



Recommended Region 4 Spending Plan

REPT Steering Committee

Joe Sastre, Chairman

May 9, 2008

Executive Preface

The attached **Spending Plan** is a compilation of information gathered over a period of six months by the Regional Emergency Planning Team (REPT) Steering Committee. As a requirement of the 2007 Department of Emergency Management and Homeland Security (DEMHS) Regional Collaboration Grant, the three Councils of Governments in DEMHS Region Four—NECCOG, SCCOG and WINCOG—conducted a Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis of the eleven Regional Emergency Support Functions (RESF) in their 43 towns and 2 tribal nations. Eleven of the fifteen RESFs were engaged and the **quality of the overall information gathered was exceptional**. It was the issue of communication or lack thereof that the following Spending Plan leaned heavily towards improving regional communications.

The outcome of the SWOT Analysis resulted in 45 separate items being identified and the REPT met three times to evaluate and ultimately recommend the ten attached items in the Spending Plan. Much of the credit for conducting the initial research on the SWOT-identified items rests within the individual RESF disciplines. Each of these groups had the requisite expertise, experience and leadership to move the items to the REPT Steering Committee for discussion and approval. The **REPT Steering Committee** strongly supports these efforts and **recommends that the REPT accept the Spending Plan** as presented.

The next step in this Regional Collaboration Grant with DEMHS is to receive the REPT approval of the attached Spending Plan, submit the Phase II Grant to DEHMS by June 2, 2008 and begin the **implementation of the Spending Plan and creation of the Regional Emergency Operations Plan** (REOP). Phase II must be completed by December 31, 2009.

We extend our sincere thanks to the RESF Committees and the REPT Steering Committee for their extensive efforts in constructing the Spending Plan and look forward to the implementation and creation of the REOP.

DEMHS Region 4

Recommended Spending Plan

| RESF | Priority | Item | Cost | Category | Page # | Appendix |
|--------------------|----------|--|-------------------|----------------------|------------|----------|
| Communications | 1 | Establish IP switch and router network to allow interconnection, as needed, of existing radio systems of any public safety or health and welfare agencies that wish to participate | 481,010 | Communication | 2, 3, 4, 5 | |
| Firefighting | 1 | Mobile Communication Trailer | 100,000 | Communication | 6 | A |
| Transportation | 1 | Communication within region (between transportation providers, centralized transportation command & emergency services). | 30,000 | Communication | 8 | |
| Emergency Mgmt | 4 | Support of Amateur Radio Volunteers | 20,000 | Communication | 9 | B |
| Firefighting | 2 | ID / Credentialing system | 70,000 | Equipment | 7 | A |
| Oil & Hazmat | 2 | CERRIT Training and Exercise | 55,000 | Equipment | 11 | |
| Agriculture & NR | 2 | Pet friendly shelter supplies | 77,616 | Supplies | 12 | C |
| Agriculture & NR | 3 | Rescue Supplies | 32,207 | Supplies | 13 | C |
| Emergency Mgmt | 2 | Citizen Corps - CERT expansion and enhancement | 50,000 | Training | 10 | B |
| Agriculture and NR | 1 | Education | 1,200 | Training | 14 | C |
| | | Total Items | \$ 917,033 | | | |
| | | Planning and Administration | \$ 40,293 | | | |
| | | Grant Amount | \$ 957,326 | | | |

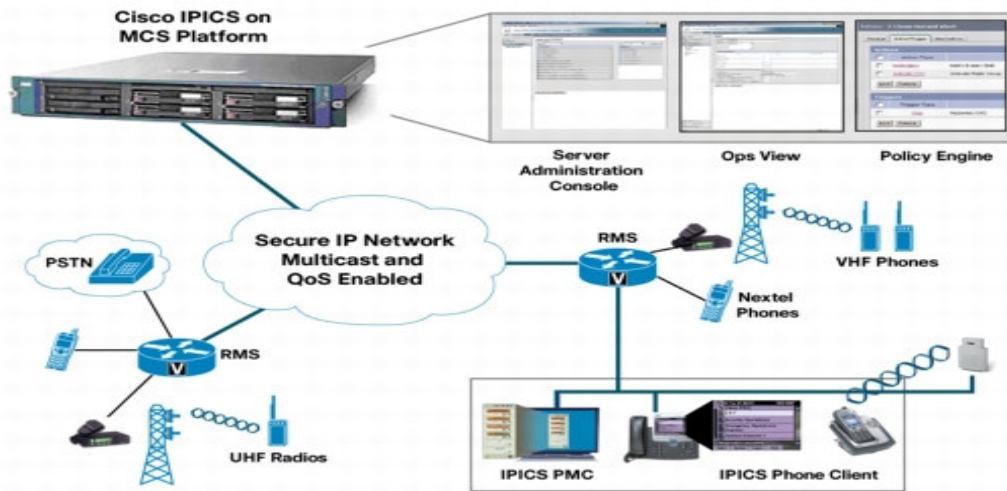
| | | | |
|--|---|--------|--------------------|
| RESF | Communication | RESF # | 2 |
| | | Cost: | \$ 481,010. |
| Item | IP Switch and Router to allow interconnection, as needed, of existing radio systems of any public safety or health and welfare agencies that wish to participate | | |
| Description: | | | |
| <u>REGIONAL INTEROPERABLE COMMUNICATIONS NETWORK</u> | | | |
| <p>Within minutes of the bombing of the Murrah Federal Building in Oklahoma City, fire department, local and state police, ambulance, public works, FBI and other personnel were on the scene attempting to treat the wounded, extinguish the fire, stabilize the building, preserve evidence and locate the perpetrators. The Incident Command System was unable to effectively coordinate activities due, in part, to the fact that the various disciplines had no common or <u>interoperable</u> communications means. This incident highlighted that the common understanding then in place for the use of radio and other communications means does not promote command and control of all resources needed to cope with a complex emergency.</p> <p>The National Response Framework, the document that currently describes how government at all levels will respond to disasters, is based on the concept that all disasters are local events and that authorities reach out to higher headquarters to obtain the resources needed to cope. The events in Oklahoma show that a communications strategy that is based on the continuation of the <i>status quo</i> will not provide Emergency Managers, Incident Commanders and CEO's the tools they need to exert control over incidents that they are charged to manage.</p> <p>The DEMHS Region 4 ESF2 Committee proposes to put in place an Internet Protocol (IP) communications network backbone that will link the dispatch centers that serve Region 4 and will enable police, fire and ambulance responders from all parts of the region to directly communicate with one another using their native radio equipment. Allied health, welfare and relief response agencies that may be involved with sheltering, debris removal, pandemic disease response, commodity distribution, etc. such as public works agencies, bus transportation agencies (including school bus fleets), public health nursing organizations and animal welfare groups will be added to the network as time goes on. Out-of-region response agencies (e.g., state & federal agencies, responders from neighboring states and nongovernmental entities) will also be able to be served by the network. Other digital devices such as cellular telephones, IDEN phones, e.g., Nextels, sound card equipped PC's with internet addresses and VoIP telephone systems will also be able to participate in managed network communications. Networks like this are very effective in CA, VA and RI. This technology is the approach that DEMHS has selected to implement a secondary State EOC in Southbury.</p> <p>This network operates by converting received audio from radio systems into IP packets and routing them over a secure data network to all dispatch centers that are connected to the network. Thus a radio-equipped unit that remains in two-way communication with any dispatch center may be assigned to a talk group to communicate directly with any other unit in similar contact with any other dispatch center regardless of the radio band or frequency on which each unit is operating. Talk groups can be established that will allow, for example, a police radio operating in the 800MHz band to talk to a fire officer operating on VHF low band and an ambulance operating in the uhf band. If necessary, the town's Emergency Manager could also communicate with the above units on his DEMHS VHF radio, his cell phone or his NEXTEL IDEN phone. The Town's CEO or shelter manager, for example, might, if necessary, join in the conversation from their desks if their PC's are equipped with sound cards and Internet addresses. Communication to dispatch centers or other headquarters, for example, the State DEMHS Headquarters at the Armory in Hartford, would also be possible over the 800MHz I/Tac system or by other means over the network.</p> <p>The system will operate over the Connecticut High Speed Public Safety Data Network, a network planned to be activated around the middle of 2009. The initial and ongoing cost of this network will be supported by the state's 911 Fund. This network is expected to include satellite up-links at most, perhaps all, dispatch centers making the network highly secure, even in the event of loss of multiple fiber links during a severe weather situation.</p> <p>In order to participate in the network, agency radio systems must be able to participate in two-way radio communications with one of the Region's dispatch centers. Connected radio systems at the time of establishment of the network will be</p> | | | |

enabled to participate on the network. It is expected that the network will grow over time to include many other allied health and welfare providers such as school bus fleets, NGO's such as the American Red Cross and state agencies such as ConnDOT. The cost of adding health welfare and relief agencies to the network will be the cost of establishing two way radio, Iden phone service or VoIP telephone service to the nearest dispatch center communications node. These costs could range from a few hundred to a few thousand dollars, depending on how the agency wants to join the network. One inexpensive way to participate will be to join a common vhf frequency network that all health welfare and relief agencies will share.

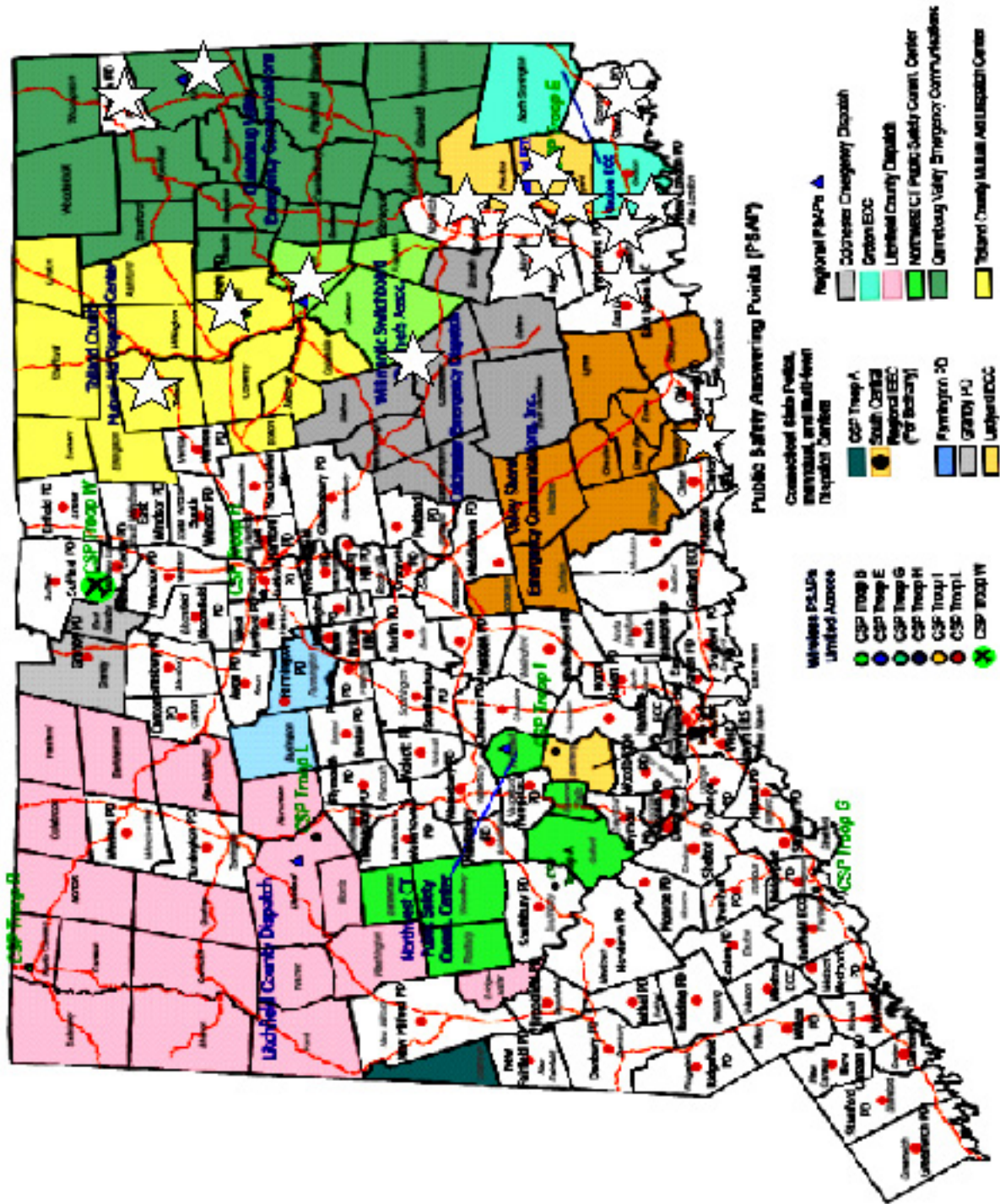
Detailed cost information will not be available until negotiations with selected vendors conclude. ESF 2 obtained the proposals submitted to DoIT by twelve prospective vendors during the Federal PSIC grant process and intends to interview most of these vendors. The current estimates have been verified to be within range of two of the most widely used vendor's systems for installation, training and first year software maintenance agreements. Connected radio capabilities vary, but are generally considered to be around eight frequencies for small PSAP's and sixteen frequencies for large PSAP's.

The Committee believes that this proposal will provide a means of implementing throughout our very large region a more powerful interoperable communications capability at a significantly lower capital cost than would otherwise be possible as a consequence of adopting modern technologies not previously implemented in this state for this purpose, but emerging nationally as the public safety networks of the future.

TYPICAL SCHEMATIC DIAGRAM FOR ILLUSTRATIVE PURPOSES ONLY



Connecticut PSAP Jurisdictions



| | | | |
|--|-------------------------------------|--------|--------------------|
| RESF | Firefighting | RESF # | 4 |
| | | Cost: | \$ 100,000. |
| Item | Mobile Communication Trailer | | |
| Description: | | | |
| <p>JUSTIFICATION: To increase interoperability communications within the region. This communications trailer would have the capability of deployment directly to an emergency scene and also to serve as a back-up to dispatch centers in the region. Region 4 geographically covers over 1200 square miles and incorporates forty-one municipalities with two tribal nations. The need for an additional communications trailer is clear. The current communications trailer is a CERRIT asset with the primary function to respond HAZMAT calls. This trailer is currently located in the City of Groton.</p> <p>NIMS National Incident Management System Communication and Information Management</p> <p>Agencies must plan in advance for the effective use of information management technologies to tie together all command, tactical, and support units involved in incident management and to enable these entities to share information critical to mission execution and the cataloging of required corrective actions.</p> <p>24 foot Trailer</p> <p>Region 4, Emergency Support Function 4 (ESF-4), Fire Service, has determined the inadequacy of emergency field communications at major incidents and public events throughout the region. The Incident Command System (ICS) depends on the presence of a <i>functional on-site communication system</i>. During large-scale incidents or events (Sail-Fest, Fairs etc.), Region 4 agencies must be able to communicate, not only with each other, but also with other emergency response agencies.</p> <p>Region 4, Emergency Support Function 4 (ESF-4), Fire Service, is requesting the purchase of a regional mobile field communication trailer as part of the Connecticut Regional 4 Homeland Security Strategy. Region 4 (ESF-4) Fire Service <i>identified a need for interoperability</i>—the ability for commanders to communicate with each other at the scene of a major emergency—this is a top priority for public safety managers. This field communications trailer will be used to address some of the interoperability issues among all public safety personnel at major incidents.</p> <p>The field communication trailer has an estimated cost of \$100,000. The trailer will be placed in a central location in Region 4 from where it can be rapidly dispatched for the creation of communications links with all public safety agencies at the scene. An efficient communications link includes radio, telephone, and data links with all agencies.</p> <p>This type of communications trailer allows for many different tow vehicles to pull it, assuring a reliable response. The use of a trailer also allows the tow vehicle to be used for other applications or assignment after the trailer has been put in place.</p> <p>This field communication trailer helps to create a Region 4 <i>safety net</i> that not only serves the public but also protects the public servants. As a regional approach to homeland security, this trailer will be dispatched to the scene of a major emergency based on incident or event. The trailer will enhance operational communications and incident management by linking up with other vehicles from agencies such as CT-DEMHS, Police, Fire and EMS Departments, , CT State Police and our fellow ESF's in Region 4.</p> <p>This trailer is set -up, equipped and ready to respond 24 hours a day, 7 days a week and 365 days a year should a major event occur or any local hazardous emergency event that may happen within Region 4. Any Law Enforcement Agency, Fire and EMS service and Emergency Support Function can call for the trailer any time it is needed. As a public education tool, the trailer can be shown to schools, organizations, civic groups, businesses or public agencies who wish to go through it to observe its capabilities.</p> | | | |
| See Appendix A: Mobile Field Communications Trailer | | | |

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|--|---|--------|-------------------|
| RESF | Firefighting | RESF # | 4 |
| | | Cost: | \$ 70,000. |
| Item | Identification System / Credentialing System | | |
| Description: | | | |
| <p>JUSTIFICATION: The need to identify, account for and credential responding personnel to emergency scenes is critical to the overall site management of this type of event. This system [hardware and software] would provide on-scene capabilities as well as region wide accountability for responding personnel [career and volunteer].</p> <p>The NIMS document mentions a credentialing system tied to training and certification standards. Is there a national credentialing system in place that we need to follow?</p> <p>A: The development of a nationwide credentialing system is a fundamental component of NIMS. A national credentialing system can document minimum professional qualifications, certifications, training and education requirements that define baseline criteria expected of emergency response professionals and volunteers for deployment as mutual aid to disasters. While such a system is meant to verify the identity and qualifications of emergency responders, it does not provide automatic access to an incident site. The credentialing system can help prevent unauthorized, i.e., self-dispatched or unqualified personnel, access to an incident site. To support this credentialing initiative, the Center will use working groups to identify positions that should be credentialed and the minimum qualification, certification, training and education requirements for each position. The groups will represent the following disciplines:</p> <ul style="list-style-type: none"> Incident Management Emergency Medical Services Fire Fighting and Hazardous Materials Response Law Enforcement Health Care Public Health Public Works Search & Rescue Animal Control / Veterinary <p>In addition to these NIC discipline groups the NIC is working with other organizations to assist their development of credentialing for their disciplines, such as the APCO/NENA initiative to credential emergency dispatchers, and the Citizen Corps initiative for credentialing volunteers.</p> | | | |
| See Appendix A: fireTRAX® Accountability | | | |

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|--|---|--------|-------------------|
| RESF | Transportation | RESF # | 1 |
| | | Cost: | \$ 30,000. |
| Item | Communication within region (between transportation providers, centralized transportation command & emergency services). | | |
| Description: | | | |
| <p>This request is intended to provide two way radio equipment, including six (6) table top base stations, cable and antennas, and receiving hardware as needed, that will allow communication between the headquarters of the three regional public transportation agencies (Windham Region Transit District, Northeast CT Transit District and Southeast Area Transit) to allow coordination between agencies in the event of a regional emergency, allowing inter-jurisdictional information and resource sharing, improved coordination and appropriate response management. This equipment will also allow communication between the transportation providers and their local emergency dispatch center allowing, in conjunction with the Interoperable Communications Network proposed by ESF-2, transportation agencies to communicate directly with Emergency Managers, Incident Commanders, regional DEMHS Coordinators and other higher headquarters as necessary to appropriately manage resources and response to emergencies.</p> | | | |

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| RESF | Emergency Management | RESF # | 5 |
| | | Cost: | \$ 20,000. |
| Item | Support of Amateur Radio Volunteers | | |
| Description: | | | |
| <p>Amateur radio operations have become a recognized entity of the Emergency Management volunteer force. In recent years, amateur radio operators have proven to be invaluable communications assets when communicating with volunteer teams engaged in emergency operations. Amateur radio support offers a primary means of volunteer communications without overtaxing traditional emergency communications centers that are using their resources in support of Emergency Services operations. Further, it is recognized that volunteer services of any kind is a logistical responsibility of this RESF, including Amateur radio volunteers. For that reason, it is requested that \$20,000.00 be allocated in support of local amateur radio operations with the purchase of an equipment trailer and any additional radios and equipment for communications between Emergency Management and volunteer operations.</p> | | | |
| See Appendix B: Amateur Radio Emergency Service Communications Trailer | | | |

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|--|---|--------|-------------------|
| RESF | Emergency Management | RESF # | 5 |
| | | Cost: | \$ 50,000. |
| Item | Citizen Corps – CERT Expansion and Enhancement | | |
| Description: | | | |
| <p>The Community Emergency Response Team (CERT) Program is administered by FEMA's Community Preparedness Division. CERT is a training program that prepares people to help themselves, their families and their neighbors in the event of a disaster in their community. With this training, volunteers can provide critical support by giving immediate assistance to victims before emergency first responders arrive on scene. CERT volunteers also support the community year-round by participating in community preparedness outreach activities and distributing materials on disaster preparedness. CERT does exist within the region on a municipal level; however, development of a Regional program would add one more valuable resource that can be utilized region wide in times of crisis. Although volunteer manpower is plentiful within local teams, equipment and supplies needed to support teams when activated is not. Currently, each CERT team is funded by the Connecticut Statewide Citizen Corps Council for team-specific supplies and training on a limited funding basis; this does not extend to items that would be shared during a regional response. For this reason, \$50,000.00 is requested for the development of a Region IV CERT Program in support of a regional CERT activation. The money would be utilized for specialized training of CERTs including but not limited to: Search and Rescue, Extended Shelter Operations, and traffic control. Items to be purchased would include, two CERT trailers outfitted with CERT disaster supplies, portable awnings, tables, forms, a portable generator, and other items necessary to support prolonged operations of a CERT response anywhere in the region. These trailers would be placed in the Northern and Southern areas of the Region respectively to facilitate quick responses throughout the region.</p> | | | |
| See Appendix B: Regional CERT Trailer Supply Breakdown | | | |

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|---|-------------------------------------|--------|-------------------|
| RESF | Oil & Hazmat | RESF # | 10 |
| | | Cost: | \$ 55,000. |
| Item | CERRIT Training and Exercise | | |
| Description: | | | |
| <p>The Connecticut Eastern Regional Response Integrated Team (CERRIT), recognized as the Hazardous Material response team by the Connecticut Department of Emergency Management and Homeland Security for Region 4, provides Haz-Mat response capability throughout New London and Windham Counties. The CERRIT is a regional team in every sense of the word, consisting of members of the following organizations:</p> <p>Submarine Base Fire Department (Federal Agency, not reimbursed or funded by DEMHS or the region) Mohegan Tribal FD (Career) Mashantucket Tribal FD (Career) Norwich FD (Career) Mystic FD (Combination) Willimantic FD (Career) UCONN Storrs FD (Career) Muddy Brook FD (Vol.) New London FD (Career) Poquonnock Bridge FD (Career) Pawcatuck FD (Comb.) Montville FD (Comb.) Waterford FD (Comb.) Lisbon FD (Vol.)</p> <p>CERRIT also receives support from the private sector from Pfizer, Electric Boat and Dominion Power.</p> <p>Each Department contributes manpower and equipment for training and response capability to the CERRIT and is available to any municipality in Eastern Connecticut. These Departments have continually supported the CERRIT from their own funding sources, primarily their budgets, to ensure regional preparedness. New London, Norwich, Mohegan and Mashantucket Tribal Depts. and Mystic have invested thousands of dollars individually to equip and support the personnel costs associated with the team’s readiness. Lisbon has provided a mobile trailer for extra suits and equipment. New London and Montville have provided fully equipped technical decontamination trailers. Mystic has provided additional metering test kits and sampling equipment with their response trailer. All of the departments have contributed funding to the regional effort. All of these expenses are above and beyond what is required of the individual department’s mandated annual training and proficiency requirements for firefighting.</p> <p>This funding requested is to provide for expenses incurred that are not being reimbursed by or provided for by other funding sources or programs. These expenses may be used for equipment, training, testing, calibrations and upgrades. The team provides for quarterly regional team training. This quarterly training, although mandated by industry guidelines and standards has less than successfully qualified with state agencies for overtime and backfill expenses charged to the participating departments.</p> <p>The requested funding is to fill the gaps in funding by other agencies for the teams requirements and needs. The individual departments involved are committed to CERRIT Team readiness but cannot continue to absorb all costs associated with their participation. Several of the participating departments have noted the impact on their local budgets as potentially problematic if not provided for by regional funding. There is a collective regional responsibility to provide funding for the un-reimbursed expenses the departments are experiencing.</p> | | | |

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|--|--|--------|-------------------|
| RESF | Agriculture & Natural Resources | RESF # | 11 |
| | | Cost: | \$ 77,616. |
| Item | Pet Friendly Shelter Supplies | | |
| Description: | | | |
| <p>A lesson learned from Hurricane Katrina is that people will refuse to evacuate if they must leave their pets behind. Half of all homes have at least one pet. By providing for pets, human lives - both victims and first responders - can be saved. The Pets Evacuation and Transportation Standards Act (PETS Act, Public Law N. 109-308) mandates each state to develop and implement a plan that provides sheltering for both people and their animals in the event of an emergency. Failure to have such a plan puts federal disaster assistance funds at risk. Following this Federal legislation, the CT Legislature passed Public Act 07-11 requiring each town's emergency plans to address caring for household pets in conjunction with emergency shelters.</p> <p>ESF 11 has planned a regional response to pet sheltering in a disaster. Instead of each town purchasing equipment and establishing a pet-friendly shelter, pet owners will be directed to the closest Region 4 pet-friendly sheltering location. Tentatively we have identified Groton, New London, Lebanon, Mansfield and Plainfield as our locations for pet-friendly shelters. These shelters would be run by specially trained CERTs, known as SART (State Animal Response Team). This would allow municipal animal control officers to continue doing their job during a disaster, while the emergency sheltering is taken care of by trained personnel.</p> <p>By using the regional approach, we hope to avoid duplication of effort by the municipalities. When pet-friendly sheltering is needed in your community, you will contact either of the ESF 11 co-chairs who will activate the SART personnel to set-up and run the shelter. With the proper training and equipment at hand, this approach will be the safest and least costly method to comply with the PETS law.</p> <p>By funding the ESF 11 request, you will comply with the federal mandate without expending large amounts of municipal funds and staff effort.</p> | | | |
| See Appendix C: Pet friendly shelter supplies | | | |

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|---|--|--------|-------------------|
| RESF | Agriculture & Natural Resources | RESF # | 11 |
| | | Cost: | \$ 32,207. |
| Item | Rescue Supplies | | |
| Description: | | | |
| <p>Our request also includes all the rescue supply items needed to set up a temporary pet shelter such as leashes, cages, bowls, animal handling equipment and trailers to transport the equipment to where it is needed. The stocked trailers would be stored at strategic locations so as to be available on short notice. Our training item is for specialized training not available from DEMHS. It is for TLAER (Technical Large Animal Emergency Rescue) which involves working with specially trained animals to safely learn large animal rescue techniques. There is only one trainer who does this course.</p> | | | |
| See Appendix C: Rescue Supplies | | | |

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|---|--|--------|------------------|
| RESF | Agriculture & Natural Resources | RESF # | 11 |
| | | Cost: | \$ 1,200. |
| Item | Education | | |
| Description: | | | |
| <p>Our funding request includes materials with which to educate pet owners on planning for a disaster and preparing a pet “disaster kit.” By getting pet owners to plan ahead and prepare, we hope that there will be less need for pet-friendly shelters.</p> | | | |
| See Appendix C: Education | | | |

APPENDIX A

| Mobile Field Communications Trailer | |
|---|---------------------|
| 24 FOOT TRAILER | \$ 15,000.00 |
| GENERATOR | \$ 15,000.00 |
| RADIOS | \$ 40,000.00 |
| DESKTOPS WORKSTATION TABLES CHAIRS LIGHTING/electrical HEAT/COOL | \$ 30,000.00 |
| TOTAL | \$100,000.00 |

| Communications Trailer Equipment | | | |
|---|---|------------------|-----------------|
| QTY | Description | Unit Cost | Extended |
| 4 | Low Band Mobile Radios, 33 mHz | \$ 600.00 | \$ 2,400.00 |
| 2 | Low Band Mobile Radios, 46 mHz | \$ 600.00 | \$ 1,200.00 |
| 4 | VHF Mobile Radios | \$ 500.00 | \$ 2,000.00 |
| 4 | UHF Mobile Radios | \$ 500.00 | \$ 2,000.00 |
| 1 | 800 mHz Mobile, NPSPAC | \$ 650.00 | \$ 650.00 |
| 1 | 800 mHz Mobile P25 Trunking | \$ 2,400.00 | \$ 2,400.00 |
| 1 | Amateur 2M/440 Control Station | \$ 450.00 | \$ 450.00 |
| 17 | Mounting Bezels | \$ 45.00 | \$ 765.00 |
| 2 | Equipment racks | \$ 1,250.00 | \$ 2,500.00 |
| 17 | Antenna Allowance/per radio | \$ 100.00 | \$ 1,700.00 |
| 4 | Power Supply, BB 70-amps w/distribution | \$ 1,325.00 | \$ 5,300.00 |
| 4 | 100-aH Battery | \$ 245.00 | \$ 980.00 |
| 4 | Battery boxes and mounts | \$ 45.00 | \$ 180.00 |
| 4 | Battery Cables w/fuse | \$ 95.00 | \$ 380.00 |
| 80 | Installation labor, programming | \$ 78.00 | \$ 6,240.00 |
| | | | \$ 29,145.00 |



Critical Incident Team

Region 4



3 Printer Option

| | Product Code: | Description: | Price: | Extended: |
|--|---|---|---------------|------------------|
| FireTrax | | | | |
| 1 | FT-HOST | A01: Host Software (Per CPU) | 2,995.00 | 2,995.00 |
| 1 | FT-SMC-H-3 | 3 Year Software Maintenance Host | 1,440.00 | 1,440.00 |
| 1 | FT-Com | Command Software per CPU | 4,995.00 | 4,995.00 |
| 1 | FT-SMC-C-3 | 3 Year Software Maintenance Command | 2,400.00 | 2,400.00 |
| 1 | FT-WSCAN | Wireless Scan with Blue Tooth, USB, Cradle | 1,207.00 | 1,207.00 |
| 1 | HMC-FTSCAN-3 | Hand Scanner 3 Year Contract | 250.00 | 250.00 |
| 4 | FT-DCI-Kit | Industrial Data Capture Kit (Includes spare battery, cradle, holster sw) | 3,995.00 | 15,980.00 |
| 4 | HMC-DCI-3 | K20: Industrial Data Capture 3 Year Hardware Service Contract | 630.00 | 2,520.00 |
| 4 | FT-SMC-RT-3 | 3 Year Software Maintenance Rapid Tag | 957.60 | 3,830.40 |
| 1 | FT-S24 | 11 MBs. Spec 24 Access Pt. Package | 1,124.00 | 1,124.00 |
| 4 | FT-FANT | Fixed Mount Vehicle Antenna | 100.00 | 400.00 |
| 1 | HMC-S24-3 | K12: S24 Three Year Service Contract | 235.00 | 235.00 |
| 4 | FT-DCX-VCRAD | B18: Vehicle Cradle for FT-DCX | 480 | 1,920.00 |
| 4 | FT-Config | Set Up Hand Held Software at Factory | 75.00 | 300.00 |
| 1 | FT-SERV | Install and Train | 2,500.00 | 2,500.00 |
| Accountability Accessories: | | | | |
| 500 | FPV-RING | H11: Complete Ring (FPV-F, G, & H) | 4.95 | 2,475.00 |
| 1 | FPV-O | H23: Large Collection Binder - NIMS Style (36" x 28" open) | 150.00 | 150.00 |
| 1 | FPV-P | H24: First Due Board - NIMS Style (13" x 16") | 70.00 | 70.00 |
| 1 | CPW-52 | Worktable/tripod | 199.00 | 199.00 |
| 1 | FT-CASE-LG | Large Case with Foam | 295.00 | 295.00 |
| 1 | CPW-CASE | Carrying case for tripod | 69.00 | 69.00 |
| 1 | CCB-2 | IM System board (Plexigas enclosed) | 199.00 | 199.00 |
| | CP60 | Data Card Accountability Tag /Credentialing System Includes Salamander Technology Barcode For Printing Cards | | |
| 3 | Cp60 Plus Duplex Printer | | 3,800.00 | 11,400.00 |
| | Includes 2 Year On Site Warranty | | | |
| 3 | ID Centre Silver with Salamander Barcode Capability and Project | | 2,400.00 | 7,200.00 |
| | Includes, Design, Production and Reports | | | |
| | Create Barcode PDF417 with Salamander Project | | | |
| | Compliant with Connecticut Hazmat Team Salamander Readers | | | |
| 3 | Software Phone Support- 1 Year | | 100.00 | 300.00 |
| 3 | Onsite Card Software Install (Card Design) | | 795.00 | 2,385.00 |
| 15 | Ribbon Ymckt-KT (300 cards) | | 165.00 | 2,475.00 |
| 12 | Box Cards (500 Card Count) | | 36.00 | 432.00 |
| <p>Pricing and Configuration are courtesy of Kathleen Agid, Higgins Corporation. (203)554-2914</p> <p>Purchase order Should be Mailed to Address Below. Please Fax a copy to: 1-(661)554-2914.</p> <p>Higgins Corporation</p> | | | | |
| | 777 Broadway | | Subtotal: | 69,745.40 |
| | South Portland, ME 04116 | | Shipping: | 250.00 |
| | 800-486-1312 Fax (207)767-5268 | | | |
| | Attn: Kathleen Agid | | Total: | 69,995.40 |



fireTRAX[®]
ACCOUNTABILITY

SALAMANDER TECHNOLOGIES

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877.430.5171



SECONDS COUNT

Fire ground accountability is not optional. Issues of life-safety, incident command and control, and leadership liability make tracking **who** is on-scene with **what** qualifications, **when** they arrive/depart and **where** they are located of utmost importance. **NIMS** compatible standard accountability is the call: fireTRAX[®] Accountability is the answer, easy as 1, 2, 3.

3 -- ELECTRONIC INCIDENT COMMAND --

If the incident dictates, deploy a fireTRAX[®] Command laptop to monitor multiple mobile units as part of a wireless local area network (WLAN). The electronic command board shows a tactical diagram of all assignments, companies, and personnel. Run multiple PAR timers, maintain a command log, work a checklist, and create ID tags right at the site. Establishing a wide-area network allows remote facilities – such as an EOC – to monitor the incident.

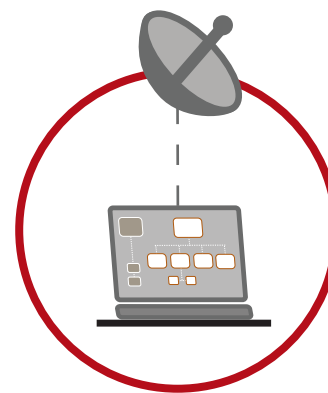
2 -- MOBILE COMPUTING --

Scanner-enabled, mobile units act as the bridge between manual and electronic accountability. Scan the responder's ID tag to display qualifications, check-in, and make assignments with all events time and date stamped. Simple PAR reports provide number and status of all units and personnel. Search the database by selecting quals or display the site history of a selected responder.

1 -- MANUAL ACCOUNTABILITY --

Traditional tags enhanced with photo-ID and a high-capacity barcode provide both visual and electronic identification when fully implementing fireTRAX[®]. Collector rings are used to organize companies, while collection boards provide the incident commander a complete visual representation of all responding units and personnel. fireTRAX[®] supports NIMS and always provides a manual backup system.

fireTRAX[®] ACCOUNTABILITY SYSTEM



3

ELECTRONIC
INCIDENT
COMMAND



2

MOBILE
HANDHELD
COMPUTING



1

MANUAL
ACCOUNTABILITY

.. FIRE GROUND ACCOUNTABILITY ..

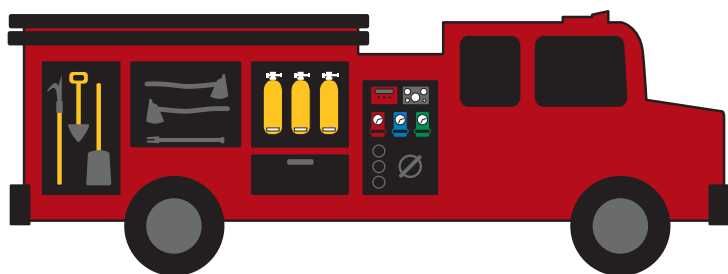


fireTRAX[®]

ACCOUNTABILITY

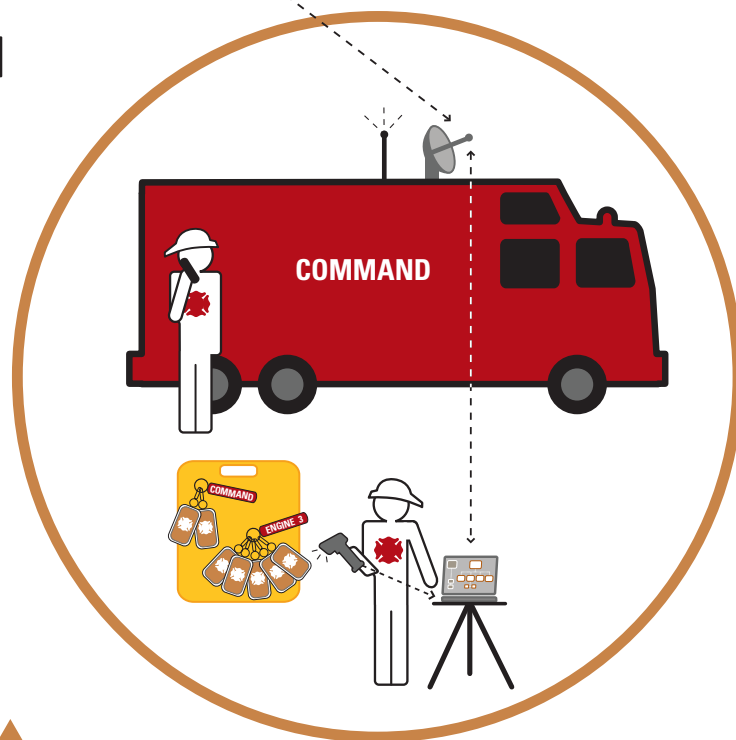
MANUAL ACCOUNTABILITY STANDARDS

- Simple 2-Tag SOP
- Responder → Company → Assignment → Collector Process
- Hot Zone Egress Management
- Basic PAR and Qualifications Management
- Easily Rolls up to Electronic Incident Command



ELECTRONIC INCIDENT COMMAND

- Supports NIMS
- Fast, Accurate, Secure
- Scalable for Mass Incidents
- Unites Mutual Aid/Interoperable
- ID tag is a Portable Data File



U.S. Patent No. 5,596,652 & 5,793,882
protect the fireTRAX[®] system & method.
U.S. Patent No. 5,573,278 protects
the fireTRAX[®] tag design.



877.430.5171

122 W State St, Traverse City, MI 49684
www.salamandertechnologies.com

THE STANDARD IN ACCOUNTABILITY™



fireTRAX[®]

ACCOUNTABILITY

-- VERSION 1.7 --

WHITE PAPER

SALAMANDER TECHNOLOGIES

JULY 2005

PERSONNEL ACCOUNTABILITY IN THE POST 9/11 ENVIRONMENT: Handling the Routine While Preparing for the Worst

ABSTRACT:

Tracking personnel and maintaining site security at a large-scale incident is a formidable challenge. Incident managers must account for all responders and visitors at site – departmental, mutual aid, outside agencies, volunteers, and civilians. The scope of these incidents goes way beyond the capabilities of traditional ID tagging systems or central dispatch unit tracking. What is needed is an on-scene, automated accountability system that is simple but can scale to meet the unique needs of a mass incident.

The fireTRAX system is the solution to this problem. Approved for purchase under the Department of Homeland Security's 2005 Authorized Equipment List (AEL), this unique system can be cross-utilized tracking personnel at incidents, during training and daily routines, providing an immediate return on investment. The fireTRAX system has quickly become the standard for personnel accountability in the USA, providing a marriage of manual and electronic accountability. Agencies can roll up from a standard 2-tag system and a collection board, to a full-scale electronic accountability system that provides the foundation for interoperability among responding agencies.

THE RULE: Accountability for Routine Incidents

Most everybody in public safety is familiar with the concept of personnel accountability – the need to know on a real time basis:

WHO is at site?

WHAT are their qualifications? (to perform certain functions)

WHERE are they located?

WHY are they at site? (permission to be at site/access control)

WHEN did they arrive/depart?

Over the years, first response agencies have adopted simple methods to track responders during routine day-to-day operations:

-- **Maintain Crew Integrity and Conduct PARs** -- Most agencies follow ICS protocols for maintaining crew integrity with close supervision by a unit officer who is responsible for responding to periodic requests for PARs (personnel accountability reports) via radio.

-- **Management by Crew Roster/Central Dispatch** -- Many salaried departments with fixed-shifts perform accountability based on dispatched units - knowing (or at least assuming) the personnel roster for that dispatched unit accurately reflects who is actually on that unit.

-- **Management by Dog Tag** -- Other agencies have adopted tagging systems where responders physically attach their tags to a unit collector to visually represent their assignment to that unit. The unit collectors can then be posted on a collection board so an incident manager can see all responding units and their "attached" personnel and help reconcile PARs.

For the most part, these accountability methods have been fine – they are right-sized for the vast majority of incidents because these incidents are typically small, routine responses that involve only your agency. However, these same accountability tools can totally breakdown becoming useless during a large-scale or mass incident.

THE EXCEPTION: ACCOUNTABILITY FOR MASS INCIDENTS

During a major emergency such as a natural disaster or terrorist attack, dozens, if not hundreds of first responders may converge on your site. Some will be from your agency, some from mutual aid, regional response teams, and perhaps state and federal agencies. Furthermore, public officials and workers will respond to site including public health, public works, and health care providers. In addition, you should expect civilian authorities, press, and volunteers to arrive at your site, invited or not. Finally, the event may involve mass casualties. All of these responders and victims are your responsibility. You have to account for them and you have to maintain site security and access control. It is an overwhelming burden . . .

THE CHALLENGE: Overcoming Barriers to Action

Public safety and homeland security officials universally agree that we, as a nation, have to prepare for major disasters. Most point to terrorist threats, bioterrorism, or WMD - but the same can be said for natural disasters such as hurricanes, earthquakes, or natural epidemics. A fundamental requirement of this emergency preparedness is the ability to rapidly and accurately track responders to, and victims of, a mass incident. Yet, since tragic events of 9/11, very little has been done to address this need to track resources. Why? There are several barriers to action, which, upon closer inspection, are not barriers at all:

- **Disasters are Rare** -- This excuse flies in the face of our homeland security imperatives made so real with the 9/11 terrorist attacks. It's like saying the odds of my house burning down are rare, so I won't buy a fire extinguisher. Or the odds of getting in a traffic accident are rare, so I won't wear a seat belt. The problem is once the latest disaster is off the front-page headlines, the urgency to correct the situation is diminished, and it is "business as usual" for public safety officials, bureaucrats, and the public funding apparatus. Thankfully, since 9/11 this attitude appears to be changing . . .
- **It's Too Hard to Automate** -- The argument here is preparing for mass incidents will require adoption of "star wars" technologies and systems that are just too complicated and beyond the reach of our first response agencies. This isn't so. Automatic identification technologies have been successfully used by front-line agencies for years. These include high-capacity barcodes, handheld pocket PCs, and wireless local area networks. These proven technologies have been integrated into a system that specifically addresses personnel accountability for mass incidents.
- **Are Purchases Authorized?** -- Some agencies believe personnel accountability systems are not approved for purchase under homeland security grants. This is a dangerous assumption. Personnel accountability systems are specifically approved for purchase under the 2005 Department of Homeland Security's Authorized Equipment List (AEL) - item 4.4 System, Operations Area Personnel Tracking and Accountability. Systems can be purchased under various fiscal year 2005 grant programs, including: the Assistance to Firefighters Grant Program (\$650 million); the State Homeland Security Grants (\$1 billion); the Urban Area Security Initiative (\$1.2 billion).
- **Where's the Payback?** -- This barrier is related to the "disasters are rare" excuse. The basic argument here is there is no return on investment in preparing for a mass incident. Another dangerous position. Obviously, if a mass incident does occur, then there is a huge payback on your investment. Furthermore, even if there is no disaster on your watch, your personnel accountability system can be cross-utilized for various routine tracking applications providing your organization much needed proficiency training as well as day-to-day efficiencies.
- **Waiting for a Standard** -- Some agencies have been waiting for a standard to evolve before committing to the purchase decision. The wait is over. The fireTRAX® system has set the standard for personnel accountability in the USA. The standard requirements are based on a firm foundation:

- a.) The system must meet the key leadership needs for effective personnel accountability including simplicity, scalability, survivability, security, and standardization.
- b.) The system has to be NIMS compatible and in-line with evolving standards for unified credentialing and it needs to feature an open architecture with technologies that are in the public domain.
- c.) The system needs to be easily adopted by first response agencies across the country in a uniform simple manner.

CRITERIA FOR EFFECTIVE ACCOUNTABILITY

So what are the criteria for an effective personnel accountability system? They can be summarized by the Five "S's":

- **SIMPLICITY** -- An effective accountability system has to be simple or first responders in the field will reject it. The fireTRAX system is based on commonly accepted SOPs for tracking personnel including the use of a standard 2-tag tracking methodology for day-to-day accountability. The system can be run in a manual mode or automated as the situation dictates. When automated, fireTRAX features easy aim and shoot barcode scanning techniques and intuitive screen navigation on the data terminals or PCs.
- **SCALABILITY** -- As addressed throughout this paper, an effective accountability system has to be able to scale – from daily tracking routines all the way up to providing accountability and site security at a mass incident. This scalability provides training benefits as well as an ROI to the agency. The fireTRAX system was specifically designed to be scalable. As will be shown later, the fireTRAX system architecture lets the agency deploy the system as a manual tagging system (tag level) or they can automate it with a hand-held Pocket PC (PDA level) or they can have one or more Pocket PCs communicating to a command post via radio frequency (LAN level) or they can have one or more command posts being monitored by a remote facility, such as an EOC using a web-based application (WAN level).
- **SURVIVABILITY** -- A critical element for a field accountability system is survivability because, as we all know, computerized systems can breakdown. The fireTRAX system features high-capacity, machine-readable ID tags - portable data files that survive and can be accessed even if central databases and wide-area communications are down. In addition, the system can easily revert back to a traditional manual tracking system if all electronics and communications fail.
- **SECURITY** -- An increasingly important element of accountability is security and this security must be provided on various levels. The fireTRAX system features ID tags that can carry a biometric (eg., photo) and the high-capacity barcode can be encoded with an individual's qualifications or certifications so you can make sure they are qualified to be at site and perform certain functions. A medical barcode can be encrypted so only authorized individuals can access this sensitive information during an emergency. In addition, fireTRAX has a field tagging module (rapidTAG™) that allows you to create incident-specific credentials for all responders and site visitors – insuring access control at a high-security incident or site.
- **STANDARDIZATION** -- Interoperability is the buzzword in public safety, and fireTRAX meets this critical requirement by uniting mutual aid and sister agencies with a common ID tag format and tracking system. In addition, fireTRAX is in compliance with NFPA standards for accountability and the National Incident Management System (NIMS) as standards are adopted.

PREPARING FOR THE FUTURE – NIMS Compliance / Standardized Credentials / Open Architecture

A key element when selecting an accountability system is making sure you will not go down a blind alley or get left behind as standards evolve. fireTRAX has been tracking (actually leading) the Feds as they address unified command and interoperability under NIMS and how that will impact resource accountability. The accountability method of fireTRAX comes straight from ICS, which is being adopted nationwide. As mentioned, fireTRAX has been pushing the whole interoperable concept – where personnel bring their data to site in a common, machine-readable data format so they can be rapidly and accurately screened, checked-in, and tracked. Furthermore, the high-capacity barcode in fireTRAX already has fields to track commonly used qualifications and certifications – so if and when the Feds finally standardize first responder testing and credentials across the USA, the fireTRAX system and tags will be able to immediately accept these standard “quals.”

Finally, the fireTRAX system features an open architecture and technologies that are in the public domain. The ID tags feature industry standard PDF417 high capacity barcodes – already adopted by over 40 states for use on driver’s licenses. The primary data capture devices are industry standard Pocket PCs. These devices can communicate to a commercial laptop (Microsoft OS) in your command post using industry standard 802.11b wireless communications. If desired, information from your command post can be linked to web-based applications using standard Internet browser techniques and existing wide-area communication networks (eg., cellular data, satellite, etc.). New technologies – such as RFID tags - will be integrated as they become standardized and economically feasible. This means the purchasing agency will not be trapped in a proprietary or dead-end technology.

-- 1 -- ID TAGGING

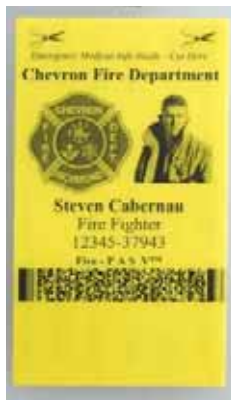
The foundation of the fireTRAX system is the standardized, machine-readable ID tag that is issued to personnel, site visitors, and even patients or victims. Each tag contains human readable text, an agency logo, and a photo to provide visual authentication of the person as well as a PDF417 high-capacity barcode containing critical information such as name, rank, serial no., agency, qualifications, and certifications. Optionally, a secondary barcode may contain emergency medical and contact information. These tags represent Portable Data Files where people bring their data to your site – a perfect interoperable tracking solution for mutual aid or large-scale interagency responses. There are two basic categories ID tags.



-- 3 -- DATA MANAGEMENT
ELECTRONIC INCIDENT COMMAND

-- 2 -- DATA CAPTURE
MOBILE COMPUTING

-- 1 -- ID TAGGING
MANUAL ACCOUNTABILITY



Laminated Tag



Hard Style Card



Incident-Specific Credential
rapidTAG



Triage Tag

AGENCY IDs

These IDs are routinely issued to all personnel in an agency or department. They are intended for extended use with only periodic replacement (eg., annual, bi-annual, etc.). These IDs can be created in your “back office” using fireTRAX Host Software loaded on your office PC that is connected to a printer. The Host Software is used to manage your agency’s personnel records, including photos, which become the raw input for creating the ID. The Host Software provides simple options for designing your ID tag/card format – but **a strict standard is maintained for the PDF417 barcode to insure interoperability.** There are two types of Agency IDs.

- **Laminated Tags with Hardware** -- This tag is an updated version of the most widely used “passport” system in the USA – the Clemens PAS V. They are primarily designed for first response agencies that must maintain a survivable, manual accountability system. Your own laser printer is used to print the tags on colored, pre-perforated tag stock (8.5” x 11”, 4 tags/sheet). Tags are laminated and equipped with ring/snap hardware so the tag can be attached to the responder’s turnout gear or a collector ring/board used in a manual accountability system. Tags may contain sensitive medical information in the secure inside of the tag that can be cut-open during an emergency. Two tags are typically provided per responder: one for attaching to a unit collector ring, the other for collection during entry to the hot zone. As with all fireTRAX ID tags, these laminated ID tags contain the PDF417 barcode so they are compatible with any fireTRAX accountability system for automated screening, check-in, and tracking of personnel.
- **Hard Card Style** -- This tag is a high-end photo-ID card using credit card quality PVC plastic. It is designed for general use among response agencies and can be carried in a wallet, mounted with a pocket-clip, or equipped with the ring/snap hardware discussed above (for attaching to gear or collector rings/boards). Production of these cards requires the same Host Software mentioned above and a photo-ID card printer such as a Fargo or Eltron. Popular upgrades to the photo-ID card printers include dual-sided printing, a security package, and a lamination module to add a protective laminate to the surface of the card. Blank PVC cards are typically used, however, a “prox card” or “magstripe card” can be cross-utilized for other applications such as access control to a building.

FIELD TAGS

Agency IDs are created in a back-office environment and are for extended use by all agency personnel. Field tags, on the other hand, are temporary tags created and/or used in the field only for responders (or victims) at a singular event or incident. There are two types of field tag:

- **Temporary Tag** -- ID labels can be produced in the field for site visitors or personnel who have lost their ID tags. This function requires the fireTRAX Command Software driving a field PC and label printer—typically in your command post or staging area. The standard label is a small (2” x 1”) synthetic “sticky” label that can be attached to an existing ID or carried as is. Due to the small footprint, only the person’s name, rank, and serial # is displayed. However, the tag also has the PDF417 barcode for automate screening, check-in, and tracking.

-- **Incident-Specific Credential (aka "rapidTAG")** -- This is a special-use tag for maximizing site security and safety at a major or prolonged incident. It is only valid for a single event or incident. Data is stripped from an existing fireTRAX ID tag or a State Driver's License to create this credential. The system operator can assign "permissions" to the tag allowing the person to perform certain functions (*role*), be in a certain site sector (*location*), and be on site for a certain period (*expiration*). Once again, a PDF417 barcode is included for automated screening, check-in, and tracking on site. This new tag is placed in the top slot of a badge holder while the person's driver's license is placed in the bottom slot to provide photo ID verification. This application is perfect for rapidly and accurately tagging volunteers, public health, public works, and other site visitors, while taking advantage of a state-issued photo ID. This application can be managed from the fireTRAX Command Software previously mentioned or run as a separate tagging application using rapidTAG Software, a field PC, driver's license reader (magstripe or barcode), and field printer.

-- **Triage Tag** -- These field tags are actually pre-printed triage tags with serialized, linear barcodes. They can be used to uniquely identify patients or victims during a mass casualty incident. Tear-off mini-tags with the same serial number can be used to tag the victim's personnel property, location where the person was found, a tag for the ambulance, a toe-tag for the victim, etc. While these tags do not use the a PDF417 barcode, they can still be used/scanned by the fireTRAX system to uniquely identify the victim (serial number) and track that victim at the incident scene and through triage/treatment/transport, another example of cross-utilizing the fireTRAX system.

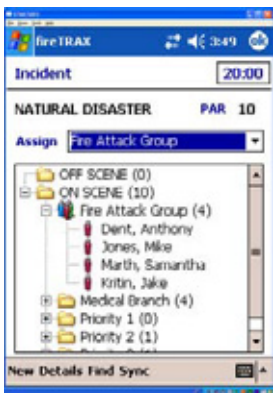
-- 2 -- **DATA CAPTURE**

The primary operation of a fireTRAX system is to capture data on personnel responding to your site or incident in the most rapid and accurate manner possible. This is accomplished by scanning the PDF417 barcode on the ID tags discussed in the previous section. This scanning action automatically displays the person's data (for credential verification), checks the person into site, assigns the person to a location or unit, and time and date stamps the event. This captured data provides the foundation for simple field reports made available right from the data capture device itself:

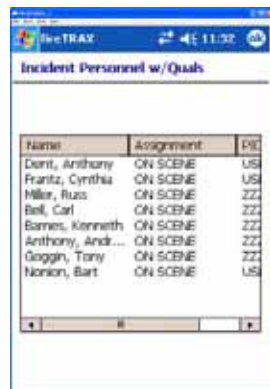
-- **PAR Reports** -- PAR Report 1 provides a summary of all assignments and PAR counts. Tap on any assignment to call-up PAR Report 2 that shows personnel at that assignment and check-in times. You can also call-up an individual's detailed record.

-- **Qual Report** -- By selecting a specific "qual" or qualifications, you can generate a Qual Report identifying every responder at site with qual(s) and their location.

-- **Individual Report** -- Select from a list of responders who are, or have been, at site, to call up that person's history at site, including all assignments and check-in times. There are three alternative hardware platforms and methods for data capture.



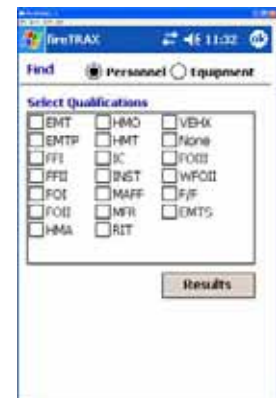
Main Screen



Individual Report 1



Individual Report 2



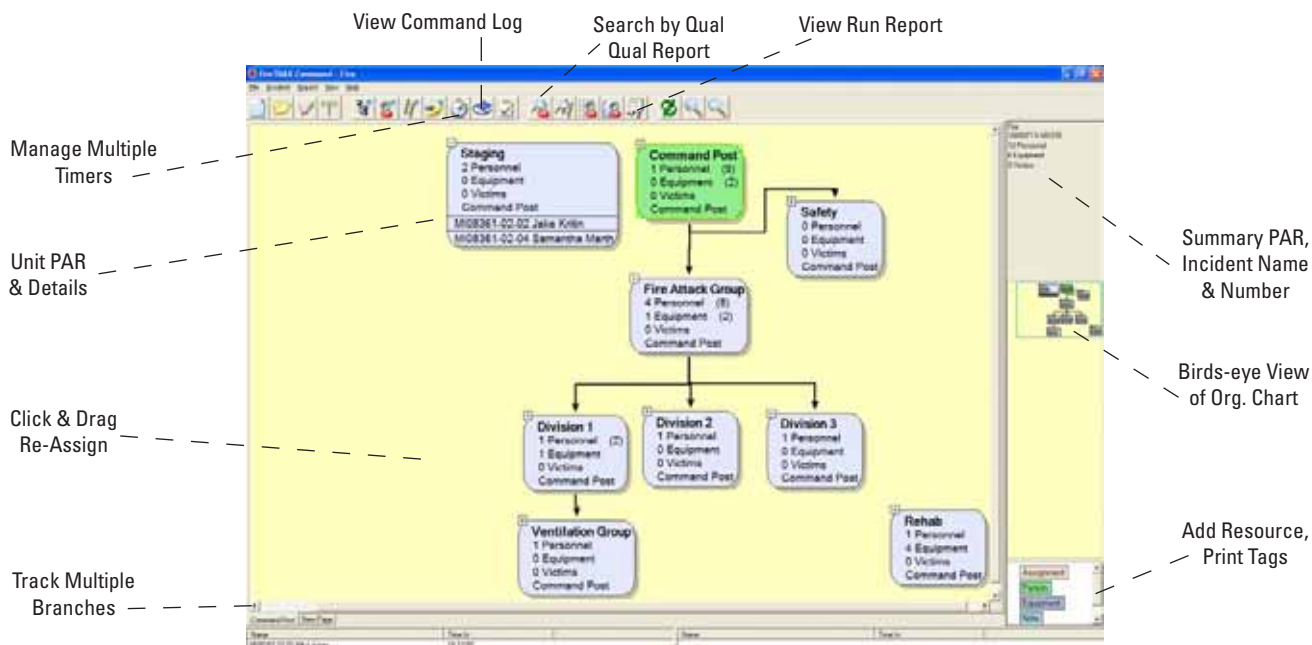
Qual Report 1

- **Direct PC Interface**-- A simple and economical method is to have a scanner “tethered” (cable or blue tooth) to a field PC in your command post or vehicle. Express Software is used to make your PC emulate the mobile data units discussed below. The primary advantage of this method is cost – a tethered scanner is typically less expensive than a mobile unit (assuming you already have the field PC). Since your field PC is typically less portable than a mobile unit, this method tends to force you into a “single entry-point” method of accountability where personnel must pass by your fixed command post or vehicle to be scanned. Depending on your point-of-view, this could be an advantage (centralized control and simplicity) or a disadvantage (lack of mobility for controlling entry at a remote location). A direct PC interface can also be used as a node on a wireless LAN discussed below.
- **Stand-Alone Mobile Unit (batch)** -- A scanner-enabled Pocket PC is the primary data capture device. It can be used as a stand-alone unit or as part of a wireless local area network for more advanced incident management (see below). In the stand-alone mode, the unit is used to provide all of the functions and reports discussed above – but that’s where the accountability function stops. While the stand-alone mode is best suited for a single entry point at a small-scale incident or event, you can still track multiple assignments. The incident manager can use the device to automate accountability and provide simple field reports. After the incident or event is completed, the mobile unit is placed in a communication cradle tethered to your host PC back at your office or station to download incident data to the Host Software for after-incident reports and archives.
- **Networked Mobile Unit (Wireless)** -- The most sophisticated and powerful data capture method is the deployment of a Wireless Local Area Network (WLAN) at site. Multiple mobile units can be wirelessly monitored from a centralized field PC equipped with an 802.11b Access Point, antenna, and fireTRAX Command Software. This allows the incident commander to monitor multiple entry points or locations at site such as Staging, Hot Zone, Operations, Rehab, Supply Cache, etc. The wireless communication range is up to 1,200’ (clear line-of-sight). On a periodic Hot Zone Medical Staging Supply Command, Post 802.11b WLAN basis, the operators of the various mobile units will activate a “sync” button to transmit the accountability data from the mobile unit to the Command PC. This data is then graphically presented on the main command screen as an organization chart (see next section), detailing the assignment(s) being tracked by each mobile unit. The incident manager has access to all data being captured at site. As previously discussed, having a tethered scanner directly input data into the Command PC can augment the WLAN.

--3 -- DATA MANAGEMENT

The ultimate objective of an accountability system is to present meaningful information to the incident management team so they can insure personnel safety, manage human resources, and maintain site security. There are three locations where this information is important. First and foremost, the incident manager needs this information at the Command Post. Second, for large-scale incidents, a remote Emergency Operating Center (EOC) or Trauma Center may need to monitor personnel deployments or mass casualties. Finally, your back office needs this information for after-incident reports and archives.

- **Command Post** -- The Command Post can monitor multiple mobile units operating on a WLAN. fireTRAX Command Software presents this data to the incident manager in a deployment schematic – an electronic command board – with various report and incident management options available: Besides having a graphical representation of all unit deployments, the incident manager can quickly drill-down in any given unit or assignment to locate a person or asset. The incident manager can simply “click and drag” to reassign people or whole units. Multiple timers can be set and managed for multiple units. During large deployments, the org chart/screen shot can be simplified by dragging whole “branches” (eg., medical branch) to the side. The incident manager can manage an Objective List with all completed objectives, PAR reports, and Notes captured in a chronological Command Log. New assignments, people, and equipment can be added at anytime and a temporary ID tag printed on the spot. In summary, the fireTRAX Command Software is a powerful tool for tracking and managing field resources.



-- **EOC** -- For large-scale incidents, events, or disasters, the information captured at site can be invaluable for emergency managers located at remote facilities such as an EOC or Trauma Center. Your fireTRAX solution can be customized to communicate data from the Command Software via a Wide Area Network (WAN) to a web-hosted "viewer" application that can be accessed by a remote facility using standard browser techniques. In the case of the EOC, knowing what agencies and units are on scene is fundamental to managing regional resources during a disaster. This data is not based on "dispatched" resources that are supposed to be on-scene; it is real-time data for resources that are actually on scene. For the regional Trauma Center, advance data on the number and type of patients on-site or in-transit is critical to their response plan, staffing, and redirects to other trauma centers.

-- **Back-Office** -- The final location for managing data is the back-office where fireTRAX Host Software is used to generate after-incident reports. Data from a stand-alone mobile unit or from the Command Software incident database is downloaded to the Host Software to generate these reports. Your agency is provided a historical archive of every incident, which can be used for critical functions such as: filing incident reports with government entities (eg., NFIRS); documenting cost reimbursements from emergency management agencies such as FEMA; conducting a "post mortem" on the incident for training purposes; documentation in the event of post-incident claims or litigation. There is also the capability to report on basic asset management functions such as simple inventories or equipment inspections. The Host Software is also where you manage agency records for personnel, equipment, assignments, and qualifications. For personnel, you can also maintain emergency medical and contact data that can be incorporated into a secondary PDF417 barcode. Finally, the Host Software is where you manage the production of ID tags for your agency. This brings us full circle back to the beginning of the fireTRAX system - uniting ALL responders with a high capacity interoperable ID tag.

STAYING PROFICIENT WITH YOUR ACCOUNTABILITY SYSTEM

A central theme throughout this paper is agencies must prepare for mass incidents - which, thankfully, are rare. So how does the agency stay proficient with their accountability system?

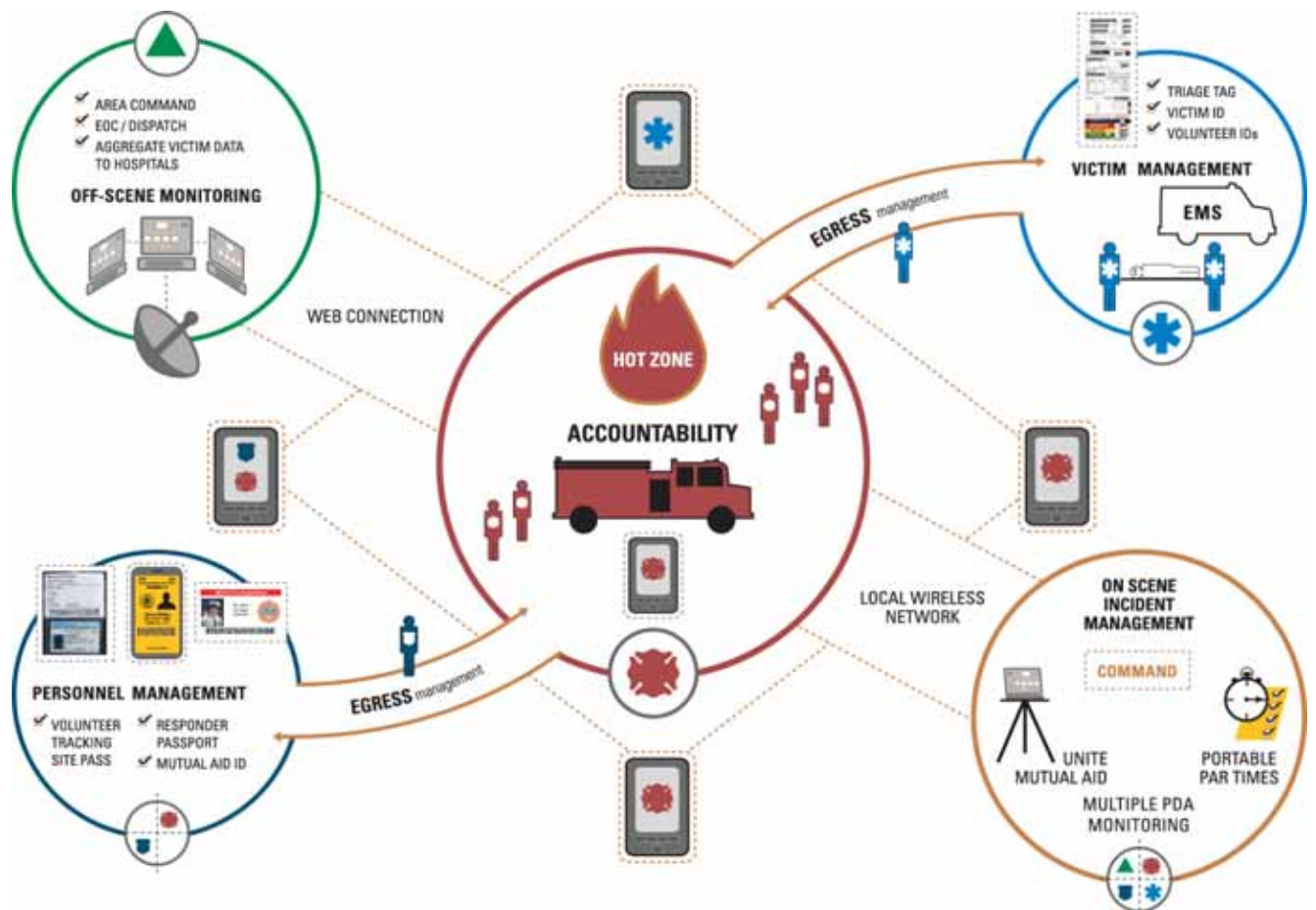
-- **Daily Use** -- The fireTRAX system is designed for daily use including accountability at routine incidents. The user does not necessarily have to implement all of the power of the system but they can exercise key elements during daily runs. For instance, the SOP may be to initially run accountability at a manual level. If and when a command post is established, a PDA may be deployed to automate tracking. If the incident escalates, the wireless LAN in the command post may be activated to monitor multiple PDAs. Once again, the system can scale according to the type and size of the incident.

- **Cross-Utilization** -- The fireTRAX system can be cross-utilized for various daily tracking routines such as trainee tracking, truck checks, equipment inventories and inspections, meeting attendance, etc. These activities can keep your agency proficient in operating the various electronics of the system – particularly the PDAs.
- **Exercises** -- While daily use and cross-utilization will certainly help keep your agency proficient, nothing can replace periodic, wide-area exercises of your accountability system. Participants should go beyond just your agency to include mutual aid, sister agencies, and other logical responders or site visitors such as public health, public works, and volunteers. These exercises will help you focus on the strengths and weaknesses of your system and SOPs so you can take corrective actions.

CONCLUSION

Tracking personnel and maintaining site security at a mass incident is a formidable challenge. Incident managers must account for all responders and visitors at site – departmental, mutual aid, outside agencies, volunteers, and civilians. The scope of these incidents goes way beyond the capabilities of traditional ID tagging systems or central dispatch unit tracking.

The fireTRAX system meets this challenge by providing incident managers a simple but scalable system that can be used for both routine incidents and large-scale disasters. The system is approved for purchase under the Dept. of Homeland Security’s 2005 Authorized Equipment List (AEL) and various grant programs are making funds available to first response agencies. The system features a common, machine-readable ID tag format where responders bring their data to your site – providing interoperability between responding agencies. The system is compliant to NIMS and features an open architecture to incorporate new technologies and federal standards as they become available. fireTRAX continues to set the standard for accountability in the United States.



APPENDIX B

Amateur Radio Emergency Service Communications Trailer

| Item Description | Cost/Item | Qty | Total Cost |
|-------------------------------------|------------------|------------|-------------------|
| Trailer 16 ft, Tandem Axle 7000#GVW | \$7,900 | 1 | \$7,900 |
| Honda EU2000i Generators | \$900 | 2 | \$1,800 |
| Honda Generator Paralleling Kit | \$250 | 1 | \$250 |
| Kenwood TM-D710A VHF/UHF Radios | \$600 | 3 | \$1,800 |
| Kenwood TS-480SAT HF Radio | \$1,000 | 1 | \$1,000 |
| SEC 1223 12 Volt DC Power Supplies | \$100 | 4 | \$400 |
| TACOMM Radio/Power Supply Carriers | \$75 | 4 | \$300 |
| Diamond SG9500 Dual Band Antennas | \$75 | 3 | \$225 |
| Diamond NMO Antenna Mount | \$50 | 3 | \$150 |
| Hi-Sierra HF Remote Tune Antenna | \$500 | 1 | \$500 |
| Cushcraft Dual Band Beam Antenna | \$150 | 1 | \$150 |
| Kantronics KPC-9612+ TNC | \$400 | 2 | \$800 |
| Kantronics KAM XL TNC | \$500 | 1 | \$500 |
| Dell Desktop PC (Win XP Pro) | \$750 | 2 | \$1,500 |
| Flat Panel 19" Video Monitors | \$300 | 2 | \$600 |
| Operator Console (Locally Built) | \$400 | 3 | \$1,200 |
| Operator Chairs | \$150 | 3 | \$450 |
| Internal Trailer Wiring (120 VAC) | \$150 | 1 | \$150 |
| Coax Cable/Antenna Patch Panel | \$200 | 1 | \$200 |
| Miscellaneous Materials | \$125 | 1 | \$125 |
| | | | \$20,000 |

Regional CERT Trailer Supply Breakdown

| Item | Qty | Cost Per | Total Cost | Description |
|---|-----|------------|--------------------|---|
| 8'x16' Trailer | 2 | \$7,907.00 | \$15,814.00 | Cargo Sport Tandem Trailer. Includes: 36"x22" Office Window, HD Ramp Door, Partition/Wall, and 24" plywood shelves w/ATP Lip. |
| CERT Action Response Kit | 30 | \$79.95 | \$2,398.50 | CERT Backpacks with standard issue CERT Gear. 15 per trailer. |
| 157 Piece First Aid Kit | 10 | \$15.95 | \$159.50 | 5 per trailer. |
| Generator 3,750 Watt | 2 | \$439.00 | \$878.00 | 1 per trailer, for portable power |
| 10'x10'x8' Pop Up Canopy | 4 | \$259.95 | \$1,039.80 | 2 per trailer. |
| Walkie Talkie | 16 | \$19.95 | \$319.20 | 8 per trailer. |
| Folding Table | 6 | \$59.95 | \$359.70 | 3 per trailer. |
| SOS TurboFlare 8pk | 6 | \$638.20 | \$3,829.20 | LED Marker "Flares". 3 pks per trailer. Cost includes shipping at \$100 per pk. |
| Flashlights Red/Green | 12 | \$57.00 | \$684.00 | 6 per trailer. |
| Portable, Collapsible Barricades | 8 | \$290.00 | \$2,320.00 | 4 Per Trailer |
| Pop Up Collapsible Cones 4 Pk | 8 | \$125.00 | \$1,000.00 | 4 Per Trailer |
| Pairs of elk hide gloves | 4 | \$25.00 | \$100.00 | 2 pairs per trailer |
| Tool Set | 2 | \$80.00 | \$160.00 | 1 per trailer |
| Assorted hand tools (shovels, axe, broom, rake) | 2 | \$200.00 | \$400.00 | 1 per trailer |
| Large garbage barrels | 2 | \$20.00 | \$40.00 | 2 per trailer |
| Garbage bags | 2 | \$15.00 | \$30.00 | 1 box per trailer, for lining garbage barrels |
| Fire extinguishers | 4 | \$40.00 | \$160.00 | 2 per trailer, for safety |
| Rolls yellow caution tape | 2 | \$10.00 | \$20.00 | 1 per trailer |
| Wheel chocks for trailers | 4 | \$18.00 | \$72.00 | 2 per trailer, for safety |
| Safety Gas cans, 5 gallon | 4 | \$40.00 | \$160.00 | 2 per trailer, to transport fuel for generator |
| Industrial extension cords, 100ft | 6 | \$50.00 | \$300.00 | 3 per trailer, for shelter lighting |
| Job site string of lights | 2 | \$119.00 | \$238.00 | 1 string per trailer, for shelter lighting |
| Propane tanks - 20 lb | 4 | \$35.00 | \$140.00 | 2 per trailer, for propane heater |
| Propane space heater 35,000 BTU | 2 | \$100.00 | \$200.00 | 1 per trailer |
| 1500 Watt Halogen Tripod Light | 2 | \$100.00 | \$200.00 | 1 per trailer, for area lighting |
| Bungee cords - 10 pack | 2 | \$12.00 | \$24.00 | 1 pack per trailer, for securing supplies and equipment |
| Folding metal chairs | 4 | \$20.00 | \$80.00 | For the workers' use |
| Clipboards | 12 | \$1.00 | \$12.00 | For filling out paperwork |
| Boxes of pens | 2 | \$5.00 | \$10.00 | For filling out paperwork |
| Box of pencils | 1 | \$4.00 | \$4.00 | For filling out paperwork |
| Permanent ink markers, assorted colors | 20 | \$0.75 | \$15.00 | For marking supplies, ID collars |
| Cleaning supplies | 1 | \$100.00 | \$100.00 | For shelter clean-up |
| Boxes of dust masks | 2 | \$12.00 | \$24.00 | For working in dusty conditions |
| D-ring binders w/storage sleeves 2" | 6 | \$7.00 | \$42.00 | For organization and storage of paperwork |
| Large plastic storage bin with wheels | 18 | \$20.00 | \$360.00 | 9 per trailer for storage of items in an organized manner |
| | | | \$31,692.90 | Sub total |

APPENDIX C

| Priority | Resource | Qty | Cost/Each | Total | Justification |
|----------|---|------|-------------|-------------|--|
| 2 | Pet friendly shelter supplies | | | | |
| | 40' X 20' fabric shelter | 2 | \$1,300.00 | \$2,600.00 | Deployable shelter for use when indoor facilities are not available |
| | 24' enclosed cargo trailer with heavy duty suspension | 2 | \$10,000.00 | \$20,000.00 | To transport cages and supplies to designated pet-friendly shelter sites |
| | Heavy duty trailer hitch | 2 | \$500.00 | \$1,000.00 | 1 per trailer, for equipping 2 animal control vehicles to pull trailers |
| | Generator 6,500 Watt | 2 | \$2,700.00 | \$5,400.00 | 1 per trailer, for portable power |
| | Containment fence 4'x 100' polygrid with PVC supports | 1 | \$100.00 | \$100.00 | 1 per trailer, for containment or capture (have 1) |
| | 10'x10' portable kennels | 2 | \$550.00 | \$1,100.00 | 1 per trailer, for dog containment and exercise |
| | Digital photo printer | 1 | \$60.00 | \$60.00 | 1 per trailer, for animal/owner & shelter worker ID, liability (have 1 plus 2 cameras) |
| | Set of 2-way radios | 6 | \$40.00 | \$240.00 | For shelter staff communication only (intra-shelter only) |
| | Metal collapsible cages, Large | 250 | \$84.00 | \$21,000.00 | 125 per trailer, for pet containment |
| | Metal collapsible cages, Medium | 250 | \$62.00 | \$15,500.00 | 125 per trailer, for pet containment |
| | Stainless steel bowls | 500 | \$4.00 | \$2,000.00 | 250 per trailer, for water bowls in cages |
| | Disposable/paper feed dishes | 2000 | \$0.50 | \$1,000.00 | 1000 per trailer, for sanitary food preparation |
| | Disposable litter pans | 2000 | \$0.36 | \$720.00 | 1000 per trailer, for sanitary waste disposal |
| | Slip leashes | 250 | \$3.00 | \$750.00 | 125 per trailer, for pet containment & handling |
| | Catch poles | 4 | \$75.00 | \$300.00 | 2 sets of 1 large & 1 small, 1 set per trailer, for safe animal handling |
| | Pairs of elk hide gloves | 4 | \$25.00 | \$100.00 | 2 pairs per trailer, for safe animal handling |
| | Catch nets - heavy duty | 1 | \$110.00 | \$110.00 | 1 per trailer, for safe animal handling (have 1) |
| | Squeeze cage, large (dog size) | 2 | \$75.00 | \$150.00 | 1 per trailer, for safe animal handling |
| | Squeeze cage, small (cat size) | 2 | \$65.00 | \$130.00 | 1 per trailer, for safe animal handling |
| | Disposable ID collars | 1000 | \$0.10 | \$100.00 | 500 per trailer, for temporary animal ID |
| | Tool Set | 2 | \$80.00 | \$160.00 | 1 per trailer, for shelter set-up/maintenance |
| | Cordless drill & bits | 2 | \$109.99 | \$219.98 | 1 per trailer, for shelter set-up/maintenance |
| | Assorted hand tools (shovels, axe, broom, rake) | 2 | \$200.00 | \$400.00 | 1 per trailer, for shelter set-up/maintenance |

| | | | | | |
|--|--|----|----------|--------------------|--|
| | Large garbage barrels | 2 | \$20.00 | \$40.00 | 2 per trailer, for storage of food, trash |
| | Garbage bags | 2 | \$15.00 | \$30.00 | 1 box per trailer, for lining garbage barrels |
| | Fire extinguishers | 4 | \$40.00 | \$160.00 | 2 per trailer, for safety |
| | Rolls yellow caution tape | 2 | \$10.00 | \$20.00 | 1 per trailer, mark animal area perimeter |
| | Wheel chocks for trailers | 4 | \$18.00 | \$72.00 | 2 per trailer, for safety |
| | Small safe | 2 | \$100.00 | \$200.00 | 1 per trailer, for Veterinarian's controlled drug storage |
| | Heavy duty flashlights | 2 | \$35.00 | \$70.00 | 2 per trailer, for use when power fails (have 2) |
| | First-aid kits | 1 | \$65.00 | \$65.00 | 1 per trailer, human safety (have 1) |
| | Safety Gas cans, 5 gallon | 4 | \$40.00 | \$160.00 | 2 per trailer, to transport fuel for generator |
| | Industrial extension cords, 100ft | 6 | \$50.00 | \$300.00 | 3 per trailer, for shelter lighting |
| | Job site string of lights | 2 | \$119.00 | \$238.00 | 1 string per trailer, for shelter lighting |
| | Propane tanks - 20 lb | 4 | \$35.00 | \$140.00 | 2 per trailer, for propane heater |
| | Propane space heater 35,000 BTU | 2 | \$100.00 | \$200.00 | 1 per trailer, for heating portable shelters |
| | 1500 Watt Halogen Tripod Light | 2 | \$100.00 | \$200.00 | 2 per shelter, for area lighting (have 2) |
| | 75-foot garden hose | 2 | \$70.00 | \$140.00 | 1 per trailer, for water |
| | Bungee cords - 10 pack | 2 | \$12.00 | \$24.00 | 1 pack per trailer, for securing supplies and equipment |
| | Folding tables 8' | 2 | \$100.00 | \$200.00 | For filling out intake paperwork, printing photo Ids |
| | Folding metal chairs | 4 | \$20.00 | \$80.00 | For the workers' use |
| | Clipboards | 12 | \$1.00 | \$12.00 | For filling out intake paperwork |
| | Boxes of pens | 2 | \$5.00 | \$10.00 | For filling out intake paperwork |
| | Box of pencils | 1 | \$4.00 | \$4.00 | For filling out intake paperwork |
| | Permanent ink markers, assorted colors | 20 | \$0.75 | \$15.00 | For marking supplies, ID collars |
| | Boxes assorted size exam gloves | 4 | \$7.50 | \$30.00 | For handling wastes and animals |
| | Cleaning supplies | 1 | \$100.00 | \$100.00 | For shelter clean-up |
| | Assorted printing and office supplies | 1 | \$500.00 | \$500.00 | Paper for printer, photo paper, ID badges, copies of intake paperwork, page protectors for cage ID |
| | Boxes of dust masks | 2 | \$12.00 | \$24.00 | For working in dusty conditions |
| | D-ring binders w/storage sleeves 2" | 6 | \$7.00 | \$42.00 | For organization and storage of paperwork |
| | Large plastic storage bin with wheels | 18 | \$20.00 | \$360.00 | 9 per trailer for storage of items in an organized manner |
| | Hand cart | 4 | \$260.00 | \$1,040.00 | 2 per trailer, for moving cages and other supplies |
| | | | | \$77,615.98 | Sub total for pet friendly shelter section |

| Priority | Resource | Qty | Cost/Each | Total | Justification |
|-----------------|---|------------|------------------|--------------|---|
| 3 | Rescue Supplies | | | | |
| | Livestock trailer | 1 | \$10,000.00 | \$10,000.00 | For transporting evacuated and rescued animals, storage of rescue equipment |
| | Generator 6,500 Watt | 1 | \$2,700.00 | \$2,700.00 | For portable power |
| | Portable winch (minimum 3000 lbs.) | 1 | \$200.00 | \$200.00 | For pulling vehicles or animals when stuck |
| | Livestock fence panels | 20 | \$100.00 | \$2,000.00 | For horse and livestock containment |
| | Containment fence 4'x 100' polygrid with PVC supports | 1 | \$100.00 | \$100.00 | For containment or capture |
| | Becker sling | 1 | \$1,400.00 | \$1,400.00 | For lifting large animals (alive or dead) from confined spaces |
| | Training class for Becker sling | 1 | \$10,000.00 | \$10,000.00 | For training team members with trained live animals |
| | Nylon web 30' x 4" | 2 | \$80.00 | \$160.00 | For large animal rescue |
| | Fire hose 20' x 5" with sewn loops | 1 | \$80.00 | \$80.00 | For large animal rescue |
| | Fire hose 6' x 5" with sewn loops | 4 | \$50.00 | \$200.00 | For large animal rescue |
| | Spread bar with shackles | 1 | \$200.00 | \$200.00 | For vertical lift & extrication rescue |
| | Fleece-lined breast collar | 1 | \$250.00 | \$250.00 | For vertical lift & extrication rescue |
| | Set of fleece lined hobbles | 2 | \$29.00 | \$58.00 | For human safety during animal rescue |
| | Life vests | 12 | \$30.00 | \$360.00 | For human safety during animal rescue |
| | Leg handling cane | 2 | \$20.00 | \$40.00 | For large animal rescue |
| | Nikopolous needle | 1 | \$100.00 | \$100.00 | For mud rescue |
| | Horse blanket | 1 | \$90.00 | \$90.00 | For post-rescue recovery |
| | Leg splints of different sizes made of 4" PVC pipe | 1 | \$50.00 | \$50.00 | For stabilization of broken legs |
| | Set of 2-way radios | 2 | \$40.00 | \$80.00 | For shelter staff communication only (intra-shelter only) |
| | Large animal halters and ropes | 20 | \$20.00 | \$400.00 | For large animal handling |
| | Tool Set | 1 | \$80.00 | \$80.00 | For shelter set-up/maintenance |
| | Buckets | 40 | \$10.00 | \$400.00 | For water and food |
| | Assorted hand tools (shovels, axe, broom, rake) | 2 | \$200.00 | \$400.00 | For shelter set-up/maintenance |
| | Large garbage barrels | 2 | \$20.00 | \$40.00 | For storage of food, trash |
| | Garbage bags | 1 | \$15.00 | \$15.00 | For lining garbage barrels |
| | Fire extinguishers | 2 | \$40.00 | \$80.00 | For safety |
| | Rolls yellow caution tape | 2 | \$10.00 | \$20.00 | For marking animal area perimeter |
| | Wheel chocks for trailer | 2 | \$18.00 | \$36.00 | For safety |
| | Duct tape rolls, blue and yellow | 2 | \$7.00 | \$14.00 | For marking equipment |
| | Small safe | 2 | \$100.00 | \$200.00 | For Veterinarian's controlled drug storage |

| | | | | | |
|--|--|-----|----------|--------------------|---|
| | Digital camera | 1 | \$130.00 | \$130.00 | For animal/owner & shelter worker ID |
| | Digital photo printer | 1 | \$60.00 | \$60.00 | For animal/owner & shelter worker ID |
| | Folding tables 8' | 2 | \$100.00 | \$200.00 | For filling out intake paperwork |
| | Folding metal chairs | 4 | \$20.00 | \$80.00 | For filling out intake paperwork |
| | Clipboards | 6 | \$1.00 | \$6.00 | For filling out intake paperwork |
| | Box of pens | 1 | \$5.00 | \$5.00 | For filling out intake paperwork |
| | Box of pencils | 1 | \$4.00 | \$4.00 | For filling out intake paperwork |
| | Permanent ink markers, assorted colors | 10 | \$0.75 | \$7.50 | For marking supplies, ID collars |
| | Disposable id collars | 100 | \$1.00 | \$100.00 | For temporary animal ID |
| | Boxes assorted size exam gloves | 4 | \$7.50 | \$30.00 | For handling wastes and animals |
| | Small safe | 1 | \$100.00 | \$100.00 | For Veterinarian's controlled drug storage |
| | Heavy duty flashlights | 4 | \$35.00 | \$140.00 | For use when power fails |
| | First-aid kit | 1 | \$65.00 | \$65.00 | For human safety |
| | Safety Gas cans, 5 gallon | 2 | \$40.00 | \$80.00 | To transport fuel for generator |
| | Industrial extension cords, 100ft | 3 | \$50.00 | \$150.00 | For shelter lighting |
| | Job site string of lights | 1 | \$119.00 | \$119.00 | For shelter lighting |
| | 1500 Watt Halogen Tripod Light | 2 | \$100.00 | \$200.00 | 2 per trailer, for area lighting (have 2) |
| | 75-foot garden hose | 2 | \$70.00 | \$140.00 | For water |
| | Bungee cords - 10 pack | 1 | \$12.00 | \$12.00 | For securing supplies and equipment |
| | Cleaning supplies | 1 | \$100.00 | \$100.00 | For shelter clean-up |
| | Assorted printing and office supplies | 1 | \$500.00 | \$500.00 | Paper for printer, photo paper, ID paperwork, copies |
| | Boxes of dust masks | 2 | \$12.00 | \$24.00 | For working in dusty conditions |
| | D-ring binders w/storage sleeves 2" | 3 | \$7.00 | \$21.00 | For organization and storage of paperwork |
| | Large plastic storage bin with wheels | 9 | \$20.00 | \$180.00 | For storage of paperwork and equipment items in an organized manner |
| | | | | | |
| | | | | \$32,206.50 | Subtotal for Rescue Supplies |

| Priority | Resource | Qty | Cost/Each | Total | Justification |
|----------|--------------------------|------|-----------|-------------------|--|
| 1 | Education | | | | |
| | Pamphlets for pet owners | 6000 | \$0.20 | \$1,200.00 | Pamphlets placed at shelters, veterinary clinics, groomers, kennels and pet stores to educate the public on how to plan ahead for their pets during a disaster |