disaster grant management consulting engineering firm. We have been the leading consulting firm on every major flood disaster the last 15 years, including Hays County/Wimberley, Texas (2015); Boulder County, Colorado (2013); the Vermont 100 year flood (2012); Nashville, Tennessee flood (2012); and Memphis, Tennessee flood (2011). Our team has assisted our clients with obtaining and/or managing over \$12 billion in post-disaster grants from FEMA PA, FEMA 404/406 HMGP, HUD CDBG-DR, NRCS, and FHWA. We are intimately familiar with obtaining post-disaster grants for our clients and helping them successfully utilize and document these grants to meet federal grant program requirements.
- ***Local Presence and Knowledge.*** Tetra Tech has strategically teamed with Columbia, South Carolina-based partners Thomas & Hutton, DESA, 4D Engineering, and Chao & Associates, Inc. These firms have an in-depth understanding of the County and its post-disaster needs. Additionally, the Tetra Tech team has supported clients throughout South and North Carolina for almost a decade, performing more than 50 disaster recovery and emergency preparedness projects. As a result, our team has an in-depth understanding of how emergency response and recovery works in the Carolinas.

Tetra Tech's team can hit the ground running. We have already developed close working relationships with many of the County departments that will be involved in the long-term recovery effort.

Section 2: Experience

- ***One Firm, Countless Services.*** Tetra Tech offers the County broad capabilities in a variety of areas that are critical before and after a disaster. From developing operationally sound emergency plans and procedures to providing temporary facilities required to restore critical government functions, Tetra Tech brings a unique mix of grant management, emergency management, infrastructure planning, mitigation, disaster response and recovery, and reconstruction expertise. ***Tetra Tech's one-stop, full-service capability translates in less cost, time, and effort for the County.***

REPRESENTATIVE PROJECTS

The project descriptions and references² included on the following pages provide an overview of the Tetra Tech team's qualifications and serve as a representative sample of our experience assisting government entities with similar projects. Additional project information can be provided upon request.

² When contacting these references, please recall that some of these projects were performed under the BDR Division, which is now Tetra Tech, Inc.

Section 2: Experience

I. FEMA Public Assistance

Section 2: Experience

Exhibit 2-1: Representative FEMA Public Assistance Experience Matrix

Client Name	Preliminary Damage Assessment	Develop Request for PA	Applicant Briefing	Applicant Kickoff Meeting	Site Visits/Inspections	Project Scoping	Project Cost Estimation & Documentation	Project Worksheet Development	Alternate Projects	Improved Projects	Project Cost Reconciliation	Interim Inspections	Funding Disbursements	Final Inspections	Grant Closeout	Appeals
Austell, City of, Georgia	▲	▲	▲	▲	▲	▲	▲	▲								
Boulder County, Colorado			▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Cameron County, Texas	▲	▲	▲	▲	▲	▲	▲	▲			▲	▲	▲		▲	▲
Cedar Falls Utilities, Iowa	▲	▲	▲	▲	▲	▲	▲	▲			▲	▲	▲		▲	
Connecticut, State of	▲				▲	▲	▲				▲				▲	▲
Fort Bend County, Texas	▲	▲	▲	▲	▲	▲	▲	▲			▲	▲	▲		▲	▲
Galveston, Port of, Texas					▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Hidalgo County, Texas	▲	▲	▲	▲	▲	▲	▲	▲			▲	▲		▲	▲	
Houston, City of, Texas		▲	▲	▲	▲	▲	▲				▲					
Manvel, City of, Texas					▲	▲	▲	▲			▲	▲	▲		▲	▲
Napa County, California	▲							▲								
Princeton Municipal Light Department, Massachusetts	▲		▲	▲	▲	▲	▲	▲			▲					
St. Johns County, Florida	▲					▲	▲				▲					
Sumter County, South Carolina	▲	▲	▲	▲	▲											
Texas Department of Transportation					▲	▲	▲	▲			▲	▲	▲	▲	▲	▲
Vermont, State of	▲		▲	▲	▲	▲	▲	▲	▲	▲	▲				▲	▲
Virginia Beach, City of, Virginia					▲	▲	▲	▲		▲	▲		▲		▲	
Virginia Department of Transportation	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Volusia County, Florida		▲			▲	▲	▲	▲	▲	▲	▲	▲				▲



CLIENT

State of Vermont
Department of Emergency
Management and Homeland
Security

LOCATION

Vermont

DURATION

January 2012 – October
2013

COST

\$3,600,000.00

REFERENCES

Mr. Ross Nagy, Deputy
Director
State of Vermont DEMHS
Director
103 South Main Street,
Waterbury, VT 05671
Phone: (800) 347-0488
Ross.nagy@state.vt.us

KEY FEATURES

- Project Evaluation
- Public Outreach
- Data Collection and Management
- Grant Application Technical Assistance
- Hazard Mitigation
- Project Worksheet Development
- Benefit Cost Analysis (BCA)
- Process Development and Improvement
- State Staff Training and Development
- Appeals
- Project Management
- Weekly Reporting

PROJECT DESCRIPTION

On August 28, 2011, Tropical Storm Irene roared ashore, unleashing heavy rain and flash floods throughout the state of Vermont. The cost of lost property due to destruction and debris was unprecedented.

In the wake of Tropical Storm Irene, the State of Vermont Department of Emergency Management and Homeland Security (DEMHS) faced the daunting task of maintaining critical operations. DEMHS officials were prepared to take steps to repair the critical infrastructure and mitigate future damage on the scale of that caused by Tropical Storm Irene. To those ends, DEMHS engaged our team first to assist with its Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) and then to assist with its FEMA Public Assistance (PA) Program. This included consulting services to evaluate the feasibility of projects under the HMGP. Within 48 hours, our team of experts deployed to the State of Vermont

Emergency Operations Center (EOC) to manage all aspects of these processes, allowing DEMHS staff to concentrate on maintaining critical services and managing the long process of recovery. Our team has since submitted over 90 HMGP applications to FEMA, processed 90 home buyout transactions, managed the implementation of all projects, assisted with 3 additional HMGP application rounds, developed program procedures, and trained new state staff.

In addition to managing the DEMHS HMGP program, our team was also tasked with assisting with the management of the very challenging FEMA PA Program under DEMHS's newly organized PA office. Senior project managers helped develop the PA office and augmented that staff to include acting as the deputy public assistance officer. In acting in this official state capacity, our team executed all aspects of the state function of the FEMA PA Grant Program, including project worksheet development, Section 406 Hazard Mitigation, and appeals. In addition, our team developed and trained state staff, including the public assistance officer and the public assistance coordinator.

Grants Administered

- FEMA PA—\$175 million
- FEMA HMGP—\$34 million



CLIENT

Boulder County, Colorado

LOCATION

Colorado

DURATION

October 2013 – December 2014

COST

\$4,590,765.00

REFERENCES

Michelle Krezek
Boulder County
Commissioners' Office
P.O. Box 471
Boulder, CO 80306
Phone: 303-441-3561
mkrezek@bouldercounty.org

KEY FEATURES

- Grant Administration (PA & HMGP)
- Claims Development

PROJECT DESCRIPTION

Our team was selected by Boulder County, Colorado, to perform disaster recovery grant management and administration services related to the flood disaster of September 11, 2013, which caused extensive damage throughout Boulder County and surrounding communities. Our team is assisting the County in strategically managing the County's claims development and administration under the Federal Emergency Management Agency's (FEMA) Public Assistance (PA) Program, the Federal Highway Administration's (FHWA) reimbursement requirements, and the FEMA Hazard Mitigation Grant Program (HMGP). In addition, our team was tasked with providing grant accounting/administration support as needed to strengthen the efficacy of County agencies to be able to manage these grants long after our team's departure.

Our team was also tasked with attending multiple long-term recovery and mitigation planning meetings with County staff to provide the County with information on the FEMA 404 HMGP, case studies of other successful HMGP projects, and ideas for potential projects. Our team has provided insight and oversight on information distributed by the State of Colorado regarding multiple rounds of funding, deadlines, and required information for the application. Following the long-term recovery and mitigation planning meetings, our team assisted with project identification, application development, and implementation.



CLIENT

City of Houston, Texas

LOCATION

Houston, Texas

GRANT ADMINISTERED

FEMA PA - \$5 Million

DURATION

October 2008 – February 2009

COST

\$216,240

REFERENCES

Ms. Annette Booker
Senior Contract
Administrator
Department of Solid Waste
Management
City of Houston, Texas
611 Walker Street
Houston, Texas 77002
Phone: (713) 837-9173
abooker@cityofhouston.net

KEY FEATURES

- Damage Assessment
- Project Worksheet Formulation
- State/Federal Coordination
- Debris Advisory
- Documentation Review
- Funding Reimbursement Support
- Invoice Reconciliation

PROJECT DESCRIPTION

On September 12, 2008, Hurricane Ike made landfall in Texas leaving behind massive amounts of debris from high winds, inland flooding and storm surge. This devastating event affected the entire community within the City of Houston. The City had not experienced this level of destruction since Hurricane Alicia in 1983. Hurricane Ike generated over five million cubic yards of debris during a twenty-four hour period. Tetra Tech immediately mobilized to the area and provided support to the Emergency Operations Center with a trained team of grant management experts. The team began collecting and evaluating critical information necessary for the FEMA reimbursement process including documentation of Houston's 12 debris management sites to ensure full compliance with state and federal environmental regulations. Tetra Tech assisted with preliminary damage assessments to estimate costs and determine the type of specialized debris programs would be necessary following the 70 hour push and right-of-way debris removal.

Tetra Tech activated an offsite data center where field documentation was collected, processed and analyzed by invoice reconciliation specialists. Debris was removed at a record pace with over 75% of the total quantity removed in just 36 days. The single-day record total exceeded 219,000 cubic yards. At the height of the operations, the City dedicated 635 staff from the Department of Solid Waste Management and 527 staff from the Department of Public Works. The Cities of Fort Worth, Austin, Dallas and San Antonio provided 349 additional support staff and equipment through mutual aid agreements. In addition to the City's 463 hauling trucks, the debris removal contractor mobilized over 4,082 pieces of hauling equipment. Together, this force managed the removal of 5,600,000 cubic yards of vegetative and construction and demolition debris. Once this initial push was completed, and operations could continue at a more normal pace, the City of Houston was faced with the overwhelming task of managing their labor and equipment hours to seek reimbursement through the FEMA Public Assistance program. Tetra Tech documented, organized and processed this intricate set of data into the required FEMA format. This information was then evaluated by a team of industry experts to request full reimbursement of damage related costs.

Over the following five months, *the Tetra Tech team compiled detailed data sets and organized supporting documentation for the City's Finance and Administration Department. The reconciliation of this data allowed the City to process Project Worksheets with a cost at \$5 million dollars.*

**CLIENT**

Port of Galveston, Texas

LOCATION

Texas

DURATION

July 2010 – Ongoing

COST

\$2,048,342.00

REFERENCES

Mr. Bernard Curran
Director of Administration
Port of Galveston
123 Rosenberg Avenue, 8th
Floor
Galveston, TX 77550
Phone: (409) 766-6183
Fax: (409) 766-6107
Bacurran@portofgalveston.com

KEY FEATURES

- Damage Assessment
- Project Formulation
- Project Worksheet Processing
- Project Worksheet Management

PROJECT DESCRIPTION

Hurricane Ike made landfall in Galveston, Texas, on September 13, 2008. This was one of the largest storms recorded in size (area) and arrived as an upper bound level 2 hurricane on the wind scale and a level 5 hurricane on equivalent storm surge scale.

The Port of Galveston (Port) maritime infrastructure (piers, docks, apron, bulkheads, underground utilities, and roadways) was heavily impacted by up to 20 foot tidal surge forces carried over and past Galveston Island to the northern reaches of Galveston Bay and channels. This infrastructure was damaged further when the tidal surge rapidly receded back into the Gulf of Mexico. The Port facilities were not designed for this extreme surge event. Fill material including sand and rock behind bulkheads and beneath supported slabs was washed away by the rapidly receding storm waters. Bulkheads were exposed to additional forces when the rapid draw down of the receding waters exceeded the ability of the bulkhead drain systems, causing unaccounted for unbalanced hydrostatic pressures. These unbalanced pressures caused overstressing of the bulkhead systems.

Our team of consultants identified an additional \$20 million plus eligible costs for the Port across several different projects. Our consultants and analysts assisted in the formulation and revision of 120 Federal Emergency Management Agency (FEMA) project worksheets and monitored and assisted Port officials throughout the recovery process.

Grants Administered

- FEMA Public Assistance - \$20 million

Section 2: Experience

II. HUD CDBG-DR

Section 2: Experience

Exhibit 2-2: Representative CDBG-DR Experience Matrix

Client Name	CDBG Technical Assistance	Development of Policies and Procedures	Disaster Recovery Grant Reporting	Economic Development	Housing Programs	HUD Action Plans for Disaster Recovery	Needs Assessment	Reconstruction and Redevelopment	Sub-Recipient Oversight and Monitoring
Boulder County, Colorado	▲	▲			▲		▲		
Connecticut, State of, Department of Housing (ICF)	▲								
Dauphin County, Pennsylvania	▲			▲	▲	▲	▲		▲
Galveston City of, Texas	▲	▲	▲					▲	▲
Louisiana, State of (ICF)	▲	▲	▲	▲	▲	▲	▲	▲	▲
New Jersey Department of Community Affairs (ICF)	▲	▲	▲	▲	▲	▲	▲	▲	▲
New Jersey Department of Environmental Protection (TT & ICF)	▲	▲	▲		▲			▲	▲
New Jersey FEMA Match (ICF)	▲		▲						▲
New York Governor's Office of Storm Recovery, NY Rising (TT)	▲	▲	▲		▲	▲	▲	▲	▲
New York State Housing Authority	▲	▲			▲		▲	▲	▲
New York State Housing Trust Fund Corporation	▲				▲		▲	▲	▲
Pennsylvania Department of Community and Economic Development (ICF)	▲	▲	▲	▲	▲	▲	▲	▲	▲
Terrebonne Parish, Louisiana	▲	▲	▲		▲		▲	▲	
Two Rivers-Ottawaquechee Regional Commission, HMGP Match	▲	▲	▲		▲				



CLIENT

New Jersey Department of Environmental Protection (NJDEP)

LOCATION

New Jersey

DURATION

June 2013 – June 2016

REFERENCE

Donna Mahon, Director
(609) 341-5313

PROJECT DESCRIPTION

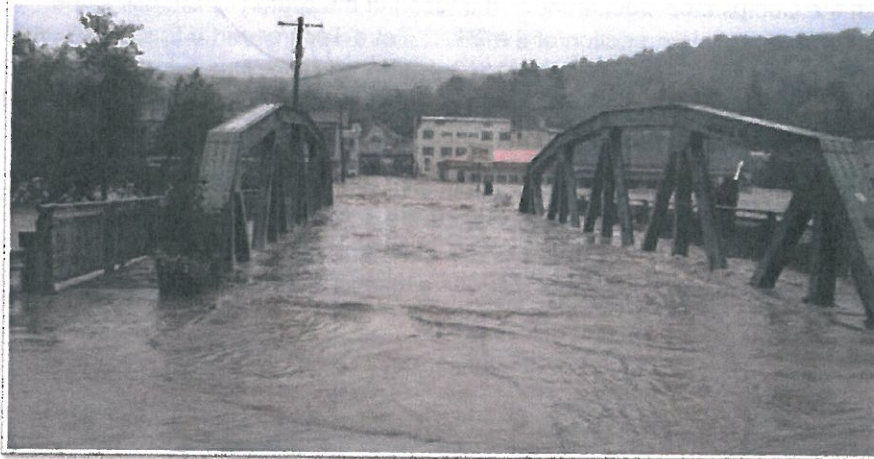
Tetra Tech, Inc. was contracted by the New Jersey Department of Environmental Protection (NJDEP) to complete Tier 2 Environmental Record Reviews under the Rehabilitation, Reconstruction, Elevation and Mitigation (RREM) and Landlord Rental Repair (1-4 unit) Program (LRRP) established under the New Jersey Community Development Block Grant Disaster Recovery (CDBG-DR) Program to assist residential property owners directly impacted by Hurricane Sandy in October 2012.

Under these programs, Tetra Tech personnel are performing environmental and historic reviews which include a desktop assessment, field reconnaissance and, in some instances, additional levels of assessment in situations when potential areas of environmental concern requiring further investigation were identified. Tetra Tech's desktop assessment of applications include, but are not limited to:

- Review of application materials for completeness and confirming the State Contract Manager's/Program Manager's determination of classification of level of environmental review was appropriate based on project activity or, as requested by the State Contract Manager/Program Manager, classifying the level of environmental review in accordance with 24 CFR Part 58.30;
- Performance of a desktop assessment utilizing the NJDEP ArcGIS Online HUD Review Tool provided by the State Contract Manager/Program Manager and performance of an onsite Tier 2 Field reconnaissance in accordance with HUD regulations and NJDEP guidance;
- Determining if consultation with another federal, state or local entity is required, consulting the entities as necessary and documenting the determination in the Tier 2 form;
- Determining if a floodplain or wetland 8-step analysis is required as per 24 CFR Part 55;
- Performance of various roles related to Section 106 compliance by a Secretary of the Interior's Standard (SOI) qualified professional to identify and evaluate historic properties (including archaeological sites), assessing projects for adverse effects on such resources, and development of appropriate treatment measures;
- Determining whether a field assessment is warranted and the rationale for such determination;
- Specifying the required conditions, mitigation and permits in the environmental review record (ERR);
- Drafting public notices when applicable.

Tetra Tech documented each assessment in an ERR in accordance with 24 CFR Part 58.38. Tetra Tech team members developed and compiled source documentation to supplement the ERR and provided justification for the information that was detailed in the Compliance Documentation Section of the Statutory Checklist, the Environmental Assessment Checklist, and any other section of the ERR. Tetra Tech ensured that assessment efforts and compilation of documentation was in accordance with HUD, FEMA and NEPA statutory requirements and federal Section 106. Throughout the entire project, the Tetra Tech team implemented a Quality Control and Quality Assurance (QA/QC) process to identify any issues with compliance and worked to resolve them.

Tetra Tech offered the state the requisite expertise, experience and most importantly, personnel resource capacity to provide the DEP with timely environmental review services. We acutely understood that that the environmental review record and documentation was a necessary and important aspect of this CDBG-DR program and its successful completion was critical to the State's ability to disburse grant funds to affected homeowners and communities.



CLIENT

NY State Housing Trust Fund Corporation

LOCATION

New York State

DURATION

August 2013 to Present

COST

\$3,200,00

REFERENCES

William C. Harding,
Executive Director

NY State Dept. of State

2 John Walsh Boulevard
Suite 206

Peekskill, New York 10566

Phone: 914-734-1347

Fax: 914-734-1763

william.harding@dos.ny.gov

KEY FEATURES

Preparation of comprehensive reconstruction and redevelopment plans for eleven communities impacted by Hurricane Irene and Tropical Storm Lee.

Locations: Village of Margaretville, Delaware County, NY; Towns of Shandaken and Hardenburgh, Ulster County, NY; Village of Washingtonville, Town of Blooming Grove, City of Middletown, Town of Walkkill, Orange County, NY; Town of Chenango, Broome County, NY; Town of Windham, Greene County, NY; Towns of Fulton and Blenheim, Schoharie County, NY.

PROJECT DESCRIPTION

Tetra Tech was awarded a contract by the New York State Housing Trust Fund Corporation (HSTF) to support the New York Rising Community Reconstruction Program (NYSCR). Tetra Tech is preparing a comprehensive reconstruction and redevelopment plan for three communities impacted by Hurricane Irene and Tropical Storm Lee. Tetra Tech performed community outreach, strategic visioning, risk assessment, housing and community needs assessments, and critical infrastructure analysis in support of an overarching economic redevelopment plan for each community. This multi-faceted approach incorporated hydraulic analysis of vulnerable areas to determine the feasibility of projects that will reduce the vulnerability of the community designated critical and significant facilities to increase the resilience against future disasters. In addition through a facilitated risk analysis as well as economic and housing market analyses, Tetra Tech worked with the communities to develop ways to implement additional strategies for economic revitalization, human services, housing, infrastructure, natural and cultural resources therefore increasing the community's capacity to implement changes. The strategies and projects address a broad range of flood mitigation projects as well as provide opportunities to stimulate economic development and vibrancy. This plan provides a roadmap for the communities to rebuild better in the wake of the devastation created by the recent disasters.

During the planning process, Tetra Tech employed a wide array public outreach from providing outreach booths at the local community festivals, on local cable and radio media outlets, employment of surveys to gather public and agency input, to support of a student-produced video highlighting challenges faced by a rural community in the wake of more frequent flooding disasters. In addition, Tetra Tech used a unique state-of-the-art on-line community mapping portal to facilitate data input from the communities and to capture locations, historical damages, road closures, and community values of life-safety and economic critical facilities and systems.

These plans effectively address the technical issues and challenges facing the flood vulnerabilities of each community's housing and infrastructure in light of the need for increased economic vitality, to result in plans for more resilient communities. The NYRCR program was established by Governor Andrew M. Cuomo to provide additional rebuilding and revitalization assistance to communities damaged by Hurricane Sandy, Irene, and Tropical Storm Lee. This program empowers communities to prepare locally-driven recovery plans to identify innovative reconstruction projects and other needed actions to allow each community not only to survive, but also to thrive in an era when natural risks will become increasingly common.

PROJECT DESCRIPTION

Tetra Tech is supporting increased community resiliency in Dauphin County, Pennsylvania by providing a county-wide program to build long-term reduction in flood insurance premiums by supporting municipalities participation in the Federal Emergency Management Agency's (FEMA) Community Rating System (CRS) program.

Tetra Tech conducted seminars for local officials to educate them about the impacts of the federal legislation, the CRS program and its benefits, and the County-wide initiative to assist the municipalities. Of the County's 40 municipalities, Tetra Tech conducted a baseline assessment of 23 municipalities' floodplain management programs to determine their readiness to enter the CRS program. Tetra Tech will help the municipalities determine if the administrative burden of participating in the CRS program is worth the financial benefits property owners will realize from lower insurance premiums.

Tetra Tech presented this countywide CRS approach at the 2015 National Association of Floodplain Managers conference in Atlanta, Georgia and received a significant number of favorable comments from FEMA and other potential clients.

This successful client engagement led to an expanded contractual relationship with the County, following a Notice of Funding Availability issued by the US Department of Housing and Urban Development, for the National Disaster Resilience Competition. Tetra Tech worked with Dauphin County to identify areas most severely impacted by the qualifying disaster – Tropical Storm Lee of 2011. We worked with the County to identify approximately \$200 million worth of recovery and resiliency projects and to develop a competitive and comprehensive application with widespread community support. In addition, Tetra Tech will be engaged in the development of the Phase 2 application due in the Fall of 2015 to assist with the assessment of climate change impacts on the County and identify adaptation measures to mitigate these impacts which will result in a more resilient County.



Erik Genga from EMI's Harrisburg, Pennsylvania office provides an overview of the County's US HUD NDRC application to municipal officials.

CLIENT

Dauphin County,
Pennsylvania

LOCATION

Dauphin County,
Pennsylvania

DURATION

6 months

COST

\$150,000

REFERENCES

George Connor
Deputy Director
Dauphin County Department
of Community and Economic
Development
Cell: 717-319-4800
gconnor@dauphinc.org



KEY FEATURES

As of February 3, 2014, ProSource has completed or has underway:

- 45 County-wide Program Tier 1 Environmental Documents
- 39 Floodplain Management Documents
- 9,252 Site-Specific Environmental Reviews for the NY Rising Housing Rehabilitation Program
- 3,640 Site-Specific Environmental Reviews for the NY Rising Housing Rehabilitation Program
- 1,141 Site-Specific Tier 2 Evaluations for the Recreate NY Smart Home Buyout/Acquisition Program
- 1,141 Phase I Environmental Site Assessments

PROJECT DESCRIPTION

New York State was included in the HUD Community Development Block Grant Disaster Recovery (CDBG-DR) program pursuant to the Disaster Relief Appropriations Act of 2013 (Public Law 113-2, approved January 29, 2013). ProSource Technologies LLC, with its partners including TetraTech, Inc., assist the New York Housing and Community Renewal (NYHCR) in providing environmental services to help individuals, families and their communities recover and rebuild after the devastating impacts of Tropical Storm Lee, Hurricane Irene and Hurricane Sandy.

In order to streamline the environmental review process, the environmental review reports (ERR) are divided into two phases: Tier 1 and Tier 2. Tier 1 reports are completed at the county and program level. Tier 2 forms are the environmental reviews that are conducted on the site-specific basis.

The Tier 1 Programmatic Environmental Assessments (PEAs) document the results of the evaluation of the potential environmental impacts of the different programs that will be offered under the CDBG-DR. The PEA assesses the environmental effects of multiple actions and their impact in a given geographic area in order to determine the additive, synergistic, and cumulative effects of discrete activities. The PEA serves as a foundation and reference document to allow the efficient completion of site-specific environmental assessments for the individual actions described in the PEA. The Floodplain Management Areawide Compliance (FPM) Documents are prepared on a county-wide program basis where allowed.

As part of the Tier 1 PEA process, a Site Specific Checklist is developed for each county and each program, which discusses the topics to be reviewed for compliance with the Tier 1 PEA document and with the applicable regulations. The Site Specific Checklist specifically indicates if the site complies with the topic discussed, or if additional permits or other actions are required to ensure compliance. The Site Specific Checklist has two components: a desktop review and a site inspection. Many of the topics in the Site Specific Checklist can be reviewed at the desktop level using available GIS and other data. The desktop review can also identify situations where a special site inspection, such as if a wetland delineation, would be prudent.

For properties participating in a rehabilitation program, a site inspection confirms the exact scope of work to be performed. For properties participating in a buyout or acquisition program, a site inspection is part of the ASTM Phase I Environmental Site Assessment (ESA) process (described below). The site inspection data is used to supplement the desktop review to complete the Site Specific Checklist.

CLIENT

New York State Housing Trust Fund Corporation

LOCATION

New York State

DURATION

2013 - 2015

COST

\$9,384,904 (As of 11/2013)

PROJECT TEAM

Andy Mazzeo

REFERENCES

Heather Spitzberg

For properties participating in the Buyout/Acquisition, a Phase I ESA and Phase II ESA (if required) are completed prior to property transfer. The Phase I ESA is conducted in compliance with the ASTM standard E1527-05. Where feasible, the Phase I ESA is conducted on an area-wide basis for each area selected for buyout or acquisition. Site Specific Phase I ESAs are conducted during the Tier 2 process.

Information from each property is collected from a database and assigned to an individual to complete the Site Specific Checklist. The Site Specific Checklists and other documents are completed by qualified environmental professionals and reviewed by a senior environmental professional it is completed. Once the QA/QC process is completed, the Site Specific Checklist is submitted to NYHCR for review and signature.

The Project Team assists in obtaining necessary environmental permits and approvals from other State and Federal Agencies, such as the United States Army Corps of Engineers (USACE); or consultation with the State Historic Preservation Office (SHPO), as identified during the Site Specific Checklist.

Section 2: Experience

III. FEMA 404 and 406 Hazard Mitigation

Section 2: Experience

Exhibit 2-3: Representative FEMA 404 and 406 Hazard Mitigation Experience Matrix

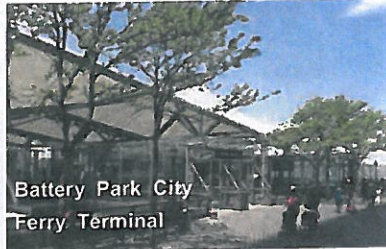
Client Name	Development of Grant Applications / Letter of Intent	Benefit Cost Analysis	Outreach/Intake	Documentation Processing / Request for Information	Grant Administration	Construction Inspection	FEMA PA 406 Hazard Mitigation	Hazard Mitigation Grant Program (HMGP 404)	Flood Mitigation Assistance (FMA)	Pre-Disaster Mitigation (PDM)	Project Closeout
Boulder, County of, Colorado	▲	▲	▲	▲	▲		▲	▲			
Galveston, County of, Texas	▲	▲	▲	▲	▲	▲		▲	▲	▲	▲
Galveston, Port of, Texas	▲	▲	▲	▲	▲	▲		▲	▲	▲	▲
Gwinnett, County of, Georgia	▲	▲	▲	▲	▲			▲		▲	▲
Manville, Borough of, New Jersey	▲	▲	▲	▲	▲	▲		▲			
Norman, City of, Oklahoma	▲			▲	▲		▲				
Napa, County of, California	▲		▲	▲	▲						
New Jersey Department of Environmental Protection, Liberty State Park	▲			▲	▲		▲				
Vermont, State of	▲	▲	▲		▲		▲	▲			▲
Virginia Beach, City of, Virginia	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲
Walton County, Florida	▲	▲	▲	▲	▲						
New York and New Jersey, Port Authority of	▲			▲	▲	▲	▲				
Gulf Breeze, Florida		▲		▲	▲	▲	▲				▲
Houston, City of, Texas	▲			▲	▲					▲	
Riverhead, Town of, New York	▲	▲		▲				▲		▲	▲



PROJECT OVERVIEW



JFK Air-Train



Battery Park City Ferry Terminal

Superstorm Sandy had a devastating impact on the Port Authority of New York and New Jersey (PANYNJ), which owns and operates multiple port facilities in both states; five airports in two states; the Port Authority Trans-Hudson (PATH) system connecting New Jersey and New York; and tunnels, bridges, and ferry transportation terminals connecting the two states – all of which were impacted to some degree. Damages are currently estimated in the billions. Tetra Tech provided support to Adjusters International for all Section 406 damage inspection, project worksheet development, and conceptual engineering and cost estimating required to submit the FEMA Public Assistance application for the disaster. Tetra Tech provided a team of engineers covering multiple disciplines in identifying FEMA 406 Mitigation opportunities at sixteen (16) of the PANYNJ’s facilities in response to Superstorm Sandy including:

Air-Train: Howard Beach Station /Queens, NY

Ferry Terminals: Battery Park City/ Manhattan, NY

Aviation: Newark International Airport / LaGuardia Airport / Teterboro Airport / JFK International Airport ; NY and NJ

Tunnels, Bridges, & Terminals: Holland Tunnel and Lincoln Tunnel; NY and NJ

Port Commerce: New York Marine Terminals (NYMT) – Brooklyn Piers, Red Hook Container Terminal, and Howland Hook/Port Ivory / Brooklyn and Staten Island, NY

Port Commerce: New Jersey Marine Terminals (NJMT) – Ports Newark, Elizabeth, Jersey South/Bayonne ; Newark and Elizabeth, NJ



LaGuardia Airport



Holland Tunnel

LOCATIONS

- New Jersey Marine Terminals
- Newark International Airport
- Teterboro Airport
- Holland Tunnel
- Battery Park City Ferry Terminal
- LaGuardia Airport
- JFK International Airport
- JFK Air-Train
- New York Marine Terminals

DURATION/DATES

November 2012– Current

DOLLAR AMOUNT OF CONTRACT

\$4,000,000

SUMMARY OF WORK

- Analyzed FEMA 406 Mitigation Opportunities
- Performed Numerous Site Visits for 40+ Different Potential Projects
- Vetted Scoping Opportunities & Cost Estimates with PANYNJ Staff
- Provided a Multi-Disciplined Team of Architects and Engineers
- FEMA Provisions Followed

REFERENCE

Gerard McCarty, Director
PANYNJ OEM
Port Authority Technical Center
241 Erie Street, Room 202
Jersey City, NJ 07310
Phone: 201.595.4673



CLIENT

Gwinnett County, Georgia

LOCATION

Georgia

DURATION

June 2012–May 2013

COST

\$100,000

REFERENCES

Mr. Greg Swanson
Director, Emergency
Management
Gwinnett County
770 Hi-Hope Road
Lawrenceville, GA 30043
Phone: (770) 513-5610
gregory.swanson@gwinnettcounty.com

KEY FEATURES

- Project Evaluation
- Public Outreach
- Data Collection and Management
- Benefit Cost Analysis
- Feasibility & Effectiveness Studies
- Grant Application Formulation
- Grant Implementation
- Project Management
- Closeout

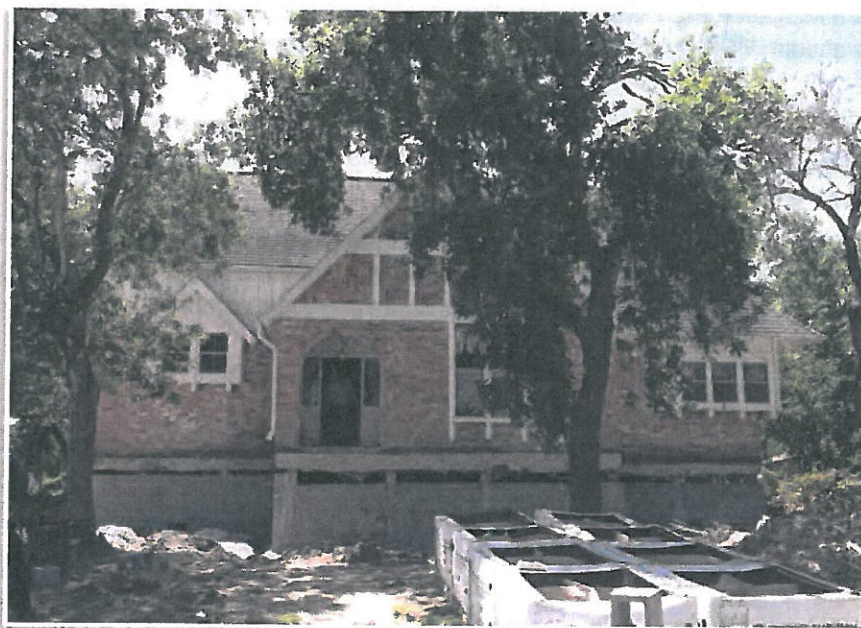
PROJECT DESCRIPTION

On September 21, 2009, an unusual weather system of three confluent moisture areas hit north Georgia and dumped more than 20 inches of rain in six days. This period of drenching rain caused disaster in Gwinnett County. Peachtree Creek, Woodall Creek, Nancy Creek, Utoy Creek, Pew Creek, and Crooked Creek were inundated by water, which reached historic high levels. The storm prompted federal disaster declarations in 17 counties, including Gwinnett County. The flooding damaged or destroyed thousands of homes, leaving more than 16,000 victims homeless and at least 11 people dead. The resulting FEMA disaster declaration (FEMA-DR-1858) provided funding for the Hazard Mitigation Grant Program (HMGP) in order to provide mitigation assistance to homes that were substantially damaged during the storm events.

Our team was hired by the County as the sole contractor to provide emergency planning, response, and recovery solutions to the County on an as-needed basis. Prior to the master contract, our team successfully completed an update to Gwinnett County's Hazard Mitigation Plan. Several months after the initial disaster declaration, the County went forth in their hopes to acquire HMGP funding in order to alleviate damages to the flood damage victims in their jurisdiction.

Our team was contracted to do an initial evaluation and feasibility assessment of 19 properties in order to determine the viability of acquiring properties for demolition with HMGP funding. After this evaluation and feasibility assessment, 11 properties were identified to be included on an application for HMGP.

Our team assisted the County with application, administration, and program management for the 11 properties. At the conclusion of this Grant, these properties were converted to open space, allowing the current homeowners to acquire residence in less vulnerable areas, ultimately creating a more disaster-resistant community.



CLIENT

Galveston County, Texas

LOCATION

Texas

DURATION

October 2008-Ongoing

GRANT AWARD

\$138 million

REFERENCES

James Gentile, Galveston County
Galveston County
Director of Housing & Economics
722 Moody (21st Street)
6th Floor - Housing Department
Galveston, Texas 77550
Phone: (409) 877-7588
Fax: (409) 877-7623
james.gentile@co.galveston.tx.us

KEY FEATURES

- Project Evaluation
- Public Outreach
- Data Collection and Management
- Grant Application Formulation
- Grant Implementation
- Project Management
- Quarterly Reporting
- Closeout
- Audit Preparation

PROJECT DESCRIPTION

On September 13, 2008, Hurricane Ike roared ashore, unleashing 100+ mph sustained winds and a devastating 20-foot storm surge on the Gulf Coast of Texas. The brunt of this powerful storm hit Galveston County, Texas, including the vulnerable Bolivar Peninsula on the northern approach to Galveston Bay. This peninsula stretches 28 miles along the coast and is barely a mile wide at its widest point. At its highest point, Bolivar is only 8 feet above sea level, and most of Bolivar is less than 6 feet above sea level. Prior to Hurricane Ike, the Bolivar Peninsula had 6,000 structures, both residential and commercial. After Hurricane Ike slammed into Bolivar, less than 2,000 structures remained, and the majority of those structures were badly damaged. The destruction and resulting debris were unprecedented in the

cost of lost property and the cost of debris removal.

In the wake of Hurricane Ike, Galveston County faced the daunting task of maintaining critical operations. Galveston County officials were prepared to take steps to repair the critical infrastructure and mitigate future damage on the scale of that caused by Hurricane Ike. To those ends, Galveston County engaged our team to assist with its overall recovery process. This included consulting services for the Federal Emergency Management Agency (FEMA) Public Assistance (PA) program and evaluating the feasibility of submitting an application for the buyout of substantially damaged or destroyed structures and the elevation of less damaged structures under the FEMA Hazard Mitigation Grant Program (HMGP). Within 48 hours, our team deployed to Galveston County to manage all aspects of these processes, allowing Galveston County staff to concentrate on maintaining critical services and beginning the long process of recovery.

Beginning with public outreach and program setup, our team began collecting applications from property owners and compiling an HMGP application for the buyout of 1,202 properties and the elevation of 12 others through two HMGP projects totaling over \$138 million with a federal share of over \$103 Million, which our team secured and implemented. In addition, Galveston County also engaged our team to assist with its extensive PA process and to act as a standby PA consultant for future disasters. Finally, on behalf of Galveston County, our team applied for a FEMA Severe Repetitive Loss (SRL) grant to elevate many more flood-prone homes throughout Galveston County, resulting in a \$36 million SRL grant award to elevate up to 225 homes.

Grants Administered

- FEMA HMGP - \$102 million
- FEMA SRL - \$34 million
- FEMA PA – Advisory Function



CLIENT

City of Virginia Beach,
Virginia

LOCATION

Virginia Beach, VA

GRANT ADMINISTERED

FEMA FMA 1.2 Million

DURATION

August 2013-December
2013

COST

\$45,000

REFERENCES

Erin E Sutton, MS, CEM,
PMP
Emergency Planner
City of Virginia Beach Fire
Department
Office of Emergency
Management
2408 Courthouse Drive,
Building 21
Virginia Beach, VA 23456
O: 757-385-1076
C: 757-751-2481
F: 757-385-5676
[eesutton@vb.gov.com](mailto:eesutton@vb.gov)

KEY FEATURES

- Project Evaluation
- Data Collection and Management
- Hazard Mitigation
- Process Development and Improvement
- Project Management
- Weekly Reporting

PROJECT DESCRIPTION

The City of Virginia Beach, the largest municipality in the Commonwealth of Virginia, is no stranger to the impacts of flooding. In the past ten years the City has had twelve Presidential Disaster Declarations for extensive damage due to flooding. The City is especially vulnerable to flooding due to low elevations and the threat of Nor'easters, hurricanes and tropical storms. The City also is comprised of a series of canals and channels which become inundated with storm surge during these events. Tetra Tech has provided program management services for a Severe Repetitive Loss (SRL) Grant for the elevation of eight (8) homes that Tetra Tech submitted for the City in 2010.

2013 brought about significant changes to the Hazard Mitigation Assistance (HMA) Programs. As a result of the Biggert Waters Act of 2012 (BW12), the Flood Mitigation Assistance (FMA) program was created, with an increased cost Federal Cost share of 100%. This Act also legislated the removal of subsidies for "grandfathered", and increased flood insurance rates for repetitive (RL) and severe repetitive loss (SRL) properties. Concerned for the

impacts of this legislation on its citizens, the City of Virginia Beach engaged Tetra Tech to produce a FMA Application for the elevation of eligible properties within the community.

Operating under new HMA Guidance and guidelines (FY2013), Tetra Tech evaluated many properties within Virginia Beach, taking into account flood loss history, depth in the flood plain and cost effectiveness. Tetra Tech utilized a new BCA methodology that FEMA released in August that used precalculated benefits of \$175,000 in order to determine if each property was cost-effective for mitigation. Using this methodology, Tetra Tech was able to include eight properties on the City's Elevation Application for FMA funding in the amount of \$1.2 million dollars. The City was informed of approval in June 2014, and anticipates starting this project in the fall.

Section 2: Experience

IV. Financial and Grant Management

Section 2: Experience

Exhibit 2-4: Representative Financial and Grant Management Experience Matrix

Client Name	Direct Administrative Cost Tracking	Project Cost Tracking	General Grant Management Consultation	Pre-Audit Documentation Preparation	Request for Reimbursement	Quarterly Reports	Contractor Invoice Reconciliation	Project Obligation Tracking
Boulder, County of, Colorado PA, CDBG, HMGP, FHWA-ER	▲	▲	▲	▲	▲	▲	▲	▲
New Orleans, City of, Louisiana FEMA Funded Demolitions	▲	▲	▲	▲	▲		▲	
New Jersey Department of Environmental Protection PA, Waterway Debris Removal, HMGP Technical Assistance (ICF)	▲	▲	▲	▲			▲	
Galveston, County of, Texas HMGP Buyouts and SRL Elevations	▲	▲	▲	▲	▲	▲	▲	
Galveston, Port of, Texas FEMA PA, 406, HMA, Planning and Exercises	▲	▲	▲	▲		▲	▲	▲
Vermont, State of FEMA PA, 406, HMGP Buyouts	▲	▲	▲	▲	▲	▲		▲
Virginia Beach, City of, Virginia FEMA PA, SRL Elevations	▲	▲	▲	▲	▲	▲	▲	▲
New Jersey, State Of, Office of Emergency Management FEMA PA	▲	▲	▲	▲	▲	▲		▲
Louisiana, State of (ICF) CDBG-DR, Katrina Disaster Recovery		▲	▲	▲	▲	▲	▲	▲
New Jersey Department of Community Affairs (ICF) CDBG-DR Technical Assistance		▲	▲	▲	▲	▲	▲	▲
New Jersey FEMA Match (ICF) CDBG-DR		▲	▲	▲	▲	▲		▲
New York Governor's Office of Storm Recovery NY Rising		▲	▲	▲	▲	▲	▲	▲
New York State Housing Authority CDBG-DR Implementation		▲	▲	▲	▲	▲	▲	▲



CLIENT

Richland County

LOCATION

South Carolina

DURATION

October 2015 – November 2015

COST

\$650,000

REFERENCES

Warren Harley
Deputy County Administrator
Richland County Administration
2020 Hampton Street, 4th Flr
Columbia, SC 29204
Phone:
harleyw@rscgov.urs

KEY FEATURES

- FEMA PA Reimbursement Services
- Road Repair Procurement Package Development
- Debris Monitoring
- Well Testing and Disinfection Project Management
- Disaster Grant Funding Strategy Development
- Long Term Recovery Planning and Workshop Facilitation
- Flood Mitigation Alternative Assessment

PROJECT DESCRIPTION

Tetra Tech was selected by Richland County under an emergency contract to provide comprehensive disaster recovery services in response to the 1,000 year flood disaster of October 1-5, 2015, which caused extensive damage throughout Richland County and surrounding communities.

Services provided to the County included:

1. **FEMA Public Assistance (PA) Reimbursement Support:** Tetra Tech assisted the County, City of Forest Acres, and County School Districts in preparation of their documentation for FEMA reimbursement.
2. **Preparation of Road Repair Procurement Packages:** Tetra Tech assisted the County's Department of Public Work prepare quantities and cost estimates to repair over 270 roads and bridges Countywide
3. **Management of Countywide Well Testing and Disinfection Program:** Tetra Tech provided overarching management of a comprehensive well testing and disinfection program
4. **Performance of Outstanding Need Assessment:** Tetra Tech completed a needs assessment study to identify any outstanding post-disaster unmet needs of the citizens of Richland County
5. **Disaster Debris Monitoring:** Tetra Tech monitored the County disaster debris drop-off locations and SCDOT debris collection vehicles removing debris from County public rights of way to ensure the County was properly charged for the SCDOT services provided
6. **FEMA, NRCS and State Meetings:** Tetra Tech participated in meetings

with FEMA and the State including the Applicant Briefing, FEMA Kick-Off Meeting and FEMA Advanced Evaluation Team to identify the long term recovery needs of the County and funding sources available to Richland County to fund the County's long term recovery needs

7. **Long Term Recovery Funding and Strategy Development:** Tetra Tech has assisted the County in identifying long terms disaster funding sources to assist fund the County's recovery efforts and develop a strategy to help maximize the amount of funds the County could realize through a comprehensive recovery strategic plan.
8. **County Council Long Term Recovery Workshop Facilitation:** Tetra Tech has worked with the County to facilitate a County Council workshop to brief the Council on the status of the recovery effort and long term recovery path forward.



PROJECT OVERVIEW

Winter Storm Alfred struck the State of Connecticut on October 29, 2011 and caused damage to trees and homes to the northern part of the State. Originally forecasted to only be a rain event, the nor'easter changed to wet snow that collected on trees that had not yet shed their leaves. The wet snow froze overnight and became too heavy for the trees to support. As a result, limbs snapped and trees toppled into streets and public roadways and posed a threat to public health and safety.

This was the largest debris incident the state had to recover from since Hurricane Gloria in 1985. The downed trees and branches took out power lines and caused power outages for over 900,000 customers statewide. Governor Malloy declared a state of emergency and our team was mobilized by the State of Connecticut to support the Interagency Debris Management Task Force (IDMTF) and statewide debris operations at the Connecticut Emergency Operations Center (CEOC).

As part of the recovery effort, the Connecticut Department of Transportation (CONNDOT) was tasked with clearing and removing debris from State maintained roadways. Even with over 800 trucks in their fleet and the necessary supporting equipment, CONNDOT required the assistance from the State's emergency debris contractors, and we were activated. The project team set up a statewide project plan that was presented to CONNDOT and approved. This plan included the removal of over 45,000 hazards in trees and 350,000 yards of disaster debris in over 45 towns across the State. Our statewide project plan incorporated the separation of contractor crews and monitors to maintain documentation for the federal grant programs provided by the Federal Emergency Management Agency (FEMA) and the Federal Highway Administration (FHWA). These crews ran simultaneously in 45 towns and cities throughout the state and sometimes on the same roadways. The administration of such a comprehensive program required the technical knowledge and experience of the project team.

LOCATION

Multiple Communities
Throughout the State of
Connecticut

DURATION/DATES

October 2011 – April 2012

DOLLAR AMOUNT OF CONTRACT

\$3,279,639

SUMMARY OF WORK

- Grant Management Consulting (FHWA & FEMA)
- Project Planning
- Disaster Debris Monitoring
- DDIR / PW Assistance
- Project Closeout

REFERENCE

Mr. Bartholomew P. Sweeney,
P.E.
Transportation Maintenance
Manager
Connecticut Department of
Transportation
2800 Berlin Turnpike
P.O. Box 317546
Newington, CT 06131
Phone: (203) 878-6300
Bartholomew.Sweeney@ct.gov

Note: This project was performed as the BDR Division, which is now Tetra Tech, Inc.



CLIENT

State of South Dakota

LOCATION

South Dakota

DURATION

August 2010 – March 2013

COST

\$375,000.00

GRANTS ADMINISTERED

FEMA PA - \$10 Million

REFERENCES

Mr. Jack Dokken
PA Officer
South Dakota Office of
Emergency Management
118 West Capitol Avenue
Pierre, SD 57501
Phone: (605) 773-3581
Fax: (605) 773-3580
Jack.dokken@state.sd.us

KEY FEATURES

- Consulting Services
- Damage Assessment
- Project Formulation
- Project Worksheet Processing
- Project Worksheet Management
- Grant Closeout and Audit Preparation

PROJECT DESCRIPTION

In January 2010, South Dakota was struck by severe winter storms that damaged infrastructure across much of the state. This resulted in a presidential disaster declaration, DR-1887, and to date over \$66 million in Public Assistance (PA) funding has been granted to applicants. Rural electrical cooperatives (REC) suffered the majority of damages, as thousands of miles of electrical utility infrastructure were destroyed by high winds and large amounts of snow, ice, and downed tree limbs.

Our team was hired by the South Dakota Office of Emergency Management (SDOEM) to provide audit and closeout assistance for over 300 large-scale project worksheets (PW). Our team reviewed Federal Emergency Management Agency (FEMA) PWs and supported documentation such as timesheets, equipment logs, vendor invoices, contracts, completed scopes of work, environmental and historical issues, and all other project-related documents for completeness, eligibility, and compliance with federal regulations and guidelines. Our team then worked directly with the sub-applicants to collect additional documentation if needed. Once PWs were determined to be complete and in compliance with federal requirements, and once site inspections were completed to verify that the approved scope of work was followed, our team notified FEMA on behalf of SDOEM that the PW was complete. FEMA then released any remaining funds to the State for disbursement.

Our staff regularly interacted with RECs to address the unique challenges they faced as revenue-based organizations receiving federal funding. This included regular staff site rotations to the State Capital complex and PW site visits.



CLIENT

Hays County, Texas

LOCATION

State of Texas, Various Locations

DURATION

May 2015 - Present

COST

\$475,000 (to date)

REFERENCE

Mr. Mark Kennedy, General Council
111 E. San Antonio St.
Ste. 202
San Marcos, Texas 78666
(512) 393-2219
mark.kennedy@co.hays.tx.us

PROJECT DESCRIPTION

During the Month of May, 2015, the State of Texas experienced one of the most severe weather events in State history, culminated by a record – breaking flood outbreak on Memorial Day weekend. An estimated 35 Trillion Gallons of rain fell during that time – enough to cover the entire State with 8” of Water. Tetra Tech, recognizing the devastating impacts that the weather events would have on local governments, mobilized senior staff within hours of the first available damage reports. As flood waters began receding our staff began field operations throughout the state including 8 projects in Central Texas that included Hays, Blanco and Caldwell Counties – the State’s most heavily impacted areas.

Within 48-hours of a Notice to Proceed, Tetra Tech had fully staffed all 8 projects with trained monitors, assisted in the opening of 3 Central Texas disposal locations, mobilized nearly 200 Automated Debris Monitoring Systems (ADMS) and began assisting our clients with FEMA Public Assistance Coordination and Debris Hauler Procurement. Our familiarity with our Texas clients coupled with our responsiveness allowed affected communities to maximize reimbursement while minimizing operational and project initiation delays that are typical of an unprepared firm.

Section 2: Experience

V. Information Technology, Data Management and Reporting

Section 2: Experience

Exhibit 2-5: Representative Information Technology, Data Management & Reporting Experience Matrix

Client Name	Development of Unique IT Solution	Managing Data for Disaster Recovery Programs	Disaster Recovery Reporting Expertise	Data Analysis	Process Improvement and Optimization
Connecticut, State of, Department of Housing (ICF) CDBG-DR Application Intake	▲	▲	▲	▲	▲
Boulder, County of, Colorado PA, CDBG, HMGP, FHWA-ER	▲	▲	▲	▲	▲
New Orleans, City of, Louisiana FEMA Funded Demolitions	▲	▲	▲	▲	▲
New Jersey Department of Environmental Protection PA, Waterway Debris Removal	▲	▲	▲	▲	▲
Vermont, State of FEMA PA, HMGP Buyouts	▲	▲	▲	▲	▲
Virginia Beach, City of, Virginia FEMA PA, SRL Elevations		▲	▲	▲	▲
Louisiana, State of (ICF) CDBG-DR, Katrina Disaster Recovery	▲	▲	▲	▲	▲
New Jersey Department of Community Affairs (ICF) CDBG-DR Technical Assistance	▲	▲	▲	▲	▲
New Jersey Department of Environmental Protection (ICF) HMGP Advisory Services	▲	▲	▲	▲	▲
Columbia, City of, South Carolina (ICF) CARE Hotline	▲	▲	▲	▲	▲
New York Governor's Office of Storm Recovery, NY Rising CDBG-DR Implementation	▲	▲	▲	▲	▲
New York State Housing Authority CDBG-DR Implementation	▲	▲	▲	▲	▲
New York State Housing Trust Fund Corporation CDBG-DR Implementation	▲	▲	▲	▲	▲
Pennsylvania Department of Community and Economic Development (ICF) CDBG-DR Implementation	▲	▲	▲	▲	▲



CLIENT

City of New Orleans,
Louisiana

LOCATION

Louisiana

DURATION

November 2007 - Present

COST

\$17,069,247.00
\$2,000,000 (additional 331
properties)
Hurricane Katrina only -
\$399,067

REFERENCES

Ms. Pura Bascos
Director of Code Enforcement
City of New Orleans
1340 Poydras Street, Suite
1000
New Orleans, LA 70112
Phone: (504) 658-4340
Fax: (504) 658-4238
pbascos@nola.gov

KEY FEATURES

- Documentation Management
- Contract Management
- Program Management
- Demolition Oversight
- Quality Assurance Inspection Services
- Right-of-entry Administration
- Staff Augmentation
- Environmental Services

PROJECT DESCRIPTION

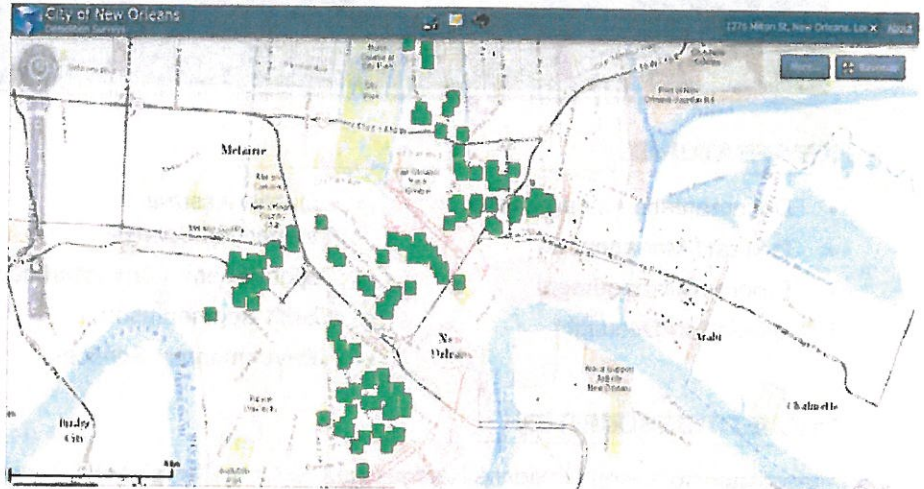
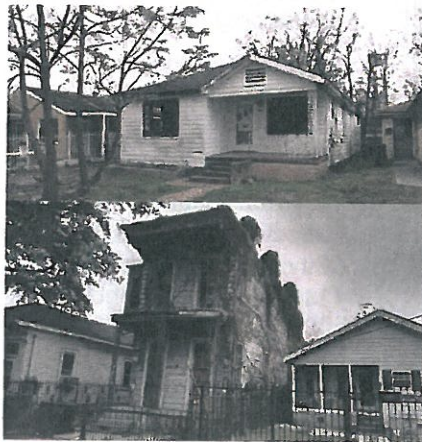
Immediately following Hurricane Katrina, the U.S. Army Corps of Engineers (USACE) was provided a direct federal mission by the Federal Emergency Management Agency (FEMA) to coordinate recovery and debris removal efforts in the City of New Orleans (City). The USACE program managed operations for more than two years until their departure in August 2007. Because thousands more homes remained to be demolished, the City retained our team to serve as the comprehensive program manager for the effort.

Our team developed a compliant, efficient demolition process for the City. The project team has surveyed over 5,000 properties, many of which were not condemned for demolition and placed in the Chapter 28 program. Our team then managed over 2,000 demolitions, including residential, commercial, and selective salvage properties. *The project team verified and documented legal authority to demolish properties*, managed environmental and utilities disconnect due diligence, managed the contracting of the debris removal contractor, *managed all legal and reimbursement-related paperwork* to support reimbursement, and provided field monitoring as required to meet FEMA guidelines.

Concurrent to assisting the City with this very important demolition initiative, Hurricane Gustav impacted the City in August of 2008. Already mobilized, our team assisted the City with documenting force account expenditures, deploying contracted debris removal resources, monitoring field work, developing debris removal documentation, and developing FEMA Public Assistance and Federal Highway Administration-Emergency Relief grant applications. In total, our team assisted the City of New Orleans with documentation and applications necessary to recover nearly \$40 million in federal reimbursement.

Furthermore, our team was still managing the Hurricane Katrina demolition project for the City when Hurricane Isaac struck the Louisiana Coast in August 2012. In addition to continuing demolition operations, our team assisted the City with program management and monitoring of the removal of debris that resulted from Hurricane Isaac, including the management of a leaner/hanger program for hazardous tree removal from right-of-way roads.

Tetra Tech was recently awarded a contract to assist the City with the program management and monitoring of an additional 331 properties that were deemed eligible by FEMA for PA funding. Upon notice to proceed, ***Tetra Tech began field surveys leveraging Esri geographic information system tools and smartphones to document and photograph properties. Electronic field surveys have provided the project team and the City with real-time access to survey information as it is generated in the field.***





KEY FEATURES

- Comprehensive Program Management and Reporting
- Data Management
- Right-Of-Way Debris Monitoring
- Waterway Debris Removal Monitoring

PROJECT DESCRIPTION

Following Hurricane Sandy, the New Jersey Department of Environmental Protection (NJDEP) awarded our team a contract for disaster debris monitoring and comprehensive program management. For the debris removal operations from state-maintained waterways, New Jersey was divided into three distinct regions. Our team was initially tasked with monitoring waterways debris removal from the northern region.

Upon deployment, our team worked closely with NJDEP and the state project manager to develop protocols and procedures in order to effectively monitor and manage waterways debris removal efforts while meeting Federal Emergency Management Agency eligibility requirements. Due to the technical aspects of the work and the need for an in-depth understanding of the specific parameters and guidelines, the need for a more highly trained work force primarily consisting of supervisory level personnel was presented and accepted. Having personnel on location with the debris removal crews who were able to completely understand the guidelines and make informed decisions immediately not only increased the efficiency of the debris removal process, but also ensured that only eligible debris was removed.

CLIENT

New Jersey Department of Environment Protection

LOCATION

New Jersey

DURATION

February 2013–January 2014

COST

\$10 million

REFERENCES

Mr. Ed Putnam
401 East State Street, 3rd Floor
Trenton, NJ 08625-0420
(609) 292-8838
Ed.putnam@dep.state.nj.us

The use of our automated debris management system (ADMS), RecoveryTrac™, greatly increased the client's visibility into the day-to-day operations and provided real-time tracking of crew locations and debris quantities. By providing real-time data and recording photos of ongoing operations, the need for a stop work request was nearly eliminated and decisions could be passed along to field operations for both monitors and contractors.

After efficiently monitoring the operations in the northern region, our team was tasked with monitoring the southern region, thus replacing the previous monitoring firm. The same methods and procedures were once again established, which resulted in a much more timely and efficient debris removal process. The southern region presented additional challenges due to the significant archeological and environmental sites that required special treatment. Using technology and real-time reporting, the onsite supervisors were able to locate the areas of environmental concerns as well as known archeological sites. By identifying issues in advance, Tetra Tech's team was able to advise the contractor prior to issues presenting themselves, resulting in both time savings and fewer incursions upon environmental and archeological assets.

Tetra Tech's team was also tasked with monitoring the sediment removal process in both regions. By relying upon our inter-company relationship and processes developed over many years of working with the U.S. Army Corps of Engineers, Tetra Tech's team was able to prepare plans and properly document the removal of Hurricane Sandy sediment. This process involved observing and documenting the surveys, which quantified how much sediment was to be removed, verifying that the sediment samples were properly taken and secured, tracking the sediment testing results, confirming that the sediment was disposed of properly, and ultimately verifying that the proper depths were reached by aggressively tracking bucket depths and recording tidal gauges on the dredging equipment.

Section 2: Experience

VI. Disaster Recovery Engineering

Section 2: Experience

Exhibit 2-6: Representative Disaster Recovery Engineering Experience Matrix

Project Name/Client	Organize/Facilitate Meetings	Field Inspections	Project Scoping	Feasibility Studies	Preliminary & Final Design	Budget Estimating	Design Development	Contract Drawing Preparation	Detailed Const. Cost Estimating	Technical Specifications Prep.	Shop Drawing Review	Post-Award Contract Support	Code Analysis
Superstorm Sandy FEMA 406 Mitigation New York and New	▲	▲	▲	▲		▲			▲				▲
Inner Harbor Navigation Canal (IHNC) Hurricane Barrier New Orleans, Louisiana	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Storm Surge/Storm Resiliency/Harbor A/E Services Destin, Florida	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Katrina Damage Evaluations & FEMA Assistance Biloxi, Mississippi	▲	▲	▲	▲		▲							▲
Panama Canal Post Panamax Third Locks Expansion Panama Canal	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Bayou Segnette Pump Station/West Bank Hurricane Prot. New Orleans, Louisiana	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Emergency Generator for Apron Lighting & Power Quebec, Canada	▲	▲	▲		▲	▲	▲	▲	▲	▲	▲	▲	▲
FAA Navigation, Landing & Lighting Systems Design Throughout Continental United States	▲	▲	▲	▲	▲	▲	▲		▲	▲	▲	▲	▲
Miami International Airport Master Plan Miami-Dade County, Florida	▲	▲	▲	▲	▲	▲							▲
Service Tunnel Rehabilitation Sea-Tac/Port of Seattle , Washington		▲	▲	▲	▲								▲
Lansing Avenue Pump Station Computer Controls Lansing, Michigan	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Market Avenue Pump Station Improvements Grand Rapids,	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
John Day Dam North Fishway Ladder Pump Station Lake Umatilla, Oregon/Washington		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Hurricane Ivan Bridge & FEMA Assistance Gulf Breeze, Florida	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲		▲	▲
Mukilteo Multimodal Ferry Terminal Mukilteo, Washington		▲	▲	▲	▲	▲	▲	▲	▲	▲			▲
Stellacoom Ferry Landing Design Pierce Countv.		▲	▲	▲	▲	▲	▲						▲
Calcasieu Channel Dredging & Rabbit Island Restoration Calcasieu Parish, Louisiana	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
Miami Harbor Dredging Phase 3 Miami, Florida	▲	▲	▲	▲	▲	▲						▲	▲

**CLIENT**

- State of New York
- State of New Jersey
- New Jersey and New York Marine Terminals

LOCATION

States of New York and New Jersey

DURATION

Ongoing

COST

Ongoing

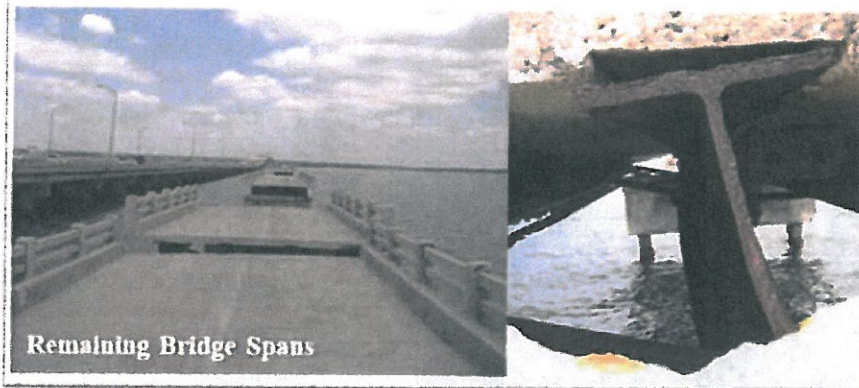
PROJECT DESCRIPTION

Tunnels, Bridges, & Terminals / Holland Tunnel / New York and New Jersey – Several meetings and site visits were conducted to inspect the damages and assess resiliency opportunities under FEMA's 406 Mitigation Program. The inspections were performed at the New Jersey Land and River Buildings including Pump Rooms, New York Land and River Buildings Pump Rooms, Mid-River Pump Rooms, and the Administration Building. Specific recommendations to mitigate from a similar or greater storm surge event included floodwalls near the New Jersey Tunnel portals and flood protection at each of the four vent buildings. The vent building flood protection measures included flood doors, sealing all wall penetrations, installing sump pumps at strategic locations, elevating electrical equipment above the pump rooms, and installing back-up power for the pump stations in the event that electric service from ConEd and PSE&G was lost similar to Superstorm Sandy.

Port Commerce / New York Marine Terminals (NYMT) / Brooklyn Piers, Red Hook Container Terminal, and Howland Hook/Port Ivory / Brooklyn and Staten Island, New York – Site visits, initial project scoping, and cost estimates for 406 Mitigation opportunities were conducted by our Team at the noted NYMT facilities. The specific projects included the Howland Hook electrical substations and equipment including wastewater lift station controls, Brooklyn Piers/Red Hook Container Terminal (BP/RHCT) electrical substations and equipment, BP/ RHCT fire suppression systems, and BP/RHCT Buildings.

Port Commerce / New Jersey Marine Terminals (NJMT) / Ports Newark, Elizabeth, Jersey South/Bayonne / Newark, New Jersey. Opportunities for 406 Mitigation were identified at the three different NJMT facilities for the Port Commerce Line Department that included protecting/ reconstructing shoreline, electrical equipment, lift stations, fire suppression systems, buildings, stormwater management systems, and traffic controls.

Specific projects included: Toyota Shoreline; BMW Access Road; Building Nos. 111, 260, 51, 108, 138/138A, 305A; and five (5) electrical substations (West Substation, Building 108, Building 44C, Building 12, and Building 22).



KEY FEATURES

- Helped City Secure \$18,000,000 for Alternative Projects
- Storm Surge Damage Analysis
- FEMA Scoping & Cost Estimating
- Planning, Design, Permitting, and Construction Services

PROJECT DESCRIPTION

Tetra Tech prepared a structural analysis for the City of Gulf Breeze's Fishing Bridge damaged by Hurricane Ivan. The storm surge combined with wind and wave action caused many spans of the fishing bridge to shift from normal alignment on their support piers. Forty-two spans collapsed and were submerged while the remaining portions fell into disrepair and became unsafe for pedestrian and vehicular traffic. Bridge structural calculations were prepared and along with site investigations, it was determined that approximately 60% of the spans required replacement along with the 30% of spans that had fallen.

Following the structural evaluation, Tetra Tech was responsible for creating an opinion of replacement cost for the City's use for updating replacement costs discussions with the Federal Emergency Management Agency (FEMA). Tetra Tech provided technical assistance on the City's behalf in answering questions from FEMA regarding the cost estimate. Additional information was prepared and provided to FEMA satisfactorily answering their concerns and obligating the full \$18,000,000 in funds to the City.

Tetra Tech was also contracted by the City of Gulf Breeze to permit the removal and placement of bridge materials as an artificial reef site. Coordination was required from numerous governmental agencies including the U.S. Army Corps of Engineers, Florida Department of Environmental Protection (FDEP), FEMA, Escambia County Marine Resources Division (ECMRD), State Historic Preservation Office (SHPO) and the U.S. Fish and Wildlife Commission. Endangered and threatened species avoidance was of critical concern during regulatory review of the proposed project

CLIENT

City of Gulf Breeze, Florida

LOCATION

Gulf Breeze, FL

DURATION

2004 – 2011

COST

\$400,000

REFERENCES

Steve Milford

City of Gulf Breeze 1070
Shoreline Drive Gulf Breeze,
FL 32561

Phone: 850-934-4030



CLIENT

Richland County Public Works

LOCATION

Richland County, SC

DURATION

Currently Ongoing

PROJECT FIRM

Chao & Associates

ROLE

Civil Engineering,
Surveying, Hydraulic
Analysis

REFERENCES

Mr. J. Stacy Culbreath, P.E.
Associate County Engineer
(803) 576-2409

PROJECT DESCRIPTION

As part of a two-phase analysis, Chao and Associates served as lead engineer and project manager on the evaluation and repair design of an earthen dam located in Richland County, SC. The original Dawson Pond dam failed in late 2013, presumably due to excessive pressure loadings from heavy rainfalls in the area. Chao provided hydraulic analysis and routing of the contributing drainage area through the pond and new outlet controls. We involved a geotechnical engineering firm to provide testing on the existing dam embankment and a recommendation for the new dam construction design. We presented all of the information gathered as well as our recommendation for repair and associated construction cost opinion in a preliminary engineering report. The project is currently in design, following our original recommendation.



PROJECT DESCRIPTION

Chao and Associates was engaged by Richland County Public Works Department to perform a condition assessment on the structural integrity of the existing 20-foot span bridge/arch culvert along Old Garners Ferry Road. A feasibility study and cost estimates were provided based on the findings of our investigation as well as a recommendation to repair the bridge rather than replace or remove the bridge completely. Chao and Associates was then retained to develop an engineering repair design to address the deficiencies noted. Repair plans included replacement of concrete topping slab, installation of appropriate guardrails, concrete spalling repair, and improving hydraulic conductivity by clearing brush and sediments.

CLIENT

Richland County Public Works

LOCATION

Columbia, South Carolina

YEAR COMPLETED

2011

PROJECT FIRM

Chao & Associates

ROLE

Structural, Civil Engineering,
Surveying & CA

REFERENCES

Mr. Stacy Culbreath, PE
(803) 576-2409

Section 2: Experience

VII. Disaster Debris Monitoring

Section 2: Experience

Exhibit 2-7: Representative Disaster Debris Monitoring Experience Matrix

Event/Client	Year	Cubic Yardage	Comprehensive Contract Management	Collection Monitoring	Disposal Monitoring	Hazardous Waste Collection Monitoring	Leaner/Hanger/Stump Removal	DMS Environmental Support	Beach Remediation/Restoration	Right-of-Entry Administration	Marine/Waterway Debris Removal I	Data Collection/ Management/ Billing/ Invoicing	FEMA Compliance Monitoring & Audit Oversight	FEMA Reimbursement	Automated Debris Management System
FLOODING – 2015¹															
Total Cubic Yards of Debris – 293,750 Total Clients – 10															
City of Houston, TX	2015	240,725	▲	▲	▲							▲	▲	▲	▲
Hays County, TX	2015	10,900	▲	▲	▲		▲	▲				▲	▲	▲	▲
Town of Wimberley, TX	2015	18,922	▲	▲	▲		▲	▲				▲	▲	▲	▲
Caldwell County, TX	2015	1,320	▲	▲	▲		▲	▲				▲	▲	▲	▲
City of San Marcos, TX	2015	5,590	▲	▲	▲		▲	▲				▲	▲	▲	▲
FLOODING – 2014															
Total Cubic Yards of Debris – 10,000 Total Clients – 1															
Escambia County, FL	2014	10,000	▲	▲	▲							▲	▲	▲	▲
TORNADO – 2014															
Total Cubic Yards of Debris – 179,851 Total Clients – 2															
Limestone County, AL	2014	104,256	▲	▲	▲		▲	▲				▲	▲	▲	▲
Blount County, AL	2014	75,595	▲	▲	▲		▲	▲				▲	▲	▲	▲
ICE STORM – 2014															
Total Cubic Yards of Debris – 1,041,047 Total Clients – 7															
Augusta-Richmond County, GA	2014	645,970	▲	▲	▲		▲	▲				▲	▲	▲	▲
Sumter County, SC	2014	104,722	▲	▲	▲		▲	▲				▲	▲	▲	▲
Dorchester County, SC	2014	91,850	▲	▲	▲		▲	▲				▲	▲	▲	▲
Barnwell County, SC	2014	85,703	▲	▲	▲		▲	▲				▲	▲	▲	▲
Colleton County, SC	2014	61,883	▲	▲	▲		▲	▲				▲	▲	▲	▲
City of Sumter, SC	2014	35,424	▲	▲	▲		▲	▲				▲	▲	▲	▲

¹ On-going debris collection operations

Section 2: Experience

Event/Client	Year	Cubic Yardage	Comprehensive Contract Management	Collection Monitoring	Disposal Monitoring	Hazardous Waste Collection Monitoring	Leaner/Hanger/Stump Removal	DMS Environmental Support	Beach Remediation/Restoration	Right-of-Entry Administration	Marine/Waterway Debris Removal I	Data Collection/ Management/ Billing/ Invoicing	FEMA Compliance Monitoring & Audit Oversight	FEMA Reimbursement	Automated Debris Management System
Hampton County, SC	2014	15,495	▲	▲	▲			▲				▲	▲	▲	▲
FLOODING – 2013															
Total Cubic Yards of Debris – 140,000* Total Clients – 1															
Boulder County, CO	2013	140,000*	▲	▲	▲		▲	▲		▲		▲	▲	▲	▲



CLIENT

Barnwell County, South Carolina

DURATION

March 2014 – April 2014

COST

\$577,060

REFERENCES

Mr. Roger Riley
57 Wall Street
Barnwell, SC 29812
Phone: (803) 541-2013
Fax: 803-541-1104
riley@barnwellsc.com

PROJECT DESCRIPTION

Following the impact of Winter Storm Pax in February 2014, Barnwell County retained the services of our team to monitor and document the removal of all debris collected within the County and guide them through the FEMA reimbursement process. With FEMA damage assessments underway, our senior management team, recruiters, and field staff began hiring and training local monitors within the County.

The use of our ADMS, RecoveryTrac™, enabled our staff to maximize field efficiency while allowing the County's debris hauler to operate at maximum capacity. This allowed the majority of the debris collection to occur during the first 30 days following the incident period and made it possible for Barnwell County to take advantage of the increased federal funding available under the Sandy Recovery Improvement Act sliding scale.

In 33 days of total field operations, our team certified 98 debris hauling vessels and bucket trucks, monitored the collection of almost 86,000 CYs of debris, and monitored the removal of 17,895 hanging limbs and 559 leaning trees.



CLIENT

Dorchester County, South Carolina

DURATION

March 2014 – April 2014

COST

\$537,788.91

GRANTS ADMINISTERED

FEMA Public Assistance

TOTAL CUBIC YARDS

91,000

REFERENCES

Mr. Mario Formisano
Emergency Management Director
212 Deming Way, Suite 3
Summerville, SC 29483
Phone: (843) 832-0341
MFormisano@dorchestercounty.net

KEY FEATURES

- Disaster Debris Monitoring
- Program management

PROJECT DESCRIPTION

Days before impact, the Tetra Tech senior management team and Dorchester County officials prepared for Winter Storm Pax's arrival. Immediately after the storm had cleared the area, Tetra Tech and Dorchester County executed a plan to maximize the value of the County's existing mutual aid agreements for debris removal, while initiating contract debris hauling and monitoring operational plans to be activated when the County's mutual aid resources were no longer available.

Upon a notice to proceed, Tetra Tech, including previously hired and trained local residents, immediately began truck certification, ROW debris collection monitoring, and removal monitoring for dangerous hanging limbs and leaning trees. **To date, Tetra Tech has used our proprietary ADMS, RecoveryTrac™, to successfully monitor and document the removal and reduction of nearly 90,000 CYs of debris and the removal of over 11,000 hanging limbs and leaning trees.**



CLIENT

New Jersey Department of Environment Protection

LOCATION

New Jersey

DURATION

February 2013–January 2014

COST

\$10 million

REFERENCES

Mr. Ed Putnam

401 East State Street, 3rd Floor

Trenton, NJ 08625-0420
(609) 292-8838

Ed.putnam@dep.state.nj.us

KEY FEATURES

- Right-Of-Way Debris Monitoring
- Comprehensive Program Management
- Waterway Debris Removal Monitoring

PROJECT DESCRIPTION

Following Hurricane Sandy, the New Jersey Department of Environmental Protection (NJDEP) awarded our team a contract for disaster debris monitoring and comprehensive program management. For the debris removal operations from state-maintained waterways, New Jersey was divided into three distinct regions. Our team was initially tasked with monitoring waterways debris removal from the northern region.

Upon deployment, our team worked closely with NJDEP and the state project manager to develop protocols and procedures in order to effectively monitor and manage waterways debris removal efforts while meeting Federal Emergency Management Agency eligibility requirements. Due to the technical aspects of the work and the need for an in-depth understanding of the specific parameters and guidelines, the need for a more highly trained work force primarily consisting of supervisory level personnel was presented and accepted. Having personnel on location with the debris removal crews who were able to completely understand the guidelines and make informed decisions immediately not only increased the efficiency of the debris removal process, but also ensured that only eligible debris was removed.

The use of our automated debris management system (ADMS), RecoveryTrac™, greatly increased the client's visibility into the day-to-day operations and provided real-time tracking of crew locations and debris

quantities. By providing real-time data and recording photos of ongoing operations, the need for a stop work request was nearly eliminated and decisions could be passed along to field operations for both monitors and contractors.

After efficiently monitoring the operations in the northern region, our team was tasked with monitoring the southern region, thus replacing the previous monitoring firm. The same methods and procedures were once again established, which resulted in a much more timely and efficient debris removal process. The southern region presented additional challenges due to the significant archeological and environmental sites that required special treatment. Using technology and real-time reporting, the onsite supervisors were able to locate the areas of environmental concerns as well as known archeological sites. By identifying issues in advance, Tetra Tech's team was able to advise the contractor prior to issues presenting themselves, resulting in both time savings and fewer incursions upon environmental and archeological assets.

Tetra Tech's team was also tasked with monitoring the sediment removal process in both regions. By relying upon our inter-company relationship and processes developed over many years of working with the U.S. Army Corps of Engineers, Tetra Tech's team was able to prepare plans and properly document the removal of Hurricane Sandy sediment. This process involved observing and documenting the surveys, which quantified how much sediment was to be removed, verifying that the sediment samples were properly taken and secured, tracking the sediment testing results, confirming that the sediment was disposed of properly, and ultimately verifying that the proper depths were reached by aggressively tracking bucket depths and recording tidal gauges on the dredging equipment.

Key Statistics

- 116,427 cubic yards of sediment and wet debris
- 100 handheld units
- 90 quality control monitors
- 80 abandoned vessels

Section 2: Experience

VIII. Emergency Management

Section 2: Experience

Exhibit 2-8: Emergency Management Experience Matrix

Client Name	Hazard Mitigation Planning	Mass Care, Sheltering & Fatality Planning	Continuity of Operations Planning	Strategic Planning	Disaster Readiness Assessment & Planning	Standard Operating Guides	Emergency Operations Planning	EMAP Accreditation	Continuity of Government Planning	Debris Management Planning	Information Technology Disaster Recovery Plan	Emergency Management Training	Pandemic Flu Planning	Emergency Management Exercises
Illinois, State of			▲		▲	▲	▲	▲	▲			▲		
North Carolina, State of								▲						▲
South Carolina, State of			▲					▲	▲				▲	▲
Mississippi State Department of Health	▲	▲	▲	▲	▲	▲	▲		▲			▲	▲	
West Virginia, State of		▲	▲		▲	▲	▲		▲				▲	
Morgan County, AL			▲		▲		▲		▲					
Escambia County, FL	▲		▲		▲					▲		▲		
Volusia County, FL		▲	▲		▲	▲				▲			▲	
Gwinnett County, GA	▲	▲				▲	▲			▲		▲		
Chicago, City of, IL		▲			▲		▲							
Apex, NC					▲	▲	▲							
Asheville, NC			▲						▲					
Brunswick County, NC			▲			▲	▲		▲	▲		▲		▲
Caldwell County, NC			▲						▲		▲	▲		▲
Henderson County, NC			▲	▲		▲	▲		▲					
Anderson County, SC			▲						▲					
Beaufort County, SC														▲
Fort Bend County, TN	▲	▲			▲					▲	▲	▲		



CLIENT

Gwinnett County, Georgia

LOCATION

Georgia

DURATION

First Term: August 2010–
August 2013

Second Term: August 2013
–August 2014

COST

First Term: \$750,585.65

Second Term: \$65,561.00

REFERENCES

Gregory Swanson

Director

Gwinnett County Office of
Emergency Management

800 Hi Hope Road

Lawrenceville, GA 30043

Phone: 770-512-5610

Fax: 770-512-5660

[Gregory.swanson@gwinnettc
ounty.com](mailto:Gregory.swanson@gwinnettc
ounty.com)

KEY FEATURES

Services

- Master Services Agreement
- Emergency Management Planning
- Financial Recovery Services

PROJECT DESCRIPTION

Our team was retained by Gwinnett County, Georgia, to provide Emergency Management Consulting and Recovery Services under a master services contract. The County wanted a firm to provide a range of services in all four phases of emergency management (preparedness, mitigation, response, and recovery), including emergency management planning, training, damage assessments, grants management, and other services as needed and ordered.

During the term of the contract, our team completed the following task orders for Gwinnett County:

1. Emergency Support Function #5 Standard Operating Procedures (2010)
2. Multijurisdictional Hazard Mitigation Plan Update (2010)
3. Crisis Communications Plan (2011)
4. Disaster Debris Hauler Procurement (2011)
5. Disaster Debris Management Plan (2011)
6. Volunteer Management Plan (2011)
7. HMGP Buyout (2011/2012)
8. Mass Care And Sheltering Annex (2012)
9. Mass Care And Sheltering Annex Training and Exercise (2013)

10. Emergency Operations Center (EOC) Training (2013)

As a result of our superior work with Gwinnett County under this contract, the County selected our team to renew the contract in August 2013 for up to an additional 5-year period. Under this renewal contract, our team is already working with the County to develop closed point of dispensing (POD) plan. The plan establishes a framework for dispensing medication or vaccines to Gwinnett County employees and their families in an event requiring mass dispensing of prophylaxis. The POD will ensure that critical personnel are available to provide services to the rest of the community without undue concern for themselves or individuals they care about.

A brief description of the tasks our team has performed for Gwinnett County is provided below:

- **Crisis Communications Plan.** Our team worked with Gwinnett County to develop a Crisis Communications Plan that provides guidance for Gwinnett County departments and municipalities within the County in carrying out effective and consistent communications before, during, and after an emergency or disaster.
- **Disaster Debris Hauler Procurement.** Our team helped develop a request for proposals (RFP) document to be used in procuring disaster debris removal services. Our team facilitated a scoping meeting with Gwinnett County to strategize and discuss key elements that should be included in the RFP.
- **Disaster Debris Management Plan (DDMP).** Our team developed a DDMP designed to outline the components critical to the success of a debris removal operation. The DDMP provides key information that will help the County coordinate and effectively manage a turnkey debris removal effort.
- **Emergency Support Function (ESF) #5 Standard Operating Procedures (SOPs).** Our team developed a set of SOPs for ESF #5 - Emergency Management to guide the activation, operation, and deactivation of the Gwinnett County emergency operations center (EOC).
- **EOC Training.** Our team assisted in the development of a customized EOC training series. This project provided the necessary training for Gwinnett County personnel who work in or support the operations of the Gwinnett County EOC to successfully fulfill their roles upon activation of the EOC.
- **Hazard Mitigation Grant Program (HMGP) Buyout.** Our team conducted an initial evaluation and feasibility assessment of 19 properties in order to determine the viability of acquiring properties for demolition with HMGP funding. Eleven properties were identified, and our team is currently assisting the County with application, administration, and program management for the properties.
- **Mass Care and Sheltering Annex.** Our team assisted Gwinnett County in developing a mass care and sheltering annex to the existing emergency operations plan (EOP). To that end, our team conducted a gap analysis and capabilities assessment as well as facility assessments and facility assessment trainings.
- **Mass Care and Sheltering Annex Training and Exercise.** Our team developed two training courses: one for front line shelter staff and one for facility owners. Our team also conducted a tabletop exercise (TTX) to test the effectiveness of the Mass Care and Sheltering Annex.
- **Multijurisdictional Hazard Mitigation Plan (HMP) Update.** Our team provided the data collection, analysis, and plan development activities necessary to fulfill the local planning requirements. The updated HMP was approved by FEMA upon initial submission with no revisions or changes needed.
- **Volunteer Management Plan.** Our team compiled data that detailed the operations of various volunteer agencies within the county and state. On-site interview assessments were conducted with the various volunteer agencies and an on-site volunteer management forum was also conducted.



CLIENT

City of Houston, Texas

DURATION

- Task 1: August–November 2012
- Task 2: February 2013–March 2015

COST

- Task 1: \$124,438
- Task 2: \$1,129,900

REFERENCE

Ms. Melanie Bartis, UASI and RCPI Program Manager
City of Houston
Mayor's Office of Public Safety and Homeland Security
900 Bagby Street, Second Floor
Houston, Texas 77002
Phone: (832) 393-0917
Fax: (832) 393-0926
melanie.bartis@houstontx.gov

KEY FEATURES

- Multiyear Training and Exercise Plan Development
- Training Development and Delivery
- Exercise Development and Delivery
- HSEEP

PROJECT DESCRIPTION

Tetra Tech personnel assisted the Houston Regional Catastrophic Preparedness Initiative (RCPI) with regional training and exercise activities. The project involved numerous stakeholders and regional agencies within the Houston-Galveston Area Council (H-GAC) region.

Task 1 included the development of the region's multi-year training and exercise plan, which outlined the training and exercises to be conducted over the next three years. Task 2 originally included nine phases, consisting of five tabletop exercises, one full-scale exercise, and the development and delivery of six training sessions that focused on the roles of various emergency support functions related to the 12 regional plans developed to support a coordinated approach to emergency response in the region. The RCPI later added three additional phases, which included a family assistance center game, the development of a field operating guide for mass fatality management, and the development of 12 training videos to socialize the current regional plans and allow for self-paced training of all levels of stakeholders in the region.

The exercises were all based on catastrophic incidents that could occur in the region and included functions of mass fatality management, regional allocation distribution and dispensing-Strategic National Stockpile, multi-agency coordination center, coordination of multiple incident sites, and catastrophic medical operations. Varying scenarios and complexity were involved in the exercises.

The original trainings were classroom-based, which primarily focused on chief elected officials, health and medical (including the medical community and public health), emergency management, logistics and resource management, fire services, search and rescue, law enforcement, and public safety and security as their responsibilities relate to the 12 regional plans.

The project team also developed training videos that include a presentation based on each of the 12 regional plans plus one training video that provides a brief overview of all 12 regional plans. Each individual training video explains the purpose of the plan, describes integration with other regional plans, reviews activation and notification procedures, and provides operational and communications considerations for users of the plan. Animations, audio, graphics, and charts have been incorporated into the training. The training videos have been created to be user-friendly, keeping every potential user in mind.

Through the training and exercises conducted, the Houston RCPI and regional jurisdictions will be more familiar with the regional plans, processes, and resources for responding to emergencies in Southeast Texas. In addition, through the lessons learned in the exercises, the Houston RCPI will be able to recognize planning gaps and take the necessary measures to be better prepared for future threats.

PROPOSED STRATEGY

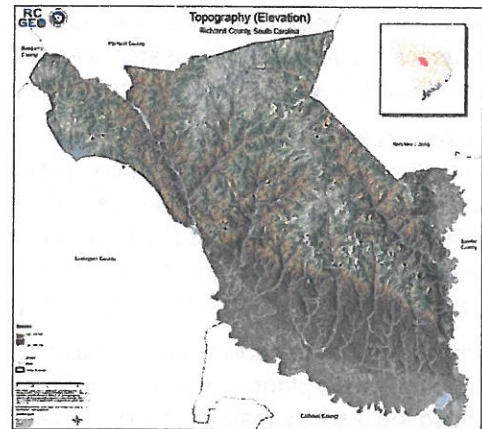
Project Understanding

Richland County (County), with over 400,000 in population¹, is the State of South Carolina's (State) second largest county and seat of the State's capital. Richland County is an important economic and political driver and is vital to the State's health and welfare. Over the last 20 years, Richland County has been impacted by moderate flooding from time to time due to periodic heavy rainfalls. On occasion, these storms have resulted in flooding of homes in certain areas of the County but otherwise have resulted in limited damage to the community.

From October 1–5, 2015, the State of South Carolina was impacted by what many consider a 1,000-year flooding event. The flooding was unprecedented in nature and destroyed significant infrastructure throughout the State, including roads, bridges, dams, water/storm water facilities and buildings – and flooding much of the low-lying areas throughout the State. In addition, significant numbers of homes throughout the State were either flooded or significantly damaged by the storm.

Richland County was by far one of the most heavily impacted areas, with approximately 300 of its 3,300 roads damaged, 150 of which sustained significant major damage. In addition, 19 dams (mostly privately owned) were breached and three County bridges were damaged, including the County Line Road Bridge, which was destroyed by the flooding event. The majority of County-owned facilities also sustained some form of flood-related damage.

Many Richland County residents were also badly affected by the storm. Numerous homes were flooded and many residents were unable to reach businesses that provide food, water, medical care, and other basic needs due to road closures. Over 300 homes with wells used for drinking water were affected when their well heads were breached by the flooding, resulting in serious contamination to their drinking water by coliform or E. coli bacteria. The Gills Creek and Lower Richland Watersheds were most damaged from the historic storm.



During the emergency period, Tetra Tech provided technical support to the Richland County Recovery Team on a number of critical post-disaster activities. This experience prepared our team to assist the County with its long-term recovery efforts.

Although the total costs to the County of the flooding event are still being calculated, current Tetra Tech estimates show Richland County's total countywide costs will be well into the tens of millions of dollars.

To help defray these costs, a presidential disaster declaration was signed by the president on October 5, triggering the approval of Federal Emergency Management Agency Public Assistance (FEMA PA) to Richland County and other affected communities throughout the State of South Carolina, initially at a 75% reimbursement rate. In addition to FEMA PA funding, a number of other federal disaster funding is anticipated in coming months, including:

- FEMA Section 404 Hazard Mitigation Grants
- FEMA Section 406 Hazard Mitigation Grants

¹ U.S. Census, 2014 estimate

Section 3: Proposed Strategy

- FEMA Individual Assistance Grants
- National Resource Conservation Service (NRCS) Grants
- Department of Housing and Urban Development (HUD) Community Development Block Grant-Disaster Recovery (CDBG-DR) Grants
- Endowment/foundation monies

With the response period coming to a close, the County has issued an RFP to retain a consulting engineering and disaster grant management firm to assist the County with its long-term recovery efforts.

Tetra Tech, Inc. (Tetra Tech) is ideally suited to assist Richland County with its long-term recovery efforts for a number of reasons. First, and most importantly, ***during the emergency period, Tetra Tech provided technical support to the Richland County Recovery Team on a number of critical post-disaster activities.*** These services included:

Tetra Tech's close working relationship with County management and ongoing support we continue to provide to the County, allows us to "hit the ground running" in support of the County's recovery efforts

1. **FEMA PA Reimbursement Support:** Tetra Tech is assisting the County, City of Forest Acres, and Richland County School Districts in preparation of their documentation for FEMA reimbursement.
2. **Preparation of Road Repair Procurement Packages:** Tetra Tech is assisting the County's Department of Public Work with preparing quantities and cost estimates to repair over 270 roads and bridges countywide.
3. **Management of Countywide Well Testing and Disinfection Program:** Tetra Tech is providing overarching management of a comprehensive well testing and disinfection program.
4. **Performance of Outstanding Need Assessment:** Tetra Tech completed a needs assessment study to identify any outstanding post-disaster unmet needs of the citizens of Richland County.
5. **Disaster Debris Monitoring:** Tetra Tech monitored the County disaster debris drop-off locations and South Carolina Department of Transportation (SCDOT) debris collection vehicles removing debris from County public rights of way to ensure the County is properly charged for the SCDOT services provided.
6. **FEMA, NRCS, and State Meetings:** Tetra Tech has participated in meetings with FEMA and the State, including the Applicant Briefing, FEMA Kickoff Meeting, and the FEMA Advanced Evaluation Team Meeting, to identify the long-term recovery needs of the County and funding sources available to Richland County to fund the County's long-term recovery needs.
7. **Long-Term Recovery Funding and Strategy Development:** Tetra Tech is assisting the County with identifying long-term disaster funding sources to assist with funding the County's recovery efforts and is developing a strategy to help maximize the amount of funds the County could realize through a comprehensive recovery strategic plan.
8. **County Council Long-Term Recovery Workshop Facilitation:** Tetra Tech has been working with the County to facilitate a County Council workshop to brief the Council on the status of the recovery effort and long-term recovery path forward.

As a result of these comprehensive technical support activities, Tetra Tech is ideally suited to support Richland County in its long-term recovery efforts. With our comprehensive understanding of the County's long-term recovery needs, our close working relationship with most of the County's management staff, and our ongoing support to the County in a variety of areas, Tetra Tech can "hit the ground running" and continue to provide the superior services and customer support the County and its residents have come to expect from our expert staff. With our 13,000 professional staff, including the nation's largest professional staff of post-disaster consultants and engineers, Tetra Tech will be able to continue to meet the diverse post-disaster needs Richland County will require over the coming years in response to FEMA DR-4241.

With our 13,000 employees, including the nation's largest professional staff of post-disaster consultant engineers and grant managers, Tetra Tech will be able to continue to meet the diverse post-disaster needs of Richland County.

Section 3: Proposed Strategy

As we have clearly demonstrated over the 45 days since the flooding ended, we are capable of successfully responding to any of the County's needs, whether this includes developing a long-term recovery funding plan, identifying funding options, assisting with obtaining direct allocations of HUD CDBG-DR funds to fund County prior projects, implementing and program managing home buyout or elevation projects, or other financial or technical needs. We are truly a one-stop shop for any type of post-disaster support activity the County may need.

In addition, we are supported by the team of local engineering and grant management firms (Thomas & Hutton, ICF, 4D Engineering, and DESA) with expertise in all phases of engineering and CDBG and Hazard Mitigation Grant Program (HMGP) grant management that will augment Tetra Tech's extensive internal capabilities.

The pages that follow provide a detailed description of Tetra Tech's approach to each of the seven requested scope of services areas listed in the County's RFP.

I. FEMA PA Advisory Services

COMPREHENSIVE DISASTER PROGRAM MANAGEMENT

Tetra Tech provides a comprehensive end-to-end approach to providing disaster-related services. Tetra Tech utilizes a standardized project management approach for all disaster services projects and tailors this system for each client's specific needs. As referenced above, Tetra Tech has utilized this disaster management approach to identify the unique needs of Richland County and deliver a diverse list of technical support services tailored to the County's needs. This system is designed to be comprehensive to allow the Tetra Tech team to identify the access points for disaster-related documentation and provide the key stakeholders with data relevant to the County's recovery and mitigation programs.

Tetra Tech provides a comprehensive end-to-end approach to providing disaster-related services. We have utilized this disaster management approach to identify the unique needs of Richland County and deliver a diverse list of technical support services tailored to the County's needs.

Tetra Tech has been supporting Richland County with its FEMA Public Assistance documentation for the last 60 days.

To ensure that the disaster assistance work to be performed by Tetra Tech on behalf of the County is performed in a coordinated, seamless, and efficient fashion, it will be critical to develop a coordinated approach to the work involved. Tetra Tech will provide the County with the highest level of productivity and value possible while maximizing the County's reimbursement under the various federal grant post-disaster programs

and supporting all disaster response functions. Effective project management is the cornerstone of a successful project. To ensure continued communication with the County and its project sponsor regarding project expectations, status, and deliverables, the Tetra Tech team utilizes the following project initiation and management activities across all tasked assistance:

- Conduct project kickoff meeting.
- Develop project scope statement.
- Develop project work plan.
- Develop application notebook and formulation.
- Submit weekly project status reports.
- Develop issues report as needed.
- Maintain external and internal relations.

Kickoff Meeting

The Tetra Tech team will begin the project by conducting a half-day kickoff meeting to develop the project work plan and establish communications protocols. The kickoff meeting will include the County key staff (Recovery Manager – Michael King, Procurement Director, County Flood Plain Manager,, Public Works Director, County Administrator, and additional staff as needed), other County disaster stakeholders, and the Tetra Tech team. During the kickoff meeting, the Tetra Tech team will review the project’s goals, objectives, timeline, and deliverables. The outputs of the initiation kickoff meeting will be a stakeholder register and a Tetra

As we have already been working with Richland County for the last 60 days, the FEMA PA kick-off meeting will be simply to serve as a milestone meeting to discuss work completed to date on FEMA PA activities and to plot a path forward for the remaining FEMA PA reimbursement process.

Tech/County coauthored project scope statement that will provide the global framework for the project work plan. .As we have already been working with Richland County for the last 60 days, this meeting will be simply to serve as a milestone meeting to discuss work completed to date on FEMA PA activities and to plot a path forward for the remaining FEMA PA reimbursement process.

Continuous and coordinated communication with Richland County staff is essential for the success of this project. Our project management team understands the importance of effective communication and will seek to establish a communication protocol with the County at the kickoff meeting to develop a proactive working relationship and ensure frequent information exchange.

Areas to be discussed in the kickoff meeting and memorialized in a project work plan will include but not be limited to the following:

- Organizational reporting between Tetra Tech, Richland County staff, State of South Carolina staff and federal agencies
- Timeline of key events (e.g., mobilization of Tetra Tech staff, timing for initial Tetra Tech meetings with the County, completion of applicant Project Worksheet (PW) formulation, etc.)
- Roles and responsibilities and reporting structure of key Tetra Tech, Richland County staff involved in the federal program emergency/disaster assistance efforts
- Contact information for key Tetra Tech, State of South Carolina, and federal staff involved in the recovery effort
- Likely staging of staff operations, including location of day-to-day operations
- Internal communication plan for ensuring all parties are kept informed of progress
- Reporting and information requirements of Tetra Tech’s work efforts and progress to the County
- Templates of critical forms to provide consistency across the theater of operations
- Identification of key FEMA officers to be interfaced under each program (PA and HMGP)
- Process flow and approvals of documents between Tetra Tech, the State, FEMA, and other federal and county agencies
- Gathering information on the County's current critical
- Identifying protocols to track and resolve issues or problems that may be identified
- Information to be included in Tetra Tech’s status reports to the County regarding recent project activity
- Maintenance of the status reports in an easy-to-access location for all parties to review from time to time
- Process for establishing task orders as requested by the County
- Other information as specified by the Richland County

Project Work Plan

As mentioned above, the Tetra Tech team will utilize the accepted project scope statement to develop a project work plan detailing the project method breakdown, sequence, and plan; project milestones, tasks, and deliverables; project timeline and deliverable dates; and responsibilities and organizational and reporting relationships of the Tetra Tech team to the various County agencies and applicants throughout the County in response to a disaster.

The project work plan will be developed from the results of the kickoff meeting, and the scope statement and will take into consideration the requirements of all stakeholders. The project work plan will be submitted to the County within 96 hours of the kickoff meeting for review and approval.

The underlying factor that contributes to the success of all Tetra Tech projects is our dedication to project management principles. Tetra Tech strives to train our staff to manage projects based on established successful principles. This ensures that, although your project is unique, it will be planned and executed in a logical process that we have improved over time. The Tetra Tech team will execute, monitor, and control the project based on the project work plan. In addition, status reports that track the project based on the project work plan will be distributed and discussed regularly.

Application Notebook and Formulation

An integral deliverable in the project work plan is the template of the application notebook for each of the disaster assistance programs the County will be utilizing. An application notebook is developed based on the template for each individual project in which an application for disaster assistance is submitted. Once an application notebook is established, all documentation relevant to an application will be scanned into the notebook and stored is on the SharePoint site. The application notebook typically has the following sections; Correspondence; Canals, Pipelines, Drains & Ditches, Maps; Engineering; Purchasing (Pre-storm, storm, post-storm); Fuel; Equipment (In-house); Estimates (Materials, Damaged Roadways, & Pictures); Employees (Labor Hours); Procurement Processes; Insurance Determination Letter; and Direct Administrative Cost.

Our team has assisted clients with developing Improved and Alternate Projects that have greatly enhanced the long-term value of these damaged assets to our county and local government clients.

Tetra Tech will provide a hardcopy of the Richland County's Application Notebook if required by FEMA. A project file for the client/applicant will contain the original paper copy of everything in the application notebook and will be provided to the County at the conclusion of the project.

Project formulation is the process of documenting damages to facilities, identifying eligible scopes of work, and estimating the costs associated with that scope of work for each eligible project. Project formulation allows the County to consolidate multiple scopes of work into a single project to expedite approval and funding and to facilitate efficient project management. The Tetra Tech team has significant experience formulating applications to maximize the long-term value of the damaged assets, including building, support infrastructure, roads, bridges, and other damaged capital-intensive assets.

In addition to standard project formulation, Tetra Tech will provide guidance, oversight, and consultation to the County with respect to clearly identifying any proposed changes to the pre-disaster design of a facility. Items that may be considered include the following:

- Improved project
- Alternate project
- Applicable codes and standards upgrades

In many cases, repair of an existing asset to its pre-disaster state is either impossible or not practical due to the extent of the damage or changes in regulations that do not permit reconstruction of the asset back to its as-built,

Section 3: Proposed Strategy

pre-disaster state. In such cases, an improved project (meeting new regulatory requirements) or alternate project (that is better suited to meet the community's needs) may be more appropriate and eligible under federal grant guidelines.

Tetra Tech staff will be available to perform site visits to the damaged to capture certain critical information to support the applicants' cost recovery to the extent that the County has not already adequately captured such information for purposes of reimbursement. Information that may be collected may include the following:

- Digital photographs of the damage site
- Address and GPS coordinates of the damaged site
- Brief narrative of the damage observed
- Document assumptions being made with respect to repair or replacement

Progress Report Dashboard

The Tetra Tech team will develop executive-level project status reports providing a dashboard summary of work performed and will be capable of reporting on real-time performance metrics. We believe utilization 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 to keep disaster management projects on track. This is especially important if staff turnover occurs by our federal partners assigned to the County 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. It is vitally important to establish a clear record of approvals and sign-offs because staff changes occur over the duration of the project. The Tetra Tech team will submit the weekly project status reports of this data as well as a snapshot of the executive-level project status report to the County. These work products will be stored in the established SharePoint system.

Executive-level project status reports provide a dashboard summary of work performed and will be capable of reporting on real-time performance metrics.

Issue Management

Although Tetra Tech does not expect any significant issues to arise over the course of the project, if issues or problems are identified, Tetra Tech is committed to providing a written statement of how each issue will be resolved (including timeframe for completion and responsible party for the corrective action) to the County within 48 hours.

We believe this immediate turnaround and corrective action of issues at the time they are identified will result in a well-managed, efficient, and successful project for the County and will maximize the grant dollars available to the County from the various federal disaster-related grant programs, such as reimbursement for the FEMA PA Program and HMGP.

External Agency Relations

Tetra Tech will provide the County with the highest level of value while helping to maximize its reimbursement under the various federal grant post-disaster programs. Our senior staff members have worked with and, in some cases, are former employees of many of the federal funding agencies. With this knowledge and relationships, many of the critical decisions and key issues can be addressed at the highest level. In addition, Tetra Tech's close relationship with FEMA and other federal agencies has resulted in a collaborative nonconfrontational approach. While we may not always agree, we always conduct ourselves in a professional manner and utilize policy established dispute resolution. This collaborative approach results in strong working relationships, frequent discussions, less disputes, and a faster, more efficient recovery.

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Tetra Tech takes a proactive approach to project management and quality control. Elements of Tetra Tech's project management and quality assurance programs include the following:

- Maintaining a consistent project team throughout the duration of the assignment
- Providing weekly project progress reports that outline progress made during the current week, issues that require resolution or client involvement, and project burn rate (staff loading), as well as other requested data
- Utilizing a functional and transparent database management system for posting project documentation for the County and project stakeholders (FEMA, Federal Highway Administration [FHWA], Department of Homeland Security [DHS] Office of Inspector General [OIG], etc.)
- Providing written status report to the County project sponsor
- Conducting regular meetings with the County project sponsor to review reports and discuss pertinent issues to include the daily issues with policy and procedural meeting
- Maintaining, at a minimum, weekly open discussion with federal staff assigned to oversee the County's recovery and mitigation projects
- Responding timely to Requests for Information (RFI) within two business days
- Conducting regular visits or communication by the Tetra Tech principal in charge to gauge client satisfaction and assist the project management team with making required corrections
- Participating in in-house (Tetra Tech) project review meetings conducted by third party reviewers (projects are given a color coded status – green (all good), yellow (potential issues that require resolution), and red (management interaction required); projects coded yellow or red will require frequent reviews
- Using checklist-based processes and procedures to complete and maintain PWs, files, and other documentation

This assignment would be performed by Tetra Tech's Financial Recovery Services (FRS) Practice. The FRS Practice is led by an operations manager whose principal responsibility is to provide project managers the resources they need to successfully meet client expectations. Project managers participate in weekly meetings with the operations manager (conference call or in-person) to discuss their programmatic needs. Achievements, impediments to success, and project deficiencies are discussed in detail and timelines are established to resolve issues. Progress reports will be provided the County weekly (or as mutually agreed).

PROJECT INITIATION, MANAGEMENT, AND CLOSEOUT

With the comprehensive grant management program in place, the Tetra Tech team will can effectively and correctly manage the creation and review of grant applications (PWs) and the implementation, management, completion and closeout of the approved projects identified in the approved grant applications within confines of the specific grant guidance and program regulations.

Review of Contracts and Procurement

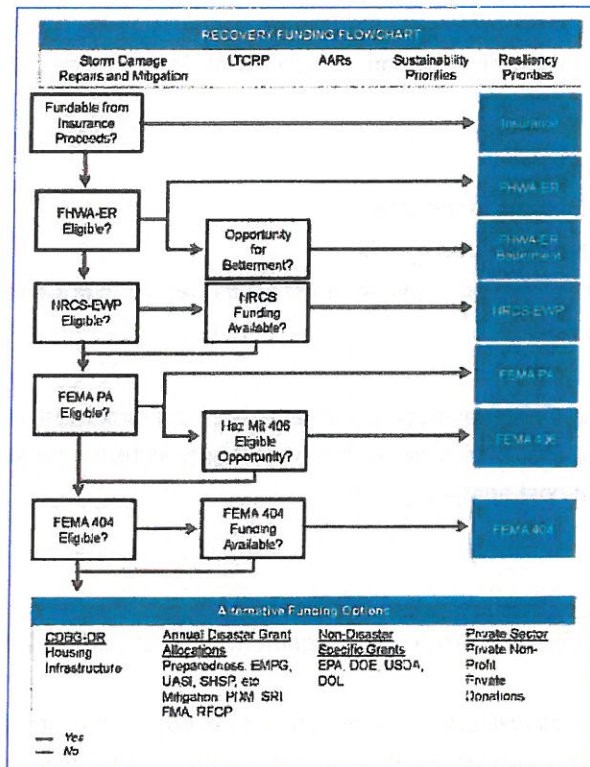
The Tetra Tech team utilizes a procurement checklist contained in Tetra Tech's Public Assistance Services Program Standard Operating Procedures (PA SOPs) in the review process of disaster procurements and contracts. The checklists contain requirements from the Uniform Administrative Requirements for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

The Tetra Tech team will also incorporate South Carolina-specific purchasing checklists and will work with the Richland County's Purchasing Department to identify County-specific requirements that should incorporated in the review process.

Development of PWs

Tetra Tech's PA SOPs address the formulation of PWs and include lessons learned from past projects and regulatory updates. The exhibit below provides an overview of the process of PW formulation described in the PA SOPs:

Exhibit 3-1: PW Formulation Process



In the preparation of the PW, Tetra Tech will identify the project category (A-G), determine if it is a large or small project, and draft the scope of work for the project. The scope of work will show a direct correlation between the cause of the damage and the repair. As an example, for a damaged facility or road the scope will include a description of damage, the type and function of the facility, and its condition prior to the disaster. The facility's location information will include the project's address, detailed directions on how to find the project, and other needed data such as GPS coordinates, the names of cross streets, and exact mileage distances. A complete description of cause of the damage will be documented due to its importance when considering eligibility.

If work has been completed, the PW will distinguish between the work that has been performed and any remaining work that is yet to be completed. Tetra Tech will review the scope of work to ensure it is not incomplete or inaccurate. An incomplete or inaccurate scope of work could impede the funding process and result in a loss of funding in the post-disaster audit. The scope of work will accurately reflect the solution for the damage described in the damage description. Tetra Tech will also address special considerations such as hazard mitigation, insurance, environmental, and historical issues that must be resolved prior to funding.

The supported cost information for labor, materials, and equipment associated with the project will be documented where the project costs may be estimated by unit price, time and materials, or contracts in which labor, equipment, and materials are provided by an outside source.

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If Tetra Tech determines there are questions, issues, or potential ineligible costs during the preparation of the PW, it will be noted and discussed with the County to minimize the delays that can be realized when a PW is disallowed or has multiple RFI from the State or FEMA staff.

Section 406 Mitigation Integration

Section 406 hazard mitigation funding applies only to disaster-damaged structural elements. Each proposed mitigation project must be approved by FEMA and conform to DAP 9526.1 under Section 406 of the Stafford Act. Once approved, it will be incorporated into a FEMA PW. The eligibility requirements for 406 mitigation are as follows:

- Prevents future similar damage
- Applied only to damage elements of the facility
- Cannot increase risk or cause adverse effects
- Consists of mitigation work above and beyond returning the facility to pre-disaster condition
- Does not apply to replacement
- Must be cost effective

Tetra Tech will assist the County with developing justification for betterments that must include an economic analysis that demonstrates the cost associated with a project outweighs the potential higher cost of future losses (e.g., development of a benefit-cost analysis [BCA]).

Review of PWs

For the review of PWs, the Tetra Tech team will implement our PA SOPs that have been developed based on industry standards, best practices, and previous engagements in past disasters. Essential checkpoints in these procedures include:

- The review and analysis of all collected documentation to ensure that costs are reasonable and eligible
- The review and analysis of collected documentation to ensure that the work and costs are adequately documented, are included in the approved scope of work, and are deemed eligible
- The review and analysis of invoices and receipts by checking the dates and amounts to ensure the dates fall within the disaster event range and are reasonable for the purchase
- The review and analysis of contract labor timesheets by checking dates and hours worked per employee to ensure the dates fall within the disaster event range and are recorded as direct labor against the disaster work
- The review and analysis of force account labor timesheets, including special issues like exempt employees, benefits/policies in place, and 40-hour threshold issue; reconciliation of force account labor, equipment, and material data

Tetra Tech will enter the data into RecoveryTrac™ in preparation for the grant application entry and cross-reference the data from the original documentation source to the financial statement of payment.

Tetra Tech will perform due diligence on issues deemed questionable and report those concerns to the County.

RECONSTRUCTION AND GRANT CLOSEOUT

Reconstruction typically begins during the recovery phase as funding is awarded and made available to applicants. In general, reconstruction activities are those services provided by post-applicant funding award to ensure that grant funds are being spent in accordance with the purpose outlined in the scope of the funding

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according to the PW scope of work and that all regulatory clearances have been satisfied. 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.

As the County submits documentation to the State of South Carolina, the closeout packets will be created within Tetra Tech's SharePoint system. Once all documentation is collected, final inspection is complete, and approval to proceed with submittal to FEMA is granted by the State of South Carolina, Tetra Tech will extract all required documentation from SharePoint to generate closeout packets that fully and concisely presents FEMA with all documentation required for grant closeout. The closeout packets will typically include the following:

- Listing and copies of PWs
- Closeout PW versions
- All associated invoices and receipts
- Force account labor and equipment records
- Project status report/proof of completion and scope of work
- Project inspection reports
- Complete Emergency Management Mission Integrated Environment (EMMIE) records detailing FEMA review and approval
- All associated project cost and funding documentation

II. CDBG-DR SUPPORT SERVICES

CDBG-DR SUPPORT SERVICES

The Tetra Tech team has comprehensive experience working with the CDBG and CDBG-DR programs and has a successful record of helping communities across the region bolster recovery efforts and long-term resilience. Tetra Tech has applied our expertise in the CDBG-DR program to help numerous communities navigate complex program requirements, including the development of Action Plans, Consolidated Plans, grant management, application procedures, and compliance review among other services. The Tetra Tech Project Team has assisted our clients in obtaining and managing over \$9 billion of HUD CDBG-DR grant funds over the past decade making us by far the largest group of HUD CDBG-DR experts in the Country.

The Tetra Tech Project Team has assisted our clients in obtaining and managing over \$9 billion of HUD CDBG-DR grant funds over the past decade making us by far the largest group of HUD CDBG-DR experts in the Country.

Tetra Tech offers Richland County the advantage of a full-service, integrated team with both the technical expertise and staff capacity to provide expert guidance in navigating all facets of the CDBG-DR program and its requirements. Below is our team's proposed scope of services to assist Richland County in successfully navigating the CDBG-DR program and maximizing the potential recovery and resilience benefits for your community

Technical Guidance and Compliance Monitoring

Tetra Tech will leverage our considerable experience working with the CDBG-DR program to provide Richland County with ongoing technical guidance and compliance monitoring during the planning and implementation of all CDBG-DR related activities. This will include expert guidance in all of the following areas as they relate to the CDBG-DR program:

- **Funding Technical Assistance:** Provide expert guidance on the most appropriate, allowable, and effective uses of the CDBG-DR funds.

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- **Policies and Procedures:** Conduct a comprehensive review of all existing systems, policies, and procedures for CDBG-DR grant management and compliance. As needed, assist staff with policy and/or program changes, development and updating of Policy and Procedures Manual.
- **Project and Program Eligibility Review:** Verify individual project or program eligibility and conformance with all program requirements. Document all required eligibility requirements for each use of funding, including but not limited to national objectives, duplication of benefit calculations, connection to the federally declared disaster, timely expenditure of funds, prevention of waste fraud and abuse, compliance with Davis Bacon and Section 3 requirements, among others.
- **Program and Project Tracking:** Assist with continuous tracking of all projects and programs utilizing CDBG-DR funds. Develop internal project documentation and tracking procedures that successfully interface with HUD's required Disaster Recovery Grant Reporting (DRGR) system.
- **Quarterly Reporting:** Prepare and submit required quarterly performance reporting to HUD.

Unmet Needs Assessment

Tetra Tech will conduct a comprehensive Unmet Needs Assessment that will allow Richland County to more fully understand the breadth of remaining community needs in order to maximize the benefits of the limited CDBG-DR resources. Tetra Tech will identify and document damages and impacts from the federally declared disaster and assess all existing recovery resources to determine the remaining recovery gap for which CDBG-DR funds can be used. This process will support all subsequent duplication of benefit calculations for individual projects by ensuring that CDBG-DR funding is only used for those projects in which other funding is not available. *Tetra Tech is assisting the County in facilitating a County Council Workshop to develop a Long Term Recovery Plan for the County.* This Plan will identify the County's unmet needs and establish an action plan for funding using HUD CDBG-DR funds to be congressionally appropriated as a result of the 1,000 Flood. *Tetra Tech has also been assisting the County administration position the County for a direct HUD CDBG-DR funding allocation due to the County's status as an Entitlement Community by HUD.*

Tetra Tech is assisting the County in facilitating a County Council Workshop to develop a Long Term Recovery Plan for the County. This Plan will identify the County's unmet needs and establish an Action Plan for funding using HUD CDBG-DR funds to be congressionally appropriated as a result of the 1,000 Flood.

To complete the Unmet Needs Assessment, our team will undertake a multi-pronged process that incorporates a range of both quantitative and qualitative analyses to identify and document unmet needs in the County. At a minimum, Tetra Tech will evaluate three core aspects of recovery: housing, infrastructure, and the economy at the lowest geographic level practicable, with a focus on any unaddressed special needs.

Tetra Tech has also been assisting the County administration position the County for a direct HUD CDBG-DR funding allocation due to the County's status as an Entitlement Community by HUD.

The following sub-tasks will be included in the Unmet Needs Analysis:

- **Community and Stakeholder Engagement:** Conduct three to five meetings with local stakeholders to discuss the impacts from the storm event, unmet needs, impacted populations, actions taken to date, and clarification of long-term needs and resilience opportunities. These open and engaging forum meetings will also help facilitate connectivity with local organizations who may be involved in recovery efforts and/or have access to unique information to support the identification of unmet needs. Additionally, a survey will be distributed to appropriate community stakeholders to identify additional impacts and unmet recovery needs.
- **Evaluation of Existing Plans and Documents:** Perform an evaluation of existing plans, documents, and information sources to help further understand the depth and breadth of issues and unmet needs. Tetra Tech will collect and review a variety of information to determine the location and extent of damages associated with the storm event as well as funding assistance received or anticipated from alternate

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sources. These documents may include but not be limited to FEMA Verified Loss data, FEMA PA recipients, FEMA Individual Assistance recipients, SBA recipients, NFIP data, relevant Hazard Mitigation Plans (HMP), Flood Insurance Studies (FIS), Flood Insurance Rate Maps (FIRM), and any local/municipal post flood reports.

- **Meetings with Government Officials:** Conduct focused meetings with local officials to complement data gathering efforts. These meetings will help provide additional flood damage data and a greater understanding of existing and needed resources for recovery and resilience.

Action Plan Development and Approval

Once the collection of the data/information is complete, our team will prepare the required Action Plan with associated strategies and programs to guide the appropriate expenditure of CDBG-DR funds. Our team will work collaboratively with local points of contact throughout the development of the draft Action Plan to develop an overarching direction for the plan's development and all specific strategies, actions and programs for implementation. The Action Plan will identify impacts, community status, needs, potential duplication of benefits, funding gaps, and impacts to vulnerable populations and low to moderate income (LMI) households. When complete, Tetra Tech will provide the draft Action Plan to the community for review and comment. Once we receive any comments, our team will prepare a final analysis for submission and approval by HUD.

At a minimum, Tetra Tech will conduct the following sub-tasks in preparing the community's Action Plan:

Stakeholder Outreach and Engagement: Conduct ongoing community outreach to inform the public on a variety of topics, including CDBG-DR program information, impacts from the disaster, the availability of recovery resources, potential funding programs and application procedures, among others. Ongoing outreach will help to refine the Unmet Needs Analysis and strengthen the strategies presented in the required Action Plan.

Program Development: Utilizing data gathered for the needs analysis, develop programs for homeowners, businesses, and capital projects that are compliant with CDBG-DR rules and aid in the physical and economic recovery and resilience of the disaster-affected area. These programs would potentially include housing, economic development and infrastructure.

LMI Assessment: Areas of concentrated vulnerable populations/LMI households or persons will be identified and provided additional consideration when identifying impacts and potential projects.

Action Plan Development and Submittal: Prepare and submit to HUD the required Action Plan through the DRGR system.

Public Hearings and Action Plan Comments: Assist with all HUD public notice and comment requirements. Assist with public notices, advertisements, posting of the draft Action Plan and required public hearings. Review and document all public comments on the draft Action Plan and complete any necessary revisions or additions.

Action Plan Amendments: Prepare all necessary Action Plan Amendments and manage the subsequent re-approval process

Task 4: Environmental Reviews

As requested by the County, Tetra Tech will use its vast past experience performing HUD level environmental reviews to support the implementation of programs and projects proposed for CDBG-DR funding. Tetra Tech's environmental reviews may include environmental assessments, categorical exclusions, and historic preservation reviews. Given the fact that the number and complexity of the reviews will be determined by the number of projects, the number of reviews will be assigned by the client, and Tetra Tech will provide a budget for completion of the reviews.

Task 5: Program Management and Implementation

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Following HUD approval of the Action Plan, Tetra Tech will assist the County with the implementation of all CDBG-DR programs and projects. This will include a comprehensive set of services to ensure compliance with all programmatic requirements while also maximizing efficiency and the full recovery benefits of the CDBG-DR funding. Specifically, Tetra Tech will provide the following core services during implementation of the CDBG-DR programs and projects:

Project Meetings: During the first six months after the Action Plan is approved, our team will meet with representatives of Richland County on a weekly basis to review drafts of the programs and policies, address any issue that have been identified by both the client and HUD, and provide technical assistance related to specific proposed projects.

Program and Application Procedures: Develop program and application procedures, materials, and evaluation criteria for consideration of projects. A draft set will be provided for review and then a final draft provided.

Project Prioritization: Assist with the review of submissions for program eligibility and relation to national objective(s) and assess effectiveness for recovery and resilience. Assist with project prioritization and develop implementation strategies for the identified projects.

Compliance Monitoring: Provide ongoing compliance monitoring and guidance during project implementation including but not limited to procurement procedures found in 24 CFR Part 85.36, federal labor standards, fair housing, accessibility requirements, eligible costs, funding drawdown, and construction schedule, among others.

Housing Program Assistance: Assist in ensuring that any housing programs or projects meet the eligibility criteria of 24 CFR Part 570 Subpart C – Eligible Activities. All eligible activities and projects will be monitored and implemented so as to comply with all subsequent federal requirements regarding buyouts, acquisitions, relocation and any necessary rental assistance under fair housing requirements.

Economic Development Program Assistance: Provide assistance on any economic development projects to ensure that they meet all of the requirements of 24 CFR Part 570.209 including job creation, employment information, review of activities for eligibility, ongoing monitoring and records maintenance.

Construction Oversight: Assist with contractor oversight and management, which would begin with assistance in identifying contractors that may meet Section 3 and MBE/WBE requirements. Other services would include guidance on contractor pre-bid meetings, bid reviews, pre-construction meetings, labor compliance, and construction progress tracking.

Funding Strategies: Assist with identification of alternate funding sources for priority projects. Review all federal programs (disaster recovery and general assistance) and identify best practices for leveraging funds to promote resilient sustainable communities.

DRGR Data Management System: Provide assistance to the County with using the DRGR system to set up the Action Plan components, processing expenditures of funds and preparation of the quarterly reports. Our team will meet on a regular basis during the first two quarters of the program implementation to provide hands-on assistance with the system and respond to any issues and/or concerns. Our team will also participate in meetings and teleconferences with US HUD staff.

CDBG-DR Training: Provide a maximum of five educational and technical assistance training programs on recovery and the CDBG-DR programs for local officials.

III. FEMA SECTION 404 AND 406 HAZARD MITIGATION EXPERTISE

Hazard mitigation is an essential tool to break the cycle of damage due to disasters. Tetra Tech is a leader in assisting to 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

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available hazard mitigation opportunities. The Tetra Tech team has the expertise and experience to coordinate Richland's efforts to support the consideration of all mitigation options. Tetra Tech can provide the following services:

- Mitigation Program Administration
- Mitigation Planning and Hazard Assessment
- Section 406 Mitigation Integration
- Hazard Mitigation Assistance (HMA) Program Application and Implementation (HMGP 404, Flood Mitigation Assistance [FMA], and Pre-Disaster Mitigation [PDM])

Hazard Mitigation Planning

Tetra Tech is appraised of evolving industry standards, requirements, and best practices and understands the requirements governing hazard mitigation planning. Over the past 10 years, Tetra Tech has supported a number of clients in developing and updating state and local FEMA-approved HMPs.

More specifically, Tetra Tech uses the FEMA Local Mitigation Plan Review Tool; the Local Mitigation Plan Review Guide, published October 1, 2011; and the Local Mitigation Action Tool for State and local Use, Section 1: Regulation Checklist to assess HMPs for compliance with FEMA requirements.

Tetra Tech designs and revises HMPs in accordance with the Disaster Mitigation Act of 2000 (also known as DMA2K); FEMA's How To Guide, "Understanding Community Risks – Identify Hazards, and Determining Risk" (FEMA 386-2); 44 CFR Part 201, Mitigation Planning; Interim Final Rule (IFR) (The Rule), published, February 26, 2002; Executive Order 11988, Floodplain Management; Executive Order 11990, Protection of Wetland; and the state and federal statutory and legal regulations that may affect authorities for hazard mitigation planning. Tetra Tech makes sure that state and local HMPs follow grant standards outlined in the PDM Program and FMA Program. In addition, this methodology for hazard mitigation planning is designed to comply with the Emergency Management Accreditation Program Planning Standards (EMAP).

Section 406 Mitigation Integration

Tetra Tech will provide technical assistance to the County in regard to Section 406 funding opportunities through the FEMA PA Program.

Section 406 hazard mitigation funding applies only to disaster-damaged structural elements. Each proposed mitigation project must be approved by FEMA and conform to DAP 9526.1 under Section 406 of the Stafford Act. The eligibility requirements are as follows:

- Prevents future similar damage
- Applied only to damage elements of the facility
- Cannot increase risk or cause adverse effects
- Consists of mitigation work above and beyond returning the facility to pre-disaster condition
- Does not apply to replacement
- Must be cost effective

Tetra Tech will assist the County with developing justification for betterments that must include an economic analysis that demonstrates the cost associated with a project outweighs the potential higher cost of future losses (e.g., development of a benefit cost analysis [BCA]).

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Tetra Tech will assist the County in identifying potential mitigation projects that may qualify for Section 406 hazard mitigation funding. As an example, our team has reviewed and approved over 300 PWs for the States of South Dakota and Vermont that included additional Section 406 hazard mitigation funding to improve highway or road facilities.

HMA Program Application and Implementation

FEMA provides mitigation funding through its HMA programs with the intent of bolstering infrastructure and preventing future losses. HMA opportunities include post-disaster mitigation program like the Section 404 HMGP that provides mitigation grants to communities affected by disasters. In addition to Section 404 HMGP grants, FEMA also offers competitive non-disaster annual reoccurring Pre-Disaster and FMA funding assistance through HMA programs where the mitigation opportunities are described in the 2013 Unified Hazard Mitigation Guidance. These non-disaster grants offer funding for a wide variety of cost effective mitigation funding opportunities to state and local governments. At the County's request, the Tetra Tech team will assist with identifying future mitigation grant opportunities to supplement the disaster-related mitigation programs. Projects that are typically reimbursable under the HMA programs include acquisition/demolition programs, home elevations, and minor flood repair projects. Tetra Tech is prepared to assist the County with HMA services, including preparing applications, conducting outreach to potential property owners, developing application scopes, assessing cost-effectiveness (BCA), regulatory clearances, grant implementation, and audit and closeout services. Currently, Tetra Tech is administering the Boulder County's HMGP Program in response to their flooding event of 2013. Our team also serves as the lead FMA contractor for Galveston County, Texas, providing residential elevations following Hurricane Ike and is administering the FMA program for the City of Virginia Beach, Virginia.

Tetra Tech has been assisting the County with a Flood Mitigation Assessment project which will be instrumental in identifying projects for 404 funding.

IV. FINANCIAL AND GRANT MANAGEMENT SUPPORT

Client Advocacy

Following catastrophic disaster that truly alters the fabric of a community—such as Tropical Storm Irene in Vermont in 2011; the tornado in Joplin, Missouri in 2011; the Iowa floods in 2008; or Hurricane Katrina along the Gulf Coast in 2005—County and local leaders will be facing many critical challenges that will shape their community for years to come.

The solutions to these challenges require a great deal of planning, foresight, and stakeholder input and analysis to understand the best interest of the community and the people affected by the disaster. In addition, coordination with the various agencies that provide federal disaster funding is a key element to the County's recovery.

As expert disaster recovery staff supporting the County, Tetra Tech will provide the County with the highest level of value while helping to maximize its reimbursement under the various federal grant post-disaster programs. Our senior staff members have worked with and, in some cases, are former employees of many of the federal funding agencies. With this knowledge and relationships, many of the critical decisions and key issues can be addressed at the highest level. In addition, Tetra Tech's close relationship with FEMA and other federal agencies has resulted in a collaborative, nonconfrontational approach. While we may not always agree, we always conduct ourselves in a professional manner and utilize policy established dispute resolution. This collaborative approach results in strong working relationships, frequent discussions, less disputes, and a faster, more efficient recovery.

Program and Procedure Updates

Tetra Tech understands the criticality of providing accurate, timely, and useful information to the County on policy and procedural issues. As a basis for these communications, Tetra Tech's will conduct daily briefings during the startup of the engagement and transition to biweekly meetings throughout the period of performance. If there is an immediate need to address a policy or procedural issue, the Tetra Tech team will contact the County immediately. To capture and memorialize issues as they arise, the Tetra Tech team will also publish reports on any issues identified on the project's SharePoint site, which will be established by Tetra Tech for the County's response.

Tetra Tech is familiar with recent changes to FEMA PA and FHWA-ER Guidance, including the Stafford Act revisions May 2012, MAP-21, Unified Hazard Mitigation Program Guidance, Sandy Recovery Improvement Act, PA Alternate Procedures Program, and various 9500 series guidance documents.

It is important that the County executive staff understands the current operational situation of the County's projects. Tetra Tech will provide status updates on PA and hazard mitigation activities undertaken, planned activities, successes, and alternative or corrective programmatic actions. Tetra Tech will also provide real-time data to the County regarding the status of progress toward FEMA PA reimbursement and the status of other disaster grant activities.

Arming the officials with such information and maintaining open lines of communications provides ample opportunity to identify trends in recovery operations and take appropriate actions if necessary to maximize the County's recovery and mitigation programs.

Preparing for Maximum Reimbursement

To facilitate the request for reimbursement process and reduce the reconciliation backlog, it is important for supporting documentation to be collected, maintained, and updated throughout the duration of the recovery. Constant monitoring of grant applications, project progress, requests for reimbursement, and reimbursement received inherently reduces the backlog and aids the speed of recovery. In addition, it eases the eventual grant closeout and reduces the risk of future deobligations.

There are many methods for the Richland County to manage the request for reimbursement process associated with state and local grant programs, including the following:

- Staffing programs with appropriate levels of staff with the proper skill sets and competency
- Staff training programs specific to the request for reimbursement process
- Effective program and project management (including regular progress reporting)
- Establishing information accessibility policies to maximize real-time tracking and minimize duplication of effort
- Controls including dashboards, checklists, timelines, and accurate points of contact for support
- Leveraging RecoveryTrac™

The Tetra Tech team has an extensive history of implementing, reconciling, and monitoring the request for reimbursement process internally and on behalf of our state and local clients spanning the FEMA PA, FEMA HMA, and HUD CDBG-DR programs, among others. While many agencies and subgrantees still wait for reimbursement from previous disasters (such as Hurricane Irene in 2012), our goal is to leverage the spirit of the Sandy Recovery Improvement Act and expedite the economic recovery of the region through strategies such as the state closeout and audit program, PW appeals process, HMGP application review, and CDBG project approval process.

Tetra Tech staff has worked with FEMA, NRCS, FHWA USACE, and HUD as an advocate to our clients to achieve positive outcomes following disasters.

Appeals Support

As a recipient of FEMA PA funds, the County can expect that funding eligibility differences will arise between FEMA or FHWA and the County. While Tetra Tech will work with FEMA or FHWA and the County to proactively resolve funding challenges through our collaborative approach, applicants have the legal right to appeal decisions and judgments made by the federal government or the County if resolution cannot be reached. Part of this legal process requires that applicants (the Richland County) submit appeals to the Grantee (State of South Carolina) for review and subsequent submission to the FEMA regional director within prescribed timeframes. Tetra Tech will implement a systematic approach by which appeals are developed and submitted. In the event that a first appeal to the FEMA regional director is unsuccessful, Tetra Tech will assist the County with drafting the second appeal for submission to the national director of recovery.

FEMA has initiated a pilot that allows PA grant applicants an added option of arbitration by an independent review panel to resolve disagreements related to PA projects for disaster-related emergency protective measures; infrastructure repair and replacement work; or debris removal. This Dispute Resolution Pilot Program is a result of the Sandy Recovery Improvement Act (SRIA) of 2013. The added option allows applicants to file for arbitration, which will be conducted by an independent review panel, instead of pursuing a second appeal under the FEMA PA Program. This resolution option will be available for emergency protective measures, infrastructure repair and replacement projects, or debris removal when the disputed amount greater than \$1,000,000. As this arbitration option is a pilot program, Tetra Tech will monitor its implementation to provide Richland County advice on its effectiveness and be prepared to champion projects in the process.

V. INFORMATION TECHNOLOGY, DATA MANAGEMENT, AND REPORTING

WEEKLY REPORTING, COMMUNICATIONS, AND MEETINGS

Tetra Tech will efficiently communicate with the County by providing weekly status reports outlining updates to the projects assigned to the Tetra Tech Team. This report will be presented in a PDF format and will provide a financial overview, tracking for PWs, DACs, status of tasks, and staffing information.

Additionally, the Tetra Tech management team will be available to meet weekly to review the weekly status report and report on work completed in the prior week, work scheduled for the coming week, timeline for future key milestones, and overall progress on the recovery effort. The weekly meeting will also be used to receive an operational briefing from the County Administrator, Recovery Liaison or their deputy to provide an accurate understanding of current needs, recovery effort status, and any changes in the project objectives.

The weekly report will also lay out an operational plan for the Tetra Tech Team for the coming week and will be prepared in consultation with DHS&EM. In addition, Tetra Tech staff is available to attend, facilitate, and/or report on recovery-related meetings at the DHS&EM's request.

Tetra Tech will communicate progress to the County through weekly status reports and meetings. The weekly report will also lay out an operational plan for the Tetra Tech Team for the coming week. The operational plan will be prepared in consultation with the County.

GRANT SUBMITTAL AND TRACKING SYSTEM

Perhaps the most critical component of the County's grant application process will be project reporting and providing the County with visibility to the process. 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

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administration and case management. The Tetra Tech team would work with additional applicable agencies to coordinate any additional needs that may enhance their response to Richland County's data needs.

As a means of warehousing files, Tetra Tech utilizes RecoveryTrac™ as a secure, password-protected, online file-sharing platform to store electronic copies of the monthly progress reports, project work plan, application notebooks, files, and other project-related information. In this way, the County will have access to project-related information in one easy-to-access location without having to expend 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. By implementing the RecoveryTrac™ system, the County would benefit in the following ways:

- **Efficiency.** By instituting an electronic document management system that associates directly with its document filing system, regulatory and auditing agencies can efficiently search and review electronic project files.
- **Enhanced Reporting.** Customizable data and document management provides for enhanced reporting capabilities. Because the County will have input in the design of RecoveryTrac™ reports, Tetra Tech can customize the reports to meet its specific needs.
- **Exporting Capabilities.** The RecoveryTrac™ system was designed with the knowledge and understanding that data and information being managed by the County must be exportable to a format that allows for importation into other applications such as the EMMIE/NEMIS, etc.
- **Real-Time Information.** RecoveryTrac™ is a web-based application that will provide the County with a real-time portal to the Tetra Tech team's project work. Through a secure login, the County will be able to log in and review project work.

Exhibit 3-3: Worksheet Database

MONITORING DAC

RecoveryTrac™ will allow Richland County to monitor the amount and ratio of Direct Administrative Costs (DAC) by individual project. All DAC claimed against projects and project costs are tracked in RecoveryTrac™. When utilized from the inception of a project, DAC can be monitored in real-time as administrative costs are associated to a project. RecoveryTrac™ may also be utilized to import previously

EMMIE PWIR	Project	TI Project #	Total TI DAC	Current Obligation	DAC % Obligation
0286	Emergency Protective Measures-SI Main Corridor Breach Repair	0002.0006	\$4,010.37	\$589,816.33	0.68%
0655	Stream Gauge	0002.0007	\$716.21	\$43,545.11	1.64%
0782	Boulder County Berms	0002.0001	\$234.19	\$69,306.57	0.34%
0820	Gravel Road Repair	0001.0002	\$12,908.25	\$354,610.84	3.66%
0821	Emergency Protective Measures-Lyons Fire	0004.0004	\$1,639.11	\$239,522.30	0.61%
0901	Winters/Permanent Road Repairs	0001.0003	\$20,380.06	\$4,364,915.83	0.47%
0967	Longmont Dam Road	0001.0001	\$21,063.72	\$5,168,256.40	0.41%
0960	Debris Removal	0009.0003	\$14,806.51	\$4,500,572.66	0.33%
1013	Emergency Protective Measures-Sheriff's DEM	0004.0005	\$32,801.58	\$1,650,234.16	1.93%
1012	Facility Replacement/Repair (Arnie U White)	0002.0002	\$5,274.91	\$250,190.00	2.11%

Exhibit 3-4: Direct Administrative Cost Report

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expended DAC and monitor any additional DAC as it is expended.

The Tetra Tech team has the experience to implement a host of technologies during a response to a disaster, including but not limited to ARCGIS, HAZUS, U.S. Army Corps of Engineers (USACE) Debris Model, online grant management software (RecoveryTrac™ and MB3 Online's SCRecoveryGrants.org.org), EMMIE, NEMIS, automated debris management systems (ADMS), WebEOC®, resource tracking software, and the Microsoft Office Suite.

PROJECT TRACKING

Tetra Tech will utilize three management information systems to monitor the progress of projects in the field:

RecoveryTrac™ and RecoveryTrac™ Geospatial: Tetra Tech's proprietary program will allow the Tetra Tech team to track the progress of projects. Activities performed by the Tetra Tech team will be documented in RecoveryTrac™ as a means of tracking staff deployed in the field. RecoveryTrac™ is a state-of-the-art technology used reduce the tremendous volume of paperwork associated with tracking applications for disaster assistance. Tetra Tech's RecoveryTrac™ project management tools provide real-time project metrics that allow local and County governments to properly manage their cost and project schedule while maximizing efficiencies. Tetra Tech's

RecoveryTrac™ has increased efficiency and improved the management of efforts for multiple clients, including the City of Sioux Falls, South Dakota (Ice Storm 2013); New Jersey Department of Environmental Protection – Marine Debris Removal Program (Hurricane Sandy); City of Newark, New Jersey (Hurricane Sandy), Borough of Sayreville, New Jersey (Hurricane Sandy); St. John the Baptist Parish, Louisiana (Hurricane Isaac); and the City of Houston, Texas (Texas Drought and Wildfires).

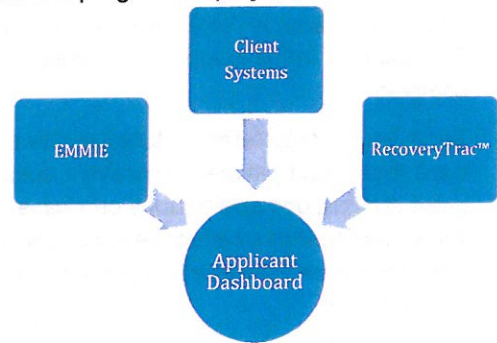


Exhibit 3-5: Systems Integration

CONTRACTOR OVERSIGHT AND FINANCIAL RECONCILIATION

Tetra Tech has extensive experience with managing and reconciling contractor invoices. Our team has successfully reconciled and managed reimbursement of over \$3 billion of costs for declared disasters. Based on this experience, our team has developed RecoveryTrac™ database as well as SOPs for contractor invoice reconciliation. At the outset of the project, Tetra Tech will work with the County's contractors to demonstrate RecoveryTrac™ and provide access and reports that the contractors can utilize for invoicing and subcontractor reconciliation.

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Tetra Tech's RecoveryTrac™ database performs a systematic comparison of the RecoveryTrac™ database records versus the contractor's invoice supporting documentation. RecoveryTrac™ generates a report that shows where the two data sets agree, disagree, or have missing information.

Invoices are submitted and reconciled to correct any deficiencies before being recommended for approval. This typically requires significant communication between Tetra Tech and contractor staff to resolve discrepancies. After all discrepancies are resolved, Tetra Tech sends a follow-up letter to the County recommending the amount of retainage to be released. Finally, a Tetra Tech invoicing specialist audits the materials in the invoice file to ensure that the file is complete.

Tetra Tech's proprietary database allows the County to track the impact payment approvals made on obligated grant applications and agency purchase orders. This allows the agency to effectively plan for purchase order adjustments and the need to generate adjustment applications.

Furthermore, the RecoveryTrac™ system combined with contractor reports enable the contractor to submit cleaner invoices, thus reducing reconciliation time and ultimately resulting in more rapid payment of the contractor and local subcontractors with less retainage required.

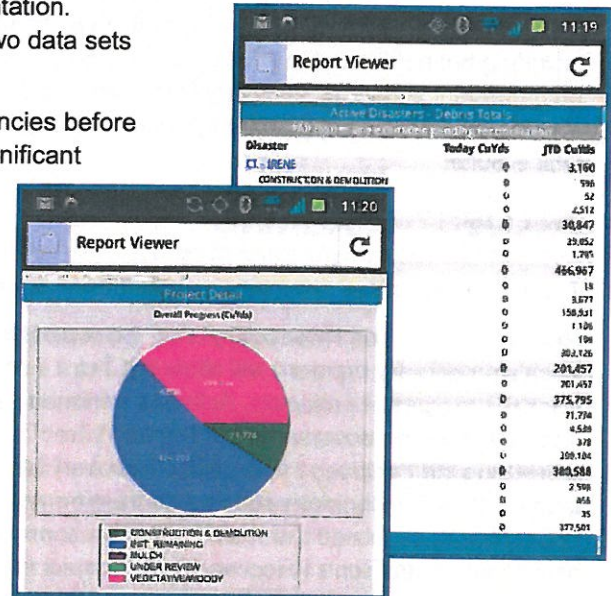


Exhibit 3-6: RecoveryTrac™ Report Viewer

COST CENTER TRACKING

Since the Tetra Tech time and expenses system is fully integrated at every level of the PA process and allows for a complete simultaneous automated documentation tool, the use of the software greatly limits the need for additional work for projects already developed in the system. For projects initially developed outside of our system and imported in at the processing, closeout, or appeal stage, our software is an ideal way to efficiently and effectively sort and track specific time entry line items.

These efficiencies are significant steps in reducing the transactional costs and friction that have become customary in the processing of disaster grants. Additional issues relating to DAC and deobligations by FEMA are sure to arise in the near future given the unsettled and sparse nature of DAC policy. However, because our software allows time entries within a relational database that utilizes FEMA and the State of South Carolina financial system data, it allows the first and second steps in the FEMA appeals process to go much more smoothly, as each individual time entry is linked to each invoice that is linked to each PW. ***Our joint focus on the "big picture" for Richland County is a key differentiator of the services that we will provide to the County. This commitment to cost containment and efficiency clearly defines the way that Tetra Tech does business.***

FEMA will reimburse HMA project specific costs as part of individual grant applications at the federal share. These costs cannot fall under the administrative functions; however, costs such as buyout transaction management, construction management, etc. may be built into project budgets. To track these expenses the Tetra Tech team would utilize the timekeeping SOPs identified in the previous discussion on the PA Program. Under the HUD CDBG-DR Grant Program, costs must be similarly tracked to either program administration or to direct program costs. The Tetra Tech team utilizes a CDBG-DR specific SOP to track all reimbursable time spent on these projects.

MANAGEMENT INFORMATION SYSTEMS

Tetra Tech is committed to leveraging technology to increase the efficiency and accuracy of disaster programs. Tetra Tech believes the data captured and created through the project is the property of the County and all authorized County personnel should have access to the data and its reporting mechanisms as allowed by the State of South Carolina and federal law. Upon completion of a task order, the County will retain access to all data in accordance with public records retention regulation. Tetra Tech continually evaluates the use of technology in the project and report on technology leveraging opportunities.

Tetra Tech believes that the data captured and created through the project is the property of the County.

As technology has evolved, the Tetra Tech team's approach to disaster recovery has, too. The Tetra Tech team has leveraged emerging technologies and the use of Tetra Tech proprietary geospatial GIS software into all four phases (preparedness, mitigation, response, and recovery) of emergency management. Pre-event mapping such as Digital Flood Insurance Rate Map (DFIRM), electronic grant, project and payment management, and post-event automated debris tracking are a small sample of the technological focus of the management information systems that the Tetra Tech team will bring to bear on the State's post-disaster management projects. To this end, Tetra Tech has developed standardized reporting tools and progress report dashboards and will customize the tools as necessary to identify and track key data against which program objectives are to be measured and under which we will build the highest level of transparency given the large amount of public dollars being expended.

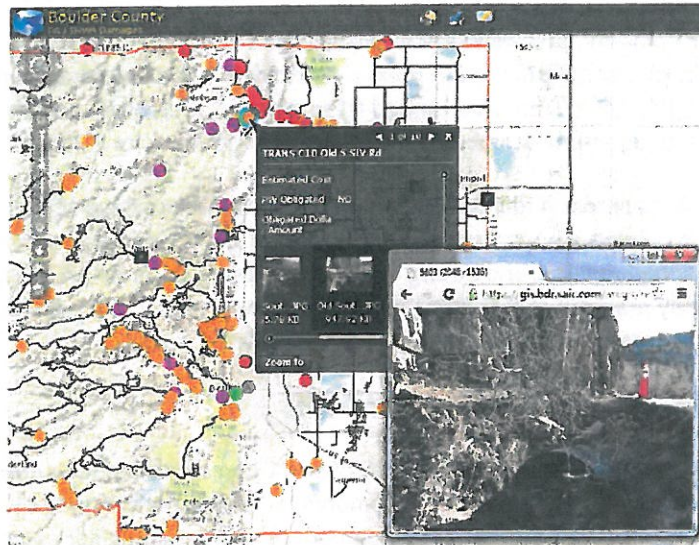


Exhibit 3-7: RecoveryTrac™ Illustrates Damage Sites, Documents, and Photographs in a Geospatial Environment

VI. DISASTER RECOVERY ENGINEERING-RELATED SERVICES SUPPORT

Tetra Tech is a leading provider of consulting, engineering, program management, construction management, design, and technical services worldwide. We serve the full project life cycle, which increases a community's resilience to major storm events and economic downturns. The specific areas of expertise related to community resilience for Tetra Tech include water resources, infrastructure, environment, resource management, energy, economic development, and emergency management.

Engineering News Record has ranked Tetra Tech among the top engineering firms in the nation, as indicated by the latest rankings at the right. Tetra Tech was ranked #1 in water resources and water management, such as stormwater management, for 13 consecutive years.

Our approach to implementing the projects anticipated under this contract is built on a sound system that includes checks and balances, accountability, and strong communication. We will follow an organized technical approach process that includes key features of feedback, measurement, and accountability. Although the specific approach to each task will vary, a generalized technical approach is outlined below.



ENGINEERING STUDIES

Over the course of a contract, clients often authorize their consultants to evaluate a variety of concepts. Such concepts might involve implementing operational changes at a treatment facility to improve treatment/energy efficiency renewal and replacement of aging pump stations and pipelines. In such assignments, it is important to clearly identify the scope of assignment as well as the precision needed for decision-making. For example, very precise performance models and cost estimates may be necessary when evaluating infrastructure improvements that must yield short "pay-back" periods. In contrast, less rigorous analyses may be necessary to support rehabilitation or replacement of an aging infrastructure with known historical maintenance issues.

Because of the uncertainties that currently exist with regard to the types of studies that may be authorized under this contract, it is difficult to develop a definitive project approach to stand-alone assignments involving studies or reports. Despite these uncertainties, the general approach to the work normally includes the following:

- Kickoff meeting
- Data gathering and analysis
- Development and refinement of alternatives
- Engineering calculations and computer models as appropriate
- Calibration of models as appropriate
- Capital, operating, and present worth cost analyses
- Preparation of draft report
- Review meetings
- Preparation of final report

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- Presentations as appropriate

PRELIMINARY ENGINEERING AND PROJECT EVALUATION

In general, the preliminary engineering phase will involve gathering information; evaluating and selecting alternatives; and determining the size, type, and configuration of the proposed facilities as well as the cost for such facilities.

Preliminary Engineering

The preliminary engineering phase identifies the criteria that will be utilized for final design and will typically include:

- Data collection
- Construction methods and material evaluation
- Alternative route analysis
- Report preparation with recommended alternative
- Survey and site issues

The preliminary engineering report will summarize the findings, conclusions, and recommendations in a concise format and will be initially submitted to the County as a draft document for review and comment. Subsequently, Tetra Tech will meet with the County to discuss the initial submittal, revise the document as necessary, and resubmit the report for approval prior to the development of the final design and construction documents. Throughout the development of this document, Tetra Tech will work with County staff in order to encourage feedback so that all comments and concerns are addressed within the initial deliverable.

Final Design Phase

The final design phase will result in bid documents, engineering drawings, and specifications, which will be reviewed by the County's staff at various milestones prior to bidding or release for permitting. In addition, a cost estimate will accompany the documents at all review milestones. To ensure proper design of the facilities, the project team will discuss and receive approval from the County for any substantial changes from the concepts outlined in the preliminary engineering report.

Immediately following authorization to proceed with the final design, the project team will initiate necessary field surveying services and geotechnical investigations. As part of this phase, Tetra Tech will provide the County with monthly status reports to keep the County abreast of the project at all times. The design of all improvements will be in accordance with the County's standards and will utilize material and equipment as approved by the County. Final design activities will proceed to the 30-, 60-, 90- and 100-percent completion levels, at which time the plans and specifications will be submitted for review by the County. A meeting will be held following the County's review of each of these submittals to discuss concerns and/or comments that the County may have regarding these submittals.

Permitting/Regulatory Phase

Tetra Tech's project approach to permitting is simple and follows the same logic as the overall project delivery concept. This simple philosophy is centered on the fact that the regulatory agencies should be involved with the project from the very beginning. Suggested involvement usually includes pre-design and pre-permitting meetings that minimize project delays through effective, straight-forward communication. In addition to having thorough communication with regulatory agency staff, Tetra Tech employs a methodical approach to permit development

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and filing. All sections of the permit applications are often verified through the client and the representative agency prior to filing. Tetra Tech also reviews the magnitude of each project, and in some instances, small projects can be handled as a repair and replacement (R&R) project and the regulatory agency can be simply notified of the repair or replacement.

Surveying and Mapping

Our surveying and mapping team has provided wide-ranging and specialized services to many public, private, and industrial clients. We understand the importance of providing accurate and detailed surveys to assist the County in acquisition, design, and/or engineering. Tetra Tech understands that the scope of services related to surveying and mapping may include:

- Right-of-way surveys that include the establishment of boundaries, monumentation of right-of-way lines, and locating encroachments, as well as proving final right-of-way maps
- Horizontal and vertical geodetic controls surveys
- Canal and levee cross sections and profiles
- Boundary surveys including extensive retracement of original sectionalized land systems boundaries
- Mean high water line surveys
- Ordinary high water surveys
- Topographic surveys
- Specific purpose surveys
- Hydrographic surveys
- Construction layout serves, records or as-built surveys and quantity surveys
- Field reconnaissance
- General surveying (preparation of legal descriptions, court testimony and surveyor's report)
- Professional surveying and mapping review
- Engineering economics studies
- Planning program development and budgeting
- Expert witness and independent peer review
- Public notification, public meetings and presentations to Governing Board
- Project management and quality assurance/control

At the beginning of each Task Work Authorization (TWA), our team will gain an understanding of the project goals, budget, and schedule and then formulate the right team of key personnel while developing a sound technical approach.

Hydraulics and Hydrology Modeling

Tetra Tech has a rich history of modeling expertise using a variety of hydraulic and water quality models including HEC-RAS, FLO-2D, and other 1- and 2-dimensional hydraulic models. Our engineers and scientists use geospatial data, topographic surveys, stream gage analysis, historical information, and field observations to configure model components. We are adept at implementing the appropriate analysis based on the data available, the conditions present, and the information desired. Our modelers have design experience, ensuring that studied alternatives are feasible and effective solutions. Tetra Tech has performed hydraulic modeling across the country to facilitate floodplain management, investigate sediment transport, and help communities become more resilient. We are currently performing HEC-RAS analysis in New York as part of the NYRCR program, which includes streams and rivers in Ulster and Delaware Counties, where we are working hand-in-hand with local communities to evaluate the effects of project alternatives and communicate these results back to the communities to facilitate prioritization of projects.

Geographic Information Systems

Tetra Tech has several teams of dedicated geographic information systems (GIS) staff who are knowledgeable in GIS programming, creating user interfaces or connection systems (ArcIMS or ArcGIS Server), customizing databases and maps, and integrating 3rd party GIS plugins (such as the HAZUS database or Maximo Spatial). The level of GIS integration can be scaled to the County's immediate needs and long-term vision.

Bidding and Award

In accordance with OMB Super Circular 2CFR200, Tetra Tech will provide bidding documents, drawings, and specifications in the appropriate electronic format for use by the County. During the bidding process, the project team can support the County by attending the pre-bid conference and respond in writing to all bidders' questions in appropriate addenda to the County. Once the bids are received, the project team can tabulate the bids, review the bidders' qualifications, and recommend award of the contract, in writing, to the County. Prior to the construction phase, a reproducible conformed set of engineering drawings and specifications will be prepared for use during construction.

Construction Services

Upon award of any construction contract, Tetra Tech will attend a pre-construction conference with the selected contractor, subcontractors, and the County. Subsequently, Tetra Tech will attend progress meetings, perform site inspections, and provide interpretation or clarification of the design documents when requested, respond to requests for additional information (RFIs), and prepare change orders required for minor modifications. In addition, Tetra Tech will review shop drawings, pay requests, and other submittals for general conformance with the specifications and drawings and conduct substantial and final completion inspections to determine if the work has been completed in conformance with the contract documents. At completion, Tetra Tech will prepare and submit certificates to the appropriate regulatory agencies. Upon completion of all work, the project team will prepare record drawings from the contractor's survey and markups in both reproducible and electronic formats for the County's use.

Public Relations: Community Meetings and Public Notifications

Construction of infrastructure adjacent to existing homes and business can have a significant impact due to access restrictions, noise, and dust. Our approach during design is to consider these impacts and address these concerns to the maximum extent practical. Our team has extensive experience working with the public on complex utilities projects in both residential neighborhoods and along urban commercial corridors. The County has a specific approach and criteria for informing property owners and residents of the planned construction of improvements. The Tetra Tech team will assist the County in drafting notification flyers to the County's criteria. Typically, the County prints and distributes the flyers to the potentially affected property owners. When preparing presentations for the community meetings, our approach is to clearly present the need for the project so the property owners fully understand the benefits to the community.

Ability to Create Innovative Approaches

We are an industry leader in the development of innovative solutions to meet our clients' needs, from the identification, modeling, and permitting water sources through construction administration, inspection, and certification. We are committed to evaluating each stage of the project to determine to best possible solution to meet the County's needs.

VII. DISASTER DEBRIS MONITORING SERVICES

Tetra Tech implements a best practices approach to disaster debris monitoring when planning for and responding to debris-generating events. Tetra Tech has carefully reviewed the scope of work requested in the County's RFP and can assure the County that we have the extensive experience, understanding, and knowledge of the County to successfully perform all aspects of the scope of work. We are aware of the magnitude and importance of organizing and directing the necessary resources to define and carry out the tasks associated with the scope of work, and we are committed to providing a consistent and coordinated team to perform these services upon activation. Our project team will continue to dedicate themselves to the County's needs throughout the year, not just during times of activation.

DAMAGE ASSESSMENT/DEBRIS ESTIMATES

Our approach to damage assessment begins with the FEMA 329 guidelines and the Tetra Tech project manager coordinating with the end users' debris manager or other assigned individuals to identify the specific damage assessment services requested (for example, debris-related, structures, and utilities).

Debris Estimation

A key element of the damage assessment process is determining the quantities of debris created by the event throughout the affected areas. To adequately plan and mobilize for a disaster debris recovery effort, it is critical to understand the potential quantities of debris that may be generated. Tetra Tech has found that rather than relying on a single approach, a combination of debris-estimating methodologies generally produces a more accurate estimate. The following debris-estimating methodologies will be used by Tetra Tech:

- **U.S. Army Corps of Engineers (USACE) Debris-Estimating Model.** This is a widely used model that takes into account factors such as hurricane category, population base, amount of vegetative cover, etc.
- **Drive-By Parcel Survey.** This survey estimates the average quantity of debris per parcel and multiplies the debris per parcel figure by the total number of parcels (residential, commercial, or both) in the applicable jurisdiction.
- **Flyover.** The flyover is used to determine whether the debris field is isolated in certain areas or spread throughout the entire jurisdiction.
- **Personal Estimates.** Tetra Tech staff and debris contractors who are experienced in disaster recovery efforts will perform personal estimates for the County.

Each of these methodologies will be considered when developing an estimated debris volume for the County.

Time and Materials

The 70-hour push period begins immediately following an event. Tetra Tech will work with the debris removal contractors, in coordination with County crews, to first clear the blocked roadways for emergency vehicle passage to critical facilities. Tetra Tech is prepared to assist during the push period by providing the following services:

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

ON-BOARDING/HIRING APPROACH

Immediately following the impact of a known event, Tetra Tech will establish Human Resources (HR) hiring centers in the field throughout the region in the affected areas. The hiring center provides efficient hiring and training processes that meet the stringent Tetra Tech field operation requirements and any specific requirements of our clients. The hiring center is designed to be quickly mobilized, transported, and set up to allow near immediate response for field staffing needs. The hiring center is typically staffed by three trained HR representatives and can process hiring of hundreds of staff per day. The hiring center can be quickly scaled to meet the most demanding needs for staff. The hiring center advertises locally and reaches out to local workforce centers to utilize persons seeking employment in the community.

Vehicle Certification

Tetra Tech has a proven vehicle certification procedure that complies with FEMA 325 and 327 guidelines to maximize reimbursement for our clients. Tetra Tech will certify all trucks used in an activation via the mobile application included in our ADMS technology. Benefits of using the mobile truck certification application include **electronic volume calculations**, instant upload to the RecoveryTrac™ database to allow a quality assurance (QA)/quality control (QC) check to immediately verify the truck certification is calculated correctly, and automated photo matching of truck and driver photographs to the truck. The truck certification application allows us to complete truck certifications in **30 percent less time than with a paper-based system**.

Exhibit 3-8: Truck Audit Report

Contractor: ASHRIE I
 Sub-Contractor 1: PAUL BUNYAN
 Sub-Contractor 2: PAUL BUNYAN

Truck #	Capacity	Cert Date	Status	Vehicle Type	Vehicle Type
09163	75000	7/5	ACTIVE	PVT 2104 (OH)	SFI F4 DADING TRUCK

Primary Rate (L x W x H) = 25'00" x 10'00" x 11'00" = 2750000 Cu Inches (L x W x H) = 1
 Type: Box (L x W x H) = 64'00" x 10'00" x 11'00" = 7744000 Cu Inches (L x W x H) = 1
 Type: Box (L x W x H) = 76'00" x 10'00" x 11'00" = 9272000 Cu Inches (L x W x H) = 1
 Total Volume: 11000000 Cu Inches (448,646) = 72 71 Cub Yds

Driver-Placard View Side View Back-Interior View

Our disaster debris vehicle certification procedure includes the following:

- Automated truck certification form, which includes the latest FEMA guidelines on truck certification documentation and volume calculations and a bar code for automated ticket scanning
- Special vehicle notations on the truck certification form and vehicle placard, which inform tower monitors of sideboards, tailgates, or other modifications, thus discouraging debris removal contractors from fraudulently altering vehicles after certification
- Photographs of vehicles, vehicle cavities, and drivers
- Periodic spot checks and recertification of trucks to identify trucks altered after initial certification
- Visual inspections of motor vehicle compliance with support from a County staff member; this can be done at the time of inspection or through our QC in real-time from an office environment

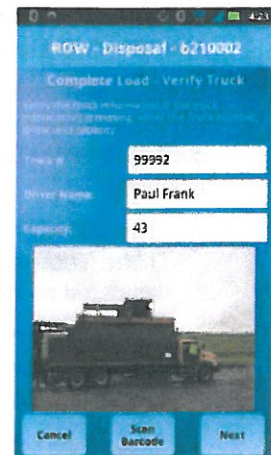


Exhibit 3-9: Mobile Truck Certification

Monitoring the Removal of Debris

Tetra Tech deploys loading site monitors to monitor the activities of each debris removal crew. Loading site monitors will document the initial step when tracking debris from collection to disposal. RecoveryTrac™ load tickets document where and when debris is collected along with other required information. Tetra Tech loading site monitors will also mark where every load of debris is collected using the RecoveryTrac™

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waypoint system. This information can be used by multiple entities (the County, municipalities that may fall under the County's program, debris hauler, NCDOT, NCDENR, local town or city) to verify completeness and maximize project schedule.

The bullets below highlight various aspects of Tetra Tech's debris removal monitoring program.

- **Operations.** Field collection monitors report to a staging location prior to the field operations beginning for a briefing to be given by the project manager or field supervisors and the distribution of safety gear (for example, caution lights or safety vests), map books, and ADMS handheld units/debris tickets.
- **Deployment.** A field monitor is assigned to one loading unit.
- **Field Supervision.** Responsibilities of the field supervisor include training, QA/QC of work being performed, verifying load ticket accuracy, and responding to field monitor and debris contractor issues in the field.
- **Responsibilities.** Field monitors will verify the proper loading of debris into the debris removal contractor's certified loading container. Monitors will document that contractors and their subcontractors adhere to local, County, and federal regulations and that they are working safely and efficiently. Field monitors often notice inconsistencies with debris removal procedures and submit them to their supervisors. If a field monitor feels there is justifiable need to stop operations, the monitor is instructed to refrain from issuing a ticket until the debris hauler supervisor and a Tetra Tech supervisor can be called in to determine the appropriate action.
- **Work Scheduling.** Tetra Tech will coordinate with the debris removal contractor's project manager to estimate the number of field monitors that will be required for the following day. To be responsive and mitigate overstaffing, Tetra Tech requests that the debris hauler release the next day's schedule by 5 p.m. so that the appropriate number of field monitors is dispatched.
- **Daily Closeout.** At the close of operations each day, all collection and disposal monitors will report to the staging area to clock out and turn in their ADMS handheld units.
- **Ineligible Debris.** Tetra Tech will supply door hangers and tags for ineligible debris. The format for both items will be submitted to the County for review and approval. At the discretion of the County, Tetra Tech will distribute door hanger and tags for ineligible debris within the County.
- **Control Point Monitoring.** If requested by the County, Tetra Tech can assign loading site monitors at designated control points identified by the County and coordinated with the debris hauler. As debris loads are completed, the loading site monitors at control points will issue tickets to validate the debris was collected from the designated area for the control point.
- **Contractor Completion.** Tetra Tech will assist in completing the project efficiently and within the timelines set forth in the RFP. There are many aspects of debris removal that are outside of the monitoring firm's control but will still need to be managed. Tetra Tech will assist with managing these goals, including the following:
 - The ability of a debris contractor to respond with sufficient equipment will affect the proposed schedule. Tetra Tech will provide burn rate analysis to verify the proper equipment is being provided. This will be adjusted as more accurate debris estimates are available.
 - Invoices by the contractor need to be produced in a timely manner so that Tetra Tech can reconcile in a timely manner. Tetra Tech will work to make the contractors aware of an appropriate time frame for invoicing and will communicate with the County if deadlines are not being met.
 - Deadlines for collecting debris are set to correspond with the work schedule that is based on estimated work to be completed. As damage estimates become more accurate (as is typical throughout the process), Tetra Tech will work with officials to adjust the timeline appropriately to reflect the changing estimates.

DEBRIS MANAGEMENT SITE MONITORING

Debris management site (DMS) locations are approved areas where debris contractors can truck eligible debris so it can be further separated or processed before being hauled to a final disposal facility. Tetra Tech can assist the County in obtaining necessary permits or approval of designated DMS as requested by the County. Debris is quantified by volumetric load calls. Towers are set up, and ingress and egress patterns are established. Each site will be restricted to a maximum capacity that will need to be monitored. Tetra Tech will provide a minimum of two monitors per site, which may increase or decrease based on need. The Tetra Tech monitors will be prepared to work a 12–14 hour shift, 7 days per week. Construction and demolition debris may be directly hauled to a final disposal facility. Specific documentation kept by DMS monitors includes the following:

- **Load Ticket.** The load ticket is used to document debris removal.
- **Disposal Monitor Log.** The disposal monitor log is used as backup documentation (and serves as a fail-safe if any documentation is missing).
- **Scale Manifest Tickets.** If the debris hauling contract payment method is weight-based, tickets generated by the existing scales at the County's DMS will be digitized and cataloged by Tetra Tech.
- **Incident Report.** The incident report is used to document anything out of the ordinary while monitoring at the DMS, including property damage, arguments, unsafe practices, and personal injury.
- **Photographic Documentation.** Tetra Tech disposal supervisors will photograph a DMS frequently in order to create a visual timeline of the site.
- **QA/QC of Field Tickets.** DMS monitors must review and correct errors made by loading site monitors in the field.

Due to the critical nature of load calls and the impact they can have on a project, Tetra Tech has developed a thorough Disposal Monitor Training Program that will be reviewed by every disposal site monitor for consistency in load calls. After a load call has been made, the disposal site monitor will issue the truck driver a Tetra Tech QC ticket.

HAZARDOUS TREE REMOVAL

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

As work in the field is completed, the information and supporting photos are uploaded directly to our database for QA/QC checks. A QA/QC manager



Section 3: Proposed Strategy

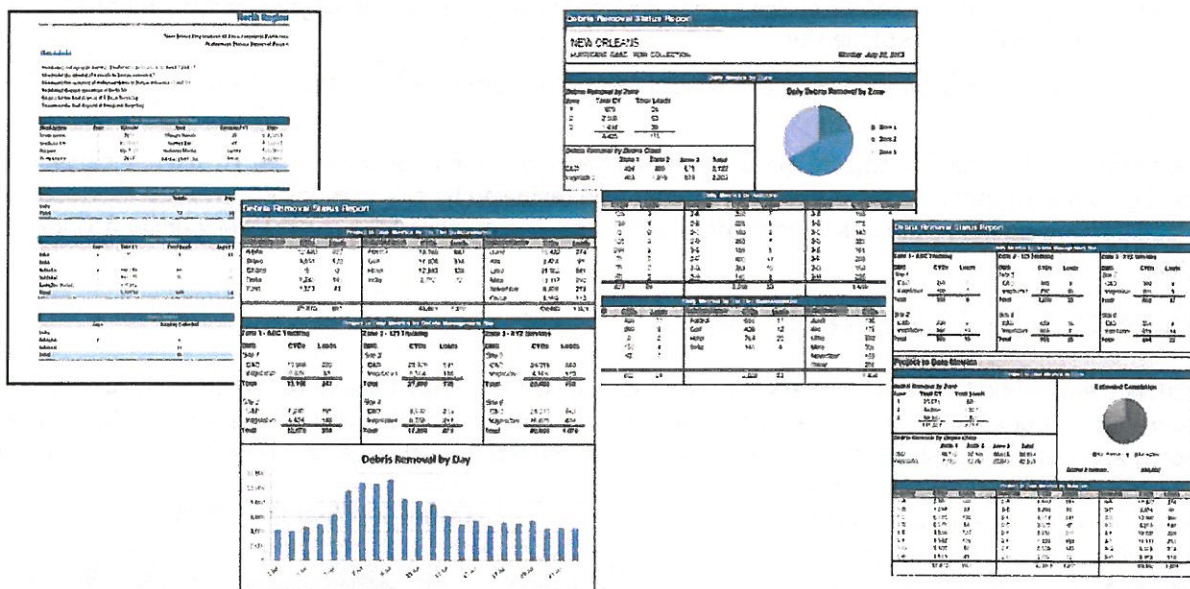
verifies that the photographs comply with FEMA regulations and that all measurements meet the District's contractual agreement with the contractor.

DAILY REPORTING METRICS

Tetra Tech has a suite of reports that are automated from RecoveryTrac™ and available in real-time via PC, tablet, or even smart phone. Our daily reporting metrics include but are not limited to the following:

- Daily operations cost accounting
- Debris contractor metrics and operations time by truck
- Daily load tickets and cumulative volumes
- Daily reporting of ongoing work and completed areas of debris removal activities
- Fiscal reports, including:
 - Cost of monitoring operations (weekly or monthly)
 - Hauling cost data (weekly or monthly)

Exhibit 3-11: Sample Custom Reports Developed



Another key feature of the Tetra Tech ADMS technology is that it allows field monitors to report incidents and provide supporting photographs in real-time. These reports are then provided in real-time geospatially or exported into Excel sheets daily and are available to the County, local governments, and the debris contractor. As monitors complete incident reports in the field, the information and supporting photographs are uploaded to the reporting server.

Depending on the type of incident, priority e-mails may be sent out by the reporting server to County representatives, Tetra Tech project team, and debris contractor representatives. Our firsthand experience assisting local governments with recovering from disasters has shown that accurately capturing and photographing pre-existing damage can alleviate residential damage claims that may be submitted to the District. Additionally, the incident map developed from the collection information is essential to quickly identifying unresolved contractor damages before the completion of the program.

Section 3: Proposed Strategy

Exhibit 3-12: Incident Reporting Tool

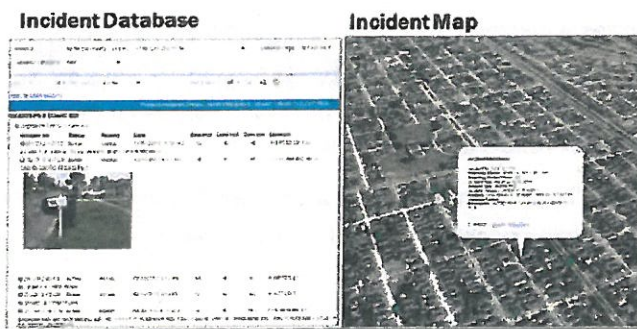
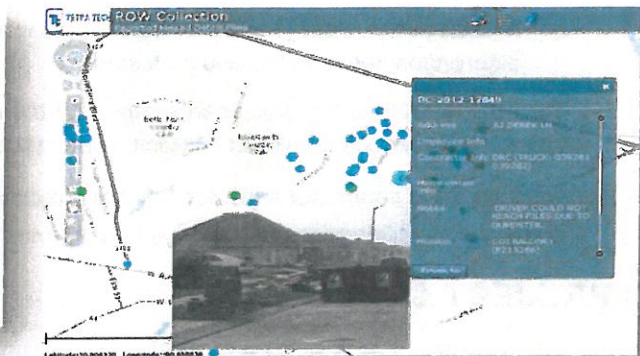


Exhibit 3-13: Missed Piles Tracking



PROJECT MANAGER'S DAILY REPORT

In addition to the standard daily reports, Tetra Tech's project management team will also provide a daily project manager's report. The daily project manager's report will be submitted to the County Debris Manager or their authorized representative daily. The project manager's report will include the following:

- Volumes of debris category collected
- Debris monitor metrics
- Maps depicting geographic areas where debris has been removed
- Tetra Tech's overall progress in completing task orders and estimated completion date
- Coordination issues (if any) with the contractor
- Damage claims or incident reports

CONTRACTOR RECONCILIATION

To expedite contractor invoice reconciliation efforts, Tetra Tech requires copies of all primary debris hauler contracts with the County. After reviewing the contracts, Tetra Tech will set up the RecoveryTrac™ database to generate transactions for tickets issued to each debris contractor. Tetra Tech will then meet with each primary debris contractor to review the debris contractor reports that will be generated automatically through RecoveryTrac™ Mobile. The debris contractor reports will provide each contractor with sufficient data to reconcile with their subcontractors as well as generate invoices for payment by the District. Several QA and QC checks will be conducted on data before it is provided to the contractor. The application of RecoveryTrac™ Mobile significantly reduces the amount of time needed for a contractor to generate an invoice and for the subsequent invoice reconciliation with Tetra Tech. The process for contractor invoice reconciliation in a RecoveryTrac™ Mobile project is as follows:

- Debris contractor manually enters ticket detail into a contractor database or imports ticket data based on debris contractor reports.
- Debris contractor generates an invoice for a specified period and submits the invoice and electronic backup to Tetra Tech for review.
- Tetra Tech reviews the contractor data against RecoveryTrac™ database records.

Section 3: Proposed Strategy

- If no discrepancies are identified, Tetra Tech notifies the debris contractor that there are no discrepancies in the dataset.
- If discrepancies are identified, Tetra Tech generates a discrepancy report noting the ticket numbers and differences between the two data sets.
- Tetra Tech submits the discrepancy report for the debris contractor's review. The debris contractor revises their invoice based on the discrepancies and resubmits to Tetra Tech for review.
- Once a debris contractor's invoice has been reconciled, Tetra Tech generates a payment recommendation and transmittal letter for each invoice and submits the invoice package for the District's review.

PROJECT CLOSEOUT

Upon project completion, Tetra Tech will prepare both physical records as well as RecoveryTrac™ database digital documentation for submittal to the County. Physical documentation such as load tickets, truck certificates, and field logs are organized and packaged in a manner conducive to easy retrieval. In addition to the physical documentation, Tetra Tech provides a final data export of the RecoveryTrac™ database, which serves to hasten any forthcoming auditing efforts. The records extracted from the database contain a digital copy of the ticket given to the contractor and the corresponding supporting photographic and/or supplemental documentation, truck certificate images and corresponding photographic documentation, and digital copies of all invoice payment recommendation packages that have been issued for the project. The ticket line item data is conveniently hyperlinked so that a simple click will yield the desired images. The RecoveryTrac™ final export data may be provided either via DVD or external hard drive.

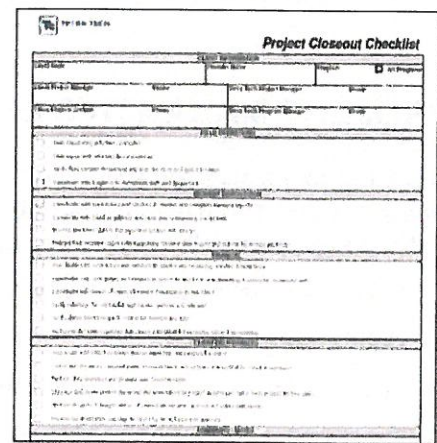
The image shows a screenshot of a 'Project Closeout Checklist' form. The form is titled 'Project Closeout Checklist' and has a header section with fields for 'Project Name', 'Location', and 'Status'. Below the header, there are several sections with checkboxes and text boxes. The sections include: 'Final Report', 'Final Invoice', 'Final Payment Recommendation', 'Final Data Export', 'Final Documentation', 'Final Training', 'Final Review', and 'Final Approval'. Each section has a checkbox and a text box for notes. The form is designed to be used as a checklist to ensure all project closeout tasks are completed.

Exhibit 3-14: Project Closeout Checklist

RECOVERYTRAC™ ADMS

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

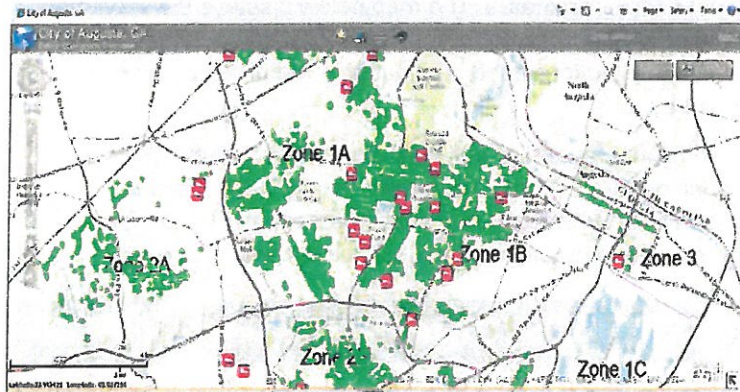
Electronic System – Key Benefits

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

Real-Time Information and Visualization Increases Efficiency

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

Exhibit 3-15: Previous Collection and Current Truck Location



Coordinated Reporting and Quality Control

RecoveryTrac™ ADMS can provide the one-stop information in a consistent, easily consumed format that can provide a multi-precinct/countywide operations status picture. These data feeds are in real-time; there is no spreadsheet to import and no conversion—just a single GIS web data service to pull required information. Some examples of data included:

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

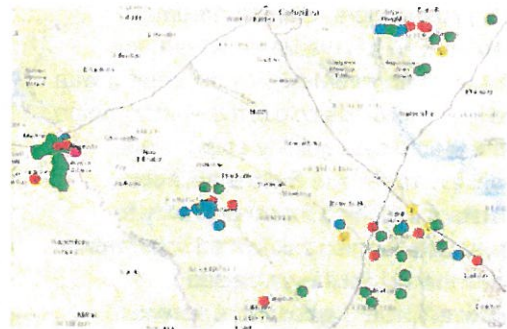
Data managers assigned to continuously monitor the information flowing into the system check for potential problems and dispatch supervisors to respond to the problem. The system monitoring panel shows real-time statistics and potential problems for operations based on exhaustive in-process quality checks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

Debris Tracking

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

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

Exhibit 3-16: Monitoring Locations



VIII. EMERGENCY MANAGEMENT SUPPORT SERVICES

Emergency Management Plans

Tetra Tech will develop emergency plans and documents following the National Plan Development Process (NPDP), the nation’s standardized methodology to design and develop operational-level emergency plans. For each document, Tetra Tech will form a Collaborative Planning Team (CPT), develop a work plan, conduct research on the plan’s topic, assemble planning resources, and begin to understand the problem addressed in the plan. Tetra Tech and the CPT will then determine the goals and objectives of the plan, and identify potential courses of action (COA) to meet those goals and objectives. Next, Tetra Tech and the CPT will analyze the COAs and determine the best ones to include in the plan. Tetra Tech will then write the plan and supporting documents in the format approved by the CPT, obtain feedback, and submit the final plan to the County for approval. Tetra Tech will then brief key officials identified by the CPT on the content of the plan.

Tetra Tech has used the above planning process to develop COOP/COG plans, debris management plans, EOPs, evacuation and sheltering plans, mass care management plans, logistics and resource management plans, and others. Tetra Tech has developed emergency plans, standard operating guidelines, and policies and procedures for many state and local governments as well as private sector, transit clients, academic and quasi-governmental organizations in both rural and urban environments. Our experience includes developing plans that require extensive outreach to diverse stakeholders to find a common solution that meets all parties’ needs. In each of these efforts, our team has worked with the full spectrum of stakeholders, including non-government organizations/nonprofit entities, faith-based organizations, and the private sector; ensuring a genuine “whole of community” approach to each solution developed. This extensive experience of dynamic engagement has honed our ability to facilitate successful plan development with dozens of multi-disciplinary stakeholders across jurisdictional lines.

Testing, Training, Drills, and Exercises

Training

Tetra Tech’ instructional design experts will work with a few key stakeholders in developing course objectives, formatting, and creating course materials. Tetra Tech will follow the ADDIE model of instructional design, which includes five phases: analysis, design, development, implementation, evaluation. This process allows for a dynamic, flexible guideline for building effective adult learning training modules. To conduct training, Tetra Tech will call upon its expert trainers in law enforcement, fire, emergency management, public health, medical, or other disciplines. Tetra Tech will conduct the training in-person, or develop self-paced training that can be completed

Section 3: Proposed Strategy

online. Tetra Tech has certified training practitioners can provide the County with a wide range of emergency preparedness training course packages.

Exercises

Tetra Tech will follow the Homeland Security Exercise and Evaluation Program methodology for all exercises. Tetra Tech will work with the County establish an Exercise Planning Team, and will work with the Exercise Planning Team to design, develop, conduct, and evaluate the exercise. Tetra Tech will coordinate development of exercise documents (e.g., situation manual, master scenario events list, controller/evaluator handbooks, etc.) and conduct the exercise planning meetings. The documents and meetings will depend on the type of exercise requested by the County. Tetra Tech will conduct follow-up telephone calls and other outreach as necessary. We will conduct a series of pre-exercise briefings and work with the County to ensure that exercise logistics are addressed.

Tetra Tech will support the delivery of each exercise by staffing and managing the exercise control organization; managing exercise control systems, including promoting a common operating picture and situational awareness among all exercise control and evaluation staff; analyzing exercise tools and methodology usage during exercises; and tracking the completion of exercise objectives.

Tetra Tech will develop a draft after action report (AAR) and review it with the County and Exercise Planning Team at an after action meeting. During the meeting, Tetra Tech will develop an improvement plan (IP) that identifies and articulates specific corrective actions, responsible agencies, and key milestones tied to the recommendations identified in the AAR. Tetra Tech will then finalize the AAR and IP matrix as a combined document.

Hazard Mitigation Planning Activities and CRS Technical Assistance

Tetra Tech will work with the County to conduct hazard mitigation planning activities, including updating the County's HMP and providing technical assistance to help the County maintain or improve its Class 8 Community Rating System (CRS) rating.

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 will work with the County to reconvene its HMP Planning Team and augment it with additional stakeholders to increase the number of CRS points earned. Tetra Tech will work with the County 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 County, including the flood hazard, and assess the problems caused by these hazards. Tetra Tech will work with the County 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 countywide 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 County and Planning Team to have the plan adopted and formally approved by FEMA.

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 County, as requested, to help enhance the County's CRS rating.

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 County 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 provide best-in-class technical expertise in such areas as engineering, environmental, and other technical service areas.

ACKNOWLEDGEMENT OF AMENDMENTS

Amendment Number	Date
Amendment 1	November 6, 2015

The Proposer shall furnish items and services identified under description in accordance with Special Conditions/Provisions, requirements and all other terms and conditions as set forth elsewhere herein. By executing this document the Offeror is agreeing to and acknowledging the acceptances of the responsibility to provide all as specified; this page must be submitted with the Offer. The Offeror also understands by executing and dating this document proposed prices/costs shall hold firm for a period of not less than *three hundred, sixty-five (365)* calendar days after the date of the solicitation award.

Company name: Tetra Tech, Inc.	
Name of Agent (Print or Type): Jonathan Burgiel	
Title: Vice President	Date: 11/13/15
Signature of Agent: <i>Jonathan Burgiel</i>	
Telephone # 321-441-8518	Fax #: 321-441-8501
Federal Identification Number: 95-4148514	
Email address: jonathan.burgiel@tetrattech.com betty.kamara@tetrattech.com	
Subscribed and sworn to me this 13th day of November	
my commission expires: 11/18/2018	Title: <i>Kalindi Fitch</i>

(Must be notarized by a Notary Public)



Kalindi Fitch
 NOTARY PUBLIC
 STATE OF FLORIDA
 Comm# FF154450
 Expires 11/18/2018

SEAL

Richland County, South Carolina

Statement of Assurance, Compliance and Non-collusion

State of Florida)

County of Orange)

Tetra Tech, Inc., being first duly sworn, deposes and says that:

- 1 The undersigned, as Vendor, certifies that every provision of this Submittal have been read and understood.
- 2 The Vendor hereby provides assurance that the firm represented in this Submittal:
 - (a) Shall comply with all requirements, stipulations, terms and conditions as stated in the Submittal/Submittal document; and
 - (b) Currently complies with all Federal, State, and local laws and regulations regarding employment practices, equal opportunities, industry and safety standards, performance and any other requirements as may be relevant to the requirements of this solicitation; did not participate in the development or drafting specifications, requirements, statement of work, etc. relating to this solicitation; and
 - (c) Is not guilty of collusion with other Vendors possibly interested in this Submittal in arriving at or determining prices and conditions to be submitted; and
 - (d) No person associated with Vendor's firm is an employee of Richland County. Should Vendor, or Vendor's firm have any currently existing agreements with the County, Vendor must affirm that said contractual arrangements do not constitute a conflict of interest in this solicitation; and
 - (e) That such agent as indicated below, is officially authorized to represent the firm in whose name the Submittal is submitted.

Name of Firm: Tetra Tech, Inc.

Name of Agent: Jonathan Burgiel

Signature & Title: 
Vice President

Address: 2301 Lucien Way, Suite 120

City, State & Zip: Maitland, FL 32751

Telephone: 321-441-8518

Fax: 321-441-8501

e-mail: jonathan.burgiel@tetrattech.com
betty.kamara@tetrattech.com

Subscribed and sworn to me this 13th day of November, 2015.

 Kalindi Fitch My commission expires:
(Title)

NOTARY SEAL



**RICHLAND COUNTY GOVERNMENT
DRUG-FREE WORKPLACE CERTIFICATION**

Company: Tetra Tech, Inc.

Project Number: RC-651-P-2016

Project Name: Request for Proposals: Consulting and Representation Services - Disaster Recovery

The undersigned hereby certifies that he/she understands and is in full compliance with the requirements set forth in Title 44, Code of Laws of South Carolina, Chapter 107.

Richland County Government (County) requires certification from participants in the Procurement process that it will comply with the statutory and administrative requirements in carrying out work or service or under contract. The certification is a requirement for Federal grant programs as described in Title 49, Code of Federal Regulations, Part 29.

Participants are required to certify they will be, or will continue to provide, a drug-free workplace in accordance with the regulation. The agreement contains specific assurances on the Drug-Free Workplace Act of 1988.

Except for the certified items below marked not applicable (N/A), the list includes major requirements for these aspects of implementation, although it is not comprehensive, nor does it relieve the participants from fully complying with all applicable statutory and administrative standards.

1. A statement has been or will be published notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the sponsor's workplace, and specifying the actions to be taken against employees for violation of such prohibition.

Yes No N/A

2. An ongoing drug-free awareness program has been or will be established to inform employees about:

- a. The dangers of drug abuse in the workplace;
- b. The sponsor's policy of maintaining a drug-free workplace;
- c. Any available drug counseling, rehabilitation, and employee assistance programs; and
- d. The penalties that may be imposed upon employees for drug

abuse violations occurring in the workplace.

Yes No N/A

3. Each employee to be engaged in the performance of the work has been or will be given a copy of the statement required within item 1 above.

Yes No N/A

4. Employees have been or will be notified in the statement required by item 1 that, as a condition of employment the employee will:

a. Abide by the terms of the statement; and

b. Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction.

Yes No N/A

5. The County will be notified in writing within five calendar days and the federal granting agency ten calendar days after receiving notice under item 4b above from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, (including position title of the employee) to the County and the federal granting agency. Notices shall include the project number of each affected grant.

Yes No N/A

6. One of the following actions will be taken within 30 calendar days of receiving a notice under item 4b above with respect to any employee who is so convicted:

a. Take appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

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

Yes No N/A

7. A good faith effort will be made to continue to maintain a drug-free workplace through implementation of items 1 through 6 above.

Yes No N/A

I have prepared documentation shown below or attached hereto with site(s) for performance of work (street address, city, county, state, zip code). There are no

such workplaces that are not identified below or in the attachment.

I have prepared additional documentation for any above items marked "no" and attached it hereto. I certify that, for the project identified herein, responses to the forgoing items are accurate as marked and attachments are correct and complete.

Location

Street Address: 2301 Lucien Way, Suite

City: Maitland

State and Zip code: Florida 32751

Name of Agent: Jonathan Burgiel

Signature of Agent:



Date: November 13, 2015

Subscribed and sworn to me this 13th day of November 2015

Title: Vice President/Operations Manager

My Commission expires: 11/18/2018

Kalindi Fitch



NOTARY SEAL



Kalindi Fitch
NOTARY PUBLIC
STATE OF FLORIDA
Comm# FF154450
Expires 11/18/2018

RICHLAND COUNTY GOVERNMENT COLUMBIA SOUTH CAROLINA 29224-1002

SOLICITATIONS, OFFERS AND AWARDS

(SUPPLIES, GOODS, EQUIPMENT, SERVICES)

*****SOLICITATION INFORMATION*****

1. SOLICITATION: # RC-651-P-2016	4. Description: Consulting & Representation Services-Disaster Rec
2. ISSUE DATE: 10-29-2015	6. Pre-Solicitations Conference: None
3. CONTACT INFORMATION SHOWN BELOW	Time: n/a
PROCUREMENT AGENT: Cheryl Patrick, CPPB	Day: n/a
Fax (803) 576-2133	Date: n/a
Email: patrickc@rcgov.us	
5. SUBMIT SOLICITATIONS TO: RICHLAND COUNTY GOVERNMENT OFFICE OF PROCUREMENT AND CONTRACTING 2020 HAMPTON STREET SUITE 3064 (Third Floor) COLUMBIA SOUTH CAROLINA 29204-1002	Location: n/a

6a. Submission Deadline: Day: **Monday** Date: **November 16, 2015** Time: **3:00pm Local Time**

7. Submit Sealed Solicitations: One (1) Original - Four (4) Copies and at least one electronic of the original by: Compact Disc (CD) or Flash Memory Data Storage Device (Flash Drive).
Additionally: Five (5) hard copies of "Attachment A - RC-651-2016" in a Separate Sealed Envelope.

8. Firm Offer Period: Three hundred sixty-five (365) calendar days

9. This solicitation consists of Section "A" through Section "G" to include all addendum's

OFFEROR BUSINESS CLASSIFICATION (TO BE COMPLETED BY OFFEROR)

10. Check Appropriate Boxes Partnership Individual Corporation Sole Proprietorship
Trading under Trade Name of:

<input type="checkbox"/> African-American Female (AAF)	<input type="checkbox"/> Hispanic Female (HF)	<input type="checkbox"/> White Female (WF)
<input type="checkbox"/> African-American Male (AAM)	<input type="checkbox"/> Hispanic Male (HM)	<input type="checkbox"/> Other:
<input type="checkbox"/> Asian Female (AF)	<input type="checkbox"/> Native American Female (NAF)	
<input type="checkbox"/> Asian Male (AM)	<input type="checkbox"/> Native American Male (NAM)	

11. All deliveries must be FOB Destination and Payment Terms will be a minimum of Net 30

12. OFFER: In compliance with above, the undersigned agrees, if this Solicitation is accepted within the period specified in above, to furnish any or all requested in this solicitation as and specified.

13. Name and address of Entity (Type or print):
Tetra Tech, Inc.
2301 Lucien Way, Suite 120
Maitland, FL 32751

e-mail: **betty.kamara@tetrattech.com**

Telephone #: 321-441-8518

Fax #: 321-441-8501

Federal Identification #: 95-4148514

14. Name & Title of Agent Authorized to sign the Solicitations.
(Type or Print): **Jonathan Burgiel, Vice President**

15. Signature of Agent & Date
Jonathan Burgiel

16. Subscribed and sworn to me

This 13th day of November

My commission expires: **11/18/18**

(Title) *Kalind Fitch*

(Must be notarized by a Notary Public)



**Kalind Fitch
NOTARY PUBLIC
STATE OF FLORIDA
Comm# FE 154450
Expires 11/18/2018**

AWARD (TO BE COMPLETED BY RICHLAND COUNTY GOVERNMENT)

17. Approval Date:	18. Award:	19. Contract #:
20. Contracting Officer: Cheryl D. Patrick, CPPB	21. Signature:	22. Award Date:

**EXHIBIT C:
CONTRACTOR RATE SCHEDULE
(8 pages)**

ATTACHMENT A:

Hourly Labor Rates and Reimbursable Project Expenses

POSITIONS	HOURLY RATES
Project Executive	\$ 225.00
Subject Matter Expert	\$ 200.00
Project Manager	\$ 175.00
Accountant	\$ 110.00
Closeout Specialist	\$ 115.00
Grant Manager	\$ 150.00
Analyst	\$ 85.00
Senior Grant Manager	\$ 165.00
Engineer I (Junior)	\$ 110.00
Engineer II (Mid)	\$ 140.00
Engineer III (Senior)	\$ 190.00
Surveyor	\$ 90.00
Debris Project Manager	\$ 75.00
Debris Operations Manager	\$ 63.00
Debris Monitor	\$ 37.00
Debris Supervisor	\$ 46.00
Scheduler	\$ 63.00
Emergency Management Consultant	\$ 135.00
Senior Emergency Management Consultant	\$ 175.00
Executive Emergency Management Consultant	\$ 215.00
Other: <u>See attached file for other</u> required positions	\$ _____

Non-labor expenses shall be invoiced to the County in the following manner:

- 1) Travel expenses including airfare and car rental shall be invoiced at cost, without mark-up and with approved documentation;
- 2) Lodging shall be invoiced up to the per diem rate according to the GSA rates established at www.gsa.gov;
- 3) Meals and incidentals shall be invoiced at the GSA per diem rate (no receipts are required);
- 4) Mileage shall be invoiced at the federally published rate;
- 5) Field documents and other equipment/supplies shall be invoiced at cost only; no markup allowed and with approved documentation, and
- 6) Other required non-labor expenses as may be applicable to the project and pre-approved by the County shall be invoiced at cost only; no markup allowed and with approved documentation.

CFR 200 Compliance Language

1. **Subcontractors** – If subcontractors are to be included in the proposal, all terms and conditions must be disclosed including method and reason for selection, subcontractor compensation, and subcontractor billing rate. At the County’s request, provide all internal sub-contractor documentation for federal reimbursement review.
2. **Procurements** – While assisting the County with project procurements or in the event the vendor must procure additional resources post-contract award, the awarded Proposer will strictly adhere to 2 CFR 200 procurement rules. This includes adhering to the strictest provisions of Federal, State, and Local procurement Rules, Regulations and/or Ordinances, etc.

3. **Vendor Billing** – The winning vendor will be engaged in direct project work, therefore, indirect billing is not anticipated and must be pre-approved by the County. All direct project costs will concisely billed to specific project codes established by the County. Vendor invoices will categorized by: project code and must include:

- Name,
- Position
- Billing rate
- Total hours, and
- Costs

Invoices must include specific project time and expense backup to include concise employee comments of tasks accomplished which must be appropriate to the position and billing rate.

All inclusive – The above 2 CFR 200 requirements have been identified as being the most relevant provisions which will affect the County and vendor while executing the project. However, the vendor is responsible for compiling with 2 CFR 200 in its entirety throughout the project lifecycle.

ATTACHMENT A
Supplemental Information

OTHER REQUIRED POSITIONS

Tetra Tech, Inc. (Tetra Tech) has provided additional labor positions and hourly labor rates that may be required to complete the scope of services requested by Richland County, SC (County). The labor positions listed will be used as needed to facilitate specific scope of services.

Exhibit A-1: Other Required Labor Positions
(Hourly labor rates are fully burdened to include profit and overhead)

Labor Category	Hourly Labor Rate
Principal-in-Charge	\$275.00
Senior Consultant//Analyst/Planner/Assessor	\$195.00
Supervising Consultant/Analyst/Planner/Assessor/Accountant	\$175.00
Senior Environmental Specialists/Reviewer	\$165.00
IT/Software Specialists	\$150.00
Senior Public Assistance/CDBG Consultant	\$145.00
Consultant/Analyst/Planner/Assessor/Trainer/Accountant/QA/QC III	\$135.00
Project Controls Manager	\$130.00
Consultant/Analyst/Planner/Assessor/Trainer/Accountant/QA/QC II	\$125.00
IT and Document Control Manager/Safety Manager	\$125.00
Estimator/Scheduler/Environmental Reviewer	\$115.00
Consultant/Assessor/Planner/Analyst/Trainer/QA/QC I	\$110.00
Program Planner/Assessor/Analyst/Trainer/QA/QC	\$100.00
Field Supervisor/Inspector	\$95.00
Assistant Planner/Assessor/Analyst/Trainer/QA/QC	\$90.00
Analytical Aide	\$85.00
Field Monitor	\$65.00
Administrative Specialist III	\$60.00
Debris Data Manager	\$55.00
Debris Health and Safety Specialist	\$55.00
Debris GIS Analyst	\$49.00
Administrative Specialist II	\$48.00
Administrative Specialist I	\$44.00
Debris Billing/Invoicing Analysts	\$39.00

Labor Category	Hourly Labor Rate
Debris Project Coordinator	\$33.00
Debris Load Ticket Data Entry Clerks	\$32.00

Note: Specialized services such as those provided by the renowned Senior FEMA Attorney, Mr. Ernie Abbott, will be billed at the Senior FEMA Appeals Specialist rate of \$425.00 per hour and the Associate Attorney will be billed at a rate of \$290.00 per hour.

Electronic Ticketing Device: Debris monitoring services rates includes the use of Tetra Tech's automated debris management system (ADMS).

Non-Labor Expenses: Non-labor expenses shall be invoiced to the County as follows:

- Travel expenses including airfare and car rental shall be invoiced at cost with no markup; receipts are required;
- Lodging shall be invoiced up to the per diem rate according to the GSA rates established at www.gsa.gov; receipts are required;
- Meals and incidentals shall be invoiced at the GSA per diem rate (receipts are not required);
- Mileage shall be invoiced at the federally published rate;
- Field documents and other equipment/supplies shall be invoiced at cost with no markup; receipts are required; and
- Other required non-labor expenses as may be applicable to the project and pre-approved by the County shall be invoiced at cost with no markup; receipts are required.

SUBCONTRACTORS

Method and Reason for Selection

Though the County does not require small, women-owned, minority-owned, and disadvantaged business enterprises (S/W/M/DBE) participation under RFP No. RC-651-P-2016 (County's RFP), it is Tetra Tech's practice to embrace S/W/M/DBE participation in its contracting when feasible and possible. Tetra Tech has undergone a thorough process of qualifying via the State of South Carolina's Division of Small and Minority Business Directory¹, interviewing and negotiating letters of commitment with several S/W/M/DBE partners for the response of the County's RFP. As a result, Tetra Tech has teamed with the following South Carolina/Richland County based S/W/M/DBE firms:

Chao and Associates, Inc.
Location: Columbia, SC

Richland County SLBE
Cert No.: E-14-405
Expiration Date: 07/02/2016

South Carolina S/MBE
Cert No : 09201590
Expiration Date: 10/31/2020

DESA, Inc.
Location: Columbia, SC

Richland County SLBE
Cert No.: P-14-314
Expiration Date: 08/29/2016

South Carolina S/MBE
Cert No : 0233670316
Expiration Date: 3/3/2016

4D Engineering, LLC
Location: Lexington, SC

South Carolina S/MBE
Cert No.: 03201314
Expiration Date: 07/31/2018

¹ <http://osmba.sc.gov/directory.html>

In an effort to demonstrate Tetra Tech's commitment to fully supporting S/W/M/DBE participation, Tetra Tech has executed letters of commitment governing Tetra Tech's relationship with its teaming partners which binds our responsibilities to one another upon being awarded the contract.

In addition, Tetra Tech has chosen two other businesses to participate on this proposal. Tetra Tech has chosen them due to their unique skill set in the field of Community Development Block Grant (CDBG) policy and operations. This is a specialized grant area and therefore we have selected these vendors based on their experience in the field.

Compensation & Billing Rates

Due to the nature of this contract and scope of services listed in the County's RFP which falls under multiple areas of expertise, Tetra Tech has not negotiated billing rates nor has Tetra Tech obligated a percentage of project revenues to any of its teaming partners for the conceived engagement. This will be assigned upon contract activation once a detailed scope of work and level of effort for a project is determined. Tetra Tech will then select the appropriate teaming partner(s) with specific and individual capabilities that will complement our own for the successful completion of the project.

We will provide the mark-up information pursuant to the terms of the RFP upon issuance of a Task Order by the County.

Terms and Conditions

Tetra Tech's subcontract standard general conditions are as follows:

1. DEFINITIONS

"Work shall mean the consulting services and tasks provided by Consultant and any of Consultant's personnel as described by Buyer in the Scope of Work attached hereto as Exhibit A and made a part hereof, and any other Work as may be added to or performed in connection with this Agreement.

"Client" shall mean the person or entity by whom Buyer has been issued a Prime Contract to perform services, if applicable.

"Signature Document" shall mean the document executed by the parties, to which these terms and conditions are attached and incorporated.

2. RELATIONSHIP OF PARTIES. Consultant, including its employees, agents or representatives, shall be deemed an independent contractor and not an agent or employee of Buyer. All benefits, coverages and claims of Consultant and any of Consultant's employees shall be the sole obligation of Consultant, including but not limited to payment of applicable taxes and arranging for insurance. Unless specifically authorized in writing by Buyer, Consultant shall have no authority to make commitments of any kind on behalf of Buyer.

The terms and conditions of this Agreement are subject to and shall be modified to comply with any requirements which may be imposed by modifications to tax legislation or IRS regulations and guidelines regarding the status of independent contractors.

3. TERM OF AGREEMENT. This Agreement shall be effective and terminated on the dates indicated on the Signature Document. The Agreement may be extended for additional periods by mutual written agreement of the parties. The period and schedule of performance of a given task will be set forth in each task. If the period of performance of a task extends beyond the term of this Agreement, then the period of performance of the task will take precedence and the parties shall proceed as if this Agreement were still in effect.

4. **TERMINATION.** Buyer has the absolute right to terminate or suspend Work under this Order by written notice to Consultant. Such termination or suspension may be in whole or in part and shall be at the sole discretion of Buyer, may be done at any time and may be for any reason whatsoever. Notice of termination or suspension may specify the schedule and manner and other conditions of the termination or suspension and Consultant shall comply therewith. In such event, Consultant shall be entitled to payment for the Work performed up to the time of such termination or suspension in accordance with the terms of this Order, including such expenditures as in the judgment of Buyer are necessarily incurred by Consultant in the orderly termination or suspension of its Work as prescribed in the notice. If Work is suspended or terminated for default, then Consultant shall be responsible for all damages or costs incurred by Buyer.

This Agreement and/or any task hereunder may also be terminated at any time by written agreement between the parties; provided, however, that Consultant shall complete any pending tasks in a timely manner, unless otherwise agreed to in writing by the parties. In the absence of any other written agreement between the parties as to termination, this Agreement shall terminate on the termination date indicated on the Signature Document.

5. **TASKS.** Specific tasks of Work under this Agreement may be set forth in the Scope of Work and/or made or confirmed by Buyer in writing. Consultant may accept or reject a task within three (3) days of receiving written notice of same. The written notice of a task shall include identification of the Prime Contract in connection with which Work is being performed, description of the Work to be performed, schedule of performance, identification of Consultant's personnel who are required to perform the task, and an estimated budget for performance. Provided, however, that in the event of a conflict between these terms and conditions and a written notice of task, these terms and conditions shall take precedence. Although it is understood by the parties that the duration of a particular task may not be accurately predicted at the outset of such task, Consultant agrees to complete any task accepted as specified in the task and/or in a timely manner in order to satisfy any scheduling requirements of Buyer and/or Client.

6. **NON-EXCLUSIVE AGREEMENT.** This Agreement is non-exclusive. Buyer may, at its discretion, select and use other consultants to provide the same type of Work contemplated by this Agreement. Consultant is not prohibited from accepting consulting tasks from other buyers during the term of this Agreement, including tasks to perform work similar to that being provided hereunder, provided that such work is not in conflict with the business interests of Buyer or the Work being performed hereunder for Buyer or Client. Prior to accepting consulting tasks from entities other than Buyer during the term of this Agreement, Consultant will advise Buyer's Authorized Representative, as designated on the Signature Document, of the name of the entity and general nature of work to be performed in sufficient detail to enable Buyer to make a determination as to whether a potential conflict of interest exists and take appropriate action.

7. **INSURANCE.** Consultant will obtain comprehensive general liability, professional liability, employees' liability and compensation insurance as will protect Buyer from all risks arising out of the Work to be performed under this Agreement. Consultant shall furnish to Buyer within three (3) days following the execution of this Agreement, a Certificate of Insurance acceptable to Buyer evidencing compliance with the minimum insurance coverage required by Buyer. Buyer may request that Consultant provides copies of insurance policies to Buyer for review within ten (10) days of commencement of Work.

8. **DRAWINGS, DATA AND WORK.** All designs, drawings, specifications, notes, and any other documents or other Work developed specifically at the request of Buyer in the performance of Work under this Agreement shall be and remain the sole property of Buyer and/or Client. Consultant agrees not to assert any rights, nor to establish any claim under the design, patent or copyright laws with respect to such material.

9. **RIGHT TO RELY.** Buyer shall be entitled to rely without independent verification on the accuracy, currency and completeness of information supplied by Consultant or its approved subcontractors. The obligations of Consultant under Article 16 (Claims and Losses) shall extend to any Claim (as defined in that Article) which may be brought against Consultant or Buyer or its or their respective officers, directors and employees arising out of or alleged in any way to involve such information.

10. WARRANTY. Consultant warrants that Consultant and Consultant's personnel shall, in performing Work hereunder, exercise the degree of skill, care and diligence consistent with the highest industry standards and perform Work in accordance with any and all drawings, specifications or requirements provided by Buyer, and that such Work will be suitable for the purpose intended. Should Consultant fail to perform to those standards, Consultant shall (a) without cost to Client or Buyer, reperform and correct any substandard Work; and (b) reimburse Buyer for Buyer's direct, incidental, consequential or other costs resulting from or arising in connection with breach of such warranty. If Consultant fails to replace or correct any such Work after reasonable notice, Buyer may, at its sole option, cause such Work to be replaced or corrected and all costs and expenses incurred in connection therewith shall be borne by Consultant. Any Work corrected as a consequence of this Article shall be subject to the same warranty as provided for the original Work. The rights and remedies of Buyer as provided in this Article and elsewhere in this Agreement shall in no way limit any other rights and remedies Buyer may have under this Agreement or at law or in equity.

11. CONSULTANT'S PERSONNEL. Consultant's personnel who are specified on the Signature Document shall perform the Work hereunder. Prior to diverting or replacing any of the specified individuals, Consultant shall notify Buyer's Authorized Representative not less than ten (10) days in advance and gain approval of such Representative. Consultant shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation. No substitutions or deviations shall be made by Consultant without the written consent of Buyer's Authorized Representative.

12. AUTHORIZED REPRESENTATIVES. The Authorized Representatives of Consultant and Buyer for this Agreement are designated on the Signature Document.

Issues which affect pricing, schedule, scope of work or terms and conditions shall be resolved through the Authorized Representatives. All notices shall be in writing and sent by certified mail return receipt requested, postage prepaid, to the designated Authorized Representatives.

13. ASSIGNMENT/SUBCONTRACTING. This Agreement shall not be assigned nor shall any Work hereunder be subcontracted without the prior written consent of Buyer.

14. CONFIDENTIALITY AND CONFLICTS OF INTEREST. Unless otherwise authorized in writing by Buyer, Consultant shall keep all information relating to this Agreement and Work hereunder confidential. Consultant shall not disclose or release any information, news release, public announcement, advertisement or other such publicity concerning this Agreement or the Work performed hereunder to any third party without the express approval of Buyer.

This Subcontract is non-exclusive. Buyer may, at its discretion, select and use others to provide the same type of Work contemplated by this Subcontract. Subcontractor is not prohibited from accepting work from other buyers during the term of this Subcontract, including work similar to that being provided hereunder, provided that such work is not in conflict with the business interests of Buyer or the Work being performed hereunder for Buyer or Client. Prior to accepting work from entities other than Buyer for Work arising from the same site or Client, Subcontractor will advise Buyer's Authorized Representative, as designated on the Signature Document, of the name of the entity and general nature of work to be performed in sufficient detail to enable Buyer to make a determination as to whether a potential conflict of interest exists and take appropriate action. The requirements of this Article are in addition to any conflict of interest requirements set forth elsewhere in the Subcontract.

15. GOVERNING LAW. This Agreement shall be governed by the laws of the State of South Carolina, excluding conflicts of law provisions. Consultant shall promptly pay and reimburse Buyer for all costs, expenses, damages, reasonable attorney's fees incurred by Buyer which arise out of the performance or non-performance by the Consultant and/or the enforcement of the terms, conditions or obligations of the Subcontract or any bond (if any) furnished in connection therewith.

16. CLAIMS AND LOSSES. Consultant agrees on behalf of Consultant, and Consultants' employees, subcontractors, agents, representatives, heirs or assigns, to waive any and all liability of Buyer or Client, or their respective employees, for bodily injury or death or for damage to or loss of property arising from Consultant's performance of Work hereunder. Consultant further agrees, to the fullest extent not prohibited by applicable law, to indemnify and hold harmless Buyer, its parent, officers, employees,

successors, assigns and Clients (collectively, "Buyer") from and against all claims, liability, liens, loss, judgments, penalties, suits and damage (collectively, "Claims") whether for breach of the Subcontract, personal injury, death or damage to property and including without limitation, any costs, expenses and attorney's fees arising out of or caused by such Claims, arising directly or indirectly out of the acts or omissions of Consultant or Consultant's employees, subcontractors, agents, or representatives in performing Work hereunder or asserted by any of Consultant's employees, subcontractors or subcontractors' employees, whether or not resulting or alleged to result from the negligence, but excluding sole negligence, of Buyer. As a separate obligation, Consultant agrees to defend any claim, action or proceeding brought against Buyer arising out of or in connection with any claim or Consultant's performance of Work hereunder.

The Consultant's obligations under this Article shall survive the termination or expiration of this Subcontract.

17. SEVERABILITY. Should any Article, portion or application therefore of this Agreement be determined by a court of competent jurisdiction to be illegal, unenforceable or in conflict with any applicable law, the validity and enforceability of the remaining Articles, portions or applications thereof, including remaining aspects of an affected Article, shall not be impaired and, to the extent necessary, Buyer and Consultant shall negotiate an equitable adjustment in the affected Articles of this Agreement. The audit, warranty, indemnification, insurance, confidentiality and conflict of interest requirements of the Subcontract shall survive the termination or expiration of this Subcontract for any reason.

18. HEADINGS. The headings within this Agreement are for convenience only and are not intended or affect construction of the contents of this Agreement.