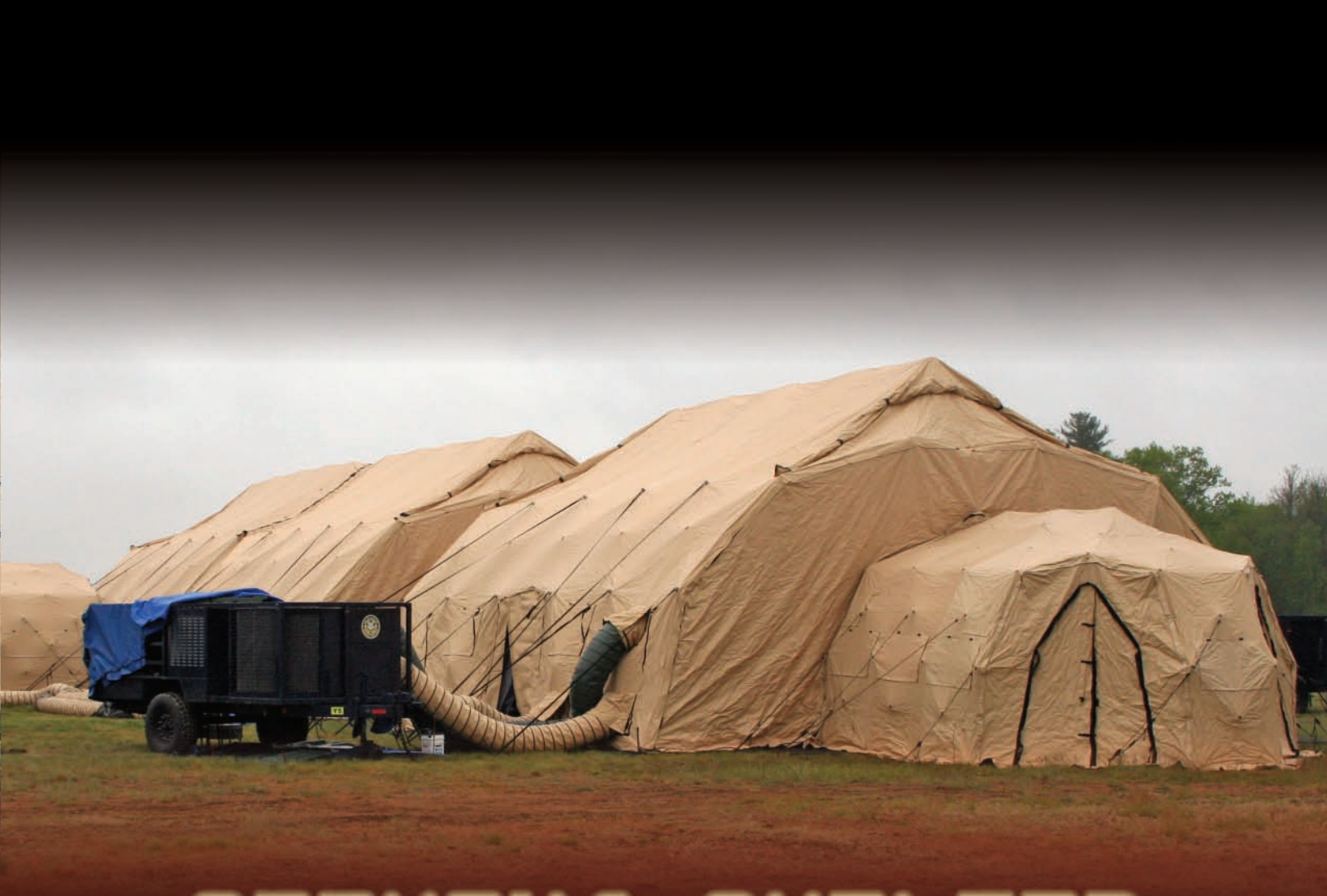
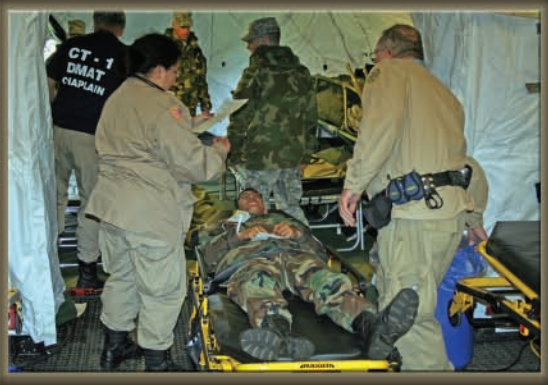
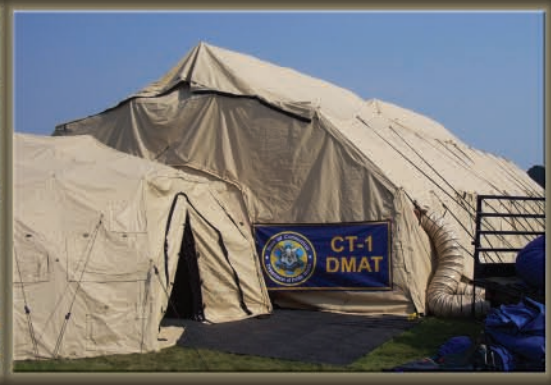
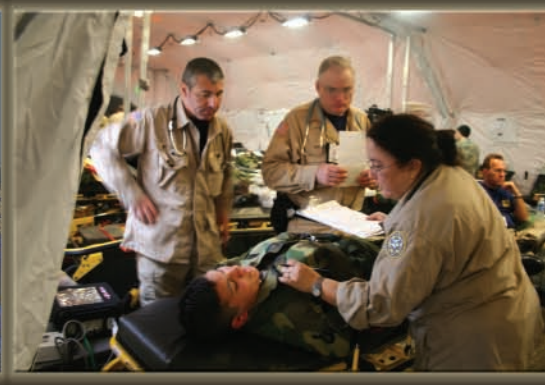


# SEEKING SHELTER

**A Case Study on How the State of Connecticut Prepared its Department of Public Health to Handle a Large-Scale Disaster Event**



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# Introduction

The genesis of the Connecticut Mobile Field Hospital, now named the *Ottilie W. Lundgren Mobile Field Hospital*, is found in the sobering events of 9/11.

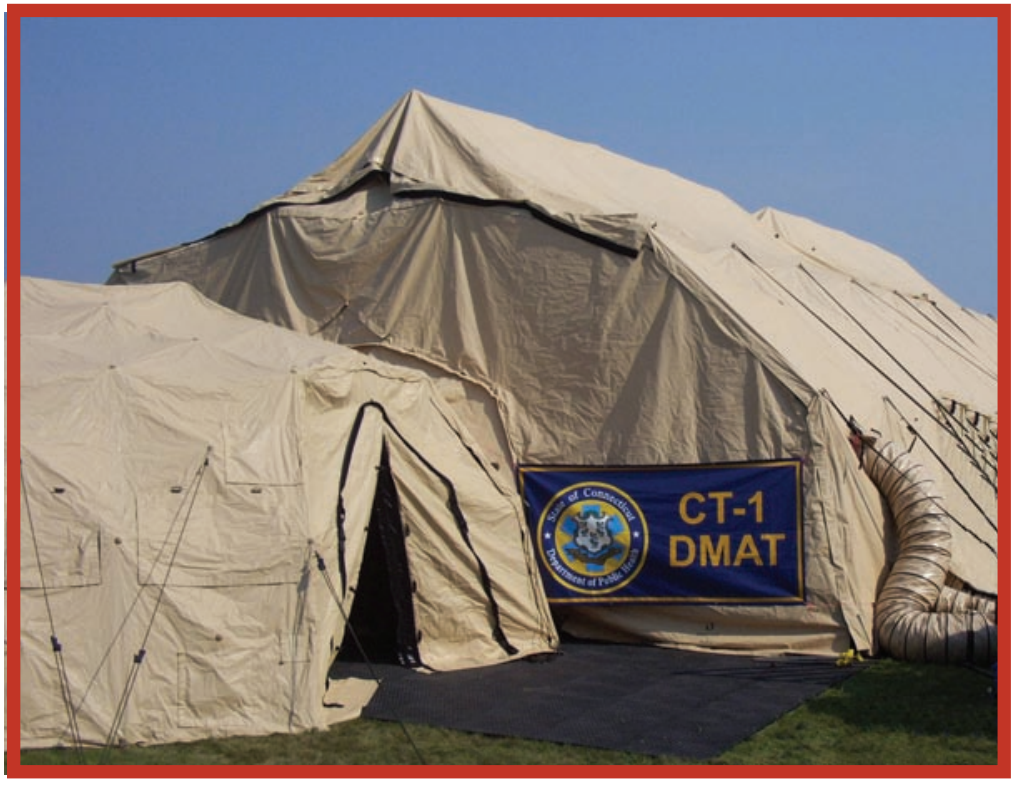
The horrific terrorist attacks on the World Trade Center and the Pentagon were followed almost immediately by an anthrax outbreak which claimed lives, not only in New York and Washington, DC, but also in Florida, New Jersey, and Connecticut.

Connecticut's single anthrax victim, 94-year old Ottilie Lundgren, is believed to have contracted the disease by handling mail that was cross-contaminated by tainted letters that passed through the Trenton, New Jersey postal facility.

As a result of these events, emergency planners at the Connecticut Department of Public Health were tasked by the governor with the responsibility of developing and implementing a plan that would allow the state's medical community to respond effectively to Mass Casualty Incidents (MCIs).

A working group, comprised of specialists from the CT Department of Public Health, Office of Policy and Management, Military Department, the Yale New Haven Health System, and Hartford Hospital was formed to study the problem and to propose a plan of action.

The following pages will detail those findings and the results.




A partially set up version of the Ottilie W. Lundgren Mobile Field Hosiptal.

# Evaluation

## IDENTIFYING THE PROBLEM

**To guide the process, the working group identified two public health crisis scenarios they believed most likely.**

- An attack on New York City, utilizing chemical, radiological, or nuclear weapons, precipitating a mass evacuation of casualties to the outlying suburban communities of the Tri-State region, including Connecticut, for medical treatment.

- An attack on New York City, utilizing a highly contagious biological pathogen. The pathogen is carried to Connecticut by any of the more than 100,000 Connecticut residents who commute to New York City on a daily basis.

## RESPONSE CAPABILITIES

**The working group also assessed the State's MCI response capabilities:**

- In order to comply with Federal mandates specified in the Center for Disease Control's Public Health Preparedness and Response for Bioterrorism grant program, Connecticut is required to maintain a reserve of 1,700 hospital beds for surge capacity every day.

- The number of available hospital beds each day averages between 1,000 and 1,400; However, during the annual flu season, that number frequently falls below 100.

- Realistically, Connecticut's hospitals' capacity to absorb surge patients would be exhausted within a few hours of the onset of a Mass Casualty Incident.

### POSSIBLE HEALTH CRISIS SCENARIOS

***Problem:*** **How to manage mass evacuation of personnel after a chemical, radiological or nuclear weapon attack.**

***Problem:*** **How to manage mass evacuation of personnel after a contagious biological pathogen**

### THE UNIQUE DEMANDS OF A MASS CASUALTY INCIDENT (MCI)

**MCIs create urgent demands that often exceed the ability of the impacted community's medical infrastructure to respond effectively. For instance, a sudden, large increase in patient volume may overwhelm local emergency rooms (a phenomenon known as surge).**

**Likewise, on-hand supplies of hospital beds, personnel, pharmaceuticals, supplies, vehicles, and equipment may not be adequate to meet the demand.**

# Research

## IDENTIFYING OPTIONS

**The working group then researched the feasibility and costs associated with several possible means of augmenting the state's emergency surge capacity.**

**The group came to the following conclusions:**

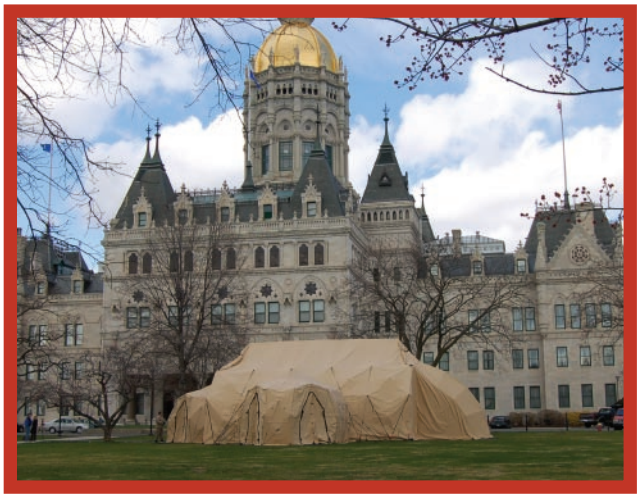
1. Build a new, permanent, 100-bed surge hospital dedicated to mass casualty incidents.

2. Renovate existing, but unused, medical facilities to be utilized as surge hospitals

3. Commandeer existing non-medical facilities (e.g., schools, hotels, community centers, etc.) in times of emergency and utilize them as expedient surge hospitals.

4. Build and pre-stage a mobile, rapidly deployable 100-bed medical facility

Part of the Ottilie W. Lundgren Mobile Field Hospital. set up on the Hartford, CT Capitol Lawn during its dedication.



## ISSUES

**For Options 1 & 2, the following complicating issues were identified:**

- **Prohibitive costs—each facility would require more than $50 million in initial capital outlay, plus maintenance costs.**
- **Health and building code issues.**
- **Both location and size are "fixed".**
- **Multi-role capability is difficult to implement.**
- **Resistance from neighbors – the "not in my backyard" syndrome**

**For Option 3 the following complicating issues were identified:**

- **Health and building code issues.**
- **Both location and size are "fixed."**
- **Staff will have to "make do" with existing dimensions, as well as electrical, lighting, HVAC and plumbing distribution.**
- **Resistance from owners, neighbors, and other stakeholders – fear that the non-medical facility would become permanently contaminated.**
- **Training exercises difficult, if not impossible, to execute.**

# Findings

## FINDING THE SOLUTION

**The working group determined that OPTION 4, the creation of mobile medical facility, was the most feasible solution to the surge capacity problem, basing their decision on the factors of cost, multiple use, and mobility. The proposed mobile medical facility would have the following characteristics:**

- Provide 100 additional hospital beds to support federal requirements for meeting the 1,700 bed surge capacity based on state population.
- Be deployable statewide.
- Provide a statewide isolation or Type C facility for the quarantine and treatment of infectious disease outbreaks.
- Have thirty (30) ICU, Ten (10) step down and sixty (60) acute/ambulatory care beds
- Provide a flexible configuration of (4) 25 bed, or (2) 50 bed or (1) 100 bed unit that can be operated jointly or independently of each other.
- Staffed by personnel from CT-1 DMAT and the 32 acute care hospitals through the statewide Emergency Credentialing System (ECS).

## RESULTS

**In May of 2004, the Connecticut State legislature ratified Special Act No. 04-2, authorizing the expenditure of $8.25 million for the "purchase and installation of a modular-based portable hospital … for the isolation and treatment of patients in the event of a smallpox event."**

**In July of 2004, the Connecticut Department of Public Health issued a Request for Proposal, inviting "qualified organizations to provide a modular-based mobile hospital for isolation and treatment of patients in the event of a mass casualty or other event requiring isolation care."**

**In addition to creating a written proposal, respondents were required to undergo a demanding evaluation process, culminating in the construction and deployment of a full-scale proof-of-concept prototype of a 25-bed field deployable medical facility.**

**In December of 2004, The Commissioner of Public Health, J. Robert Galvin, M.D., M.P.H., announced that the state had awarded the right to negotiate a contract for the mobile hospital to DHS Technologies, LLC, the parent company for DHS Systems and Reeves EMS.**

**DHS Systems is the leading manufacturer for soft-walled shelter systems. Its Deployable Rapid Assembly Shelters, or DRASH, have been used worldwide as command and control shelters, emergency medical facilities and forward operating bases. Reeves manufactures decontamination shelters and accessories; patient movement equipment; and gear bags. Together, both companies would work to make Connecticut's proposal a reality.**

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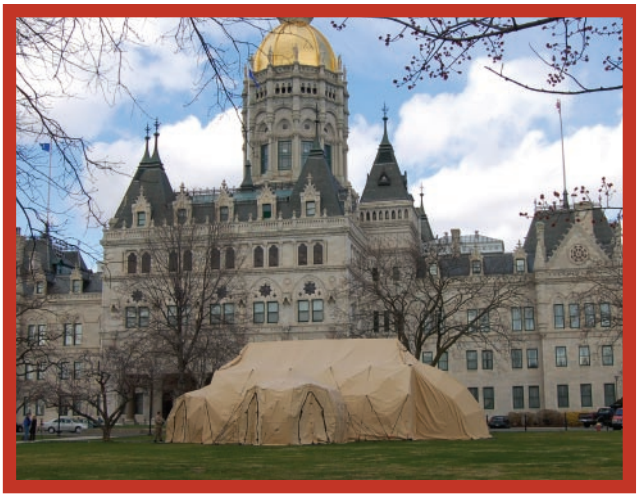

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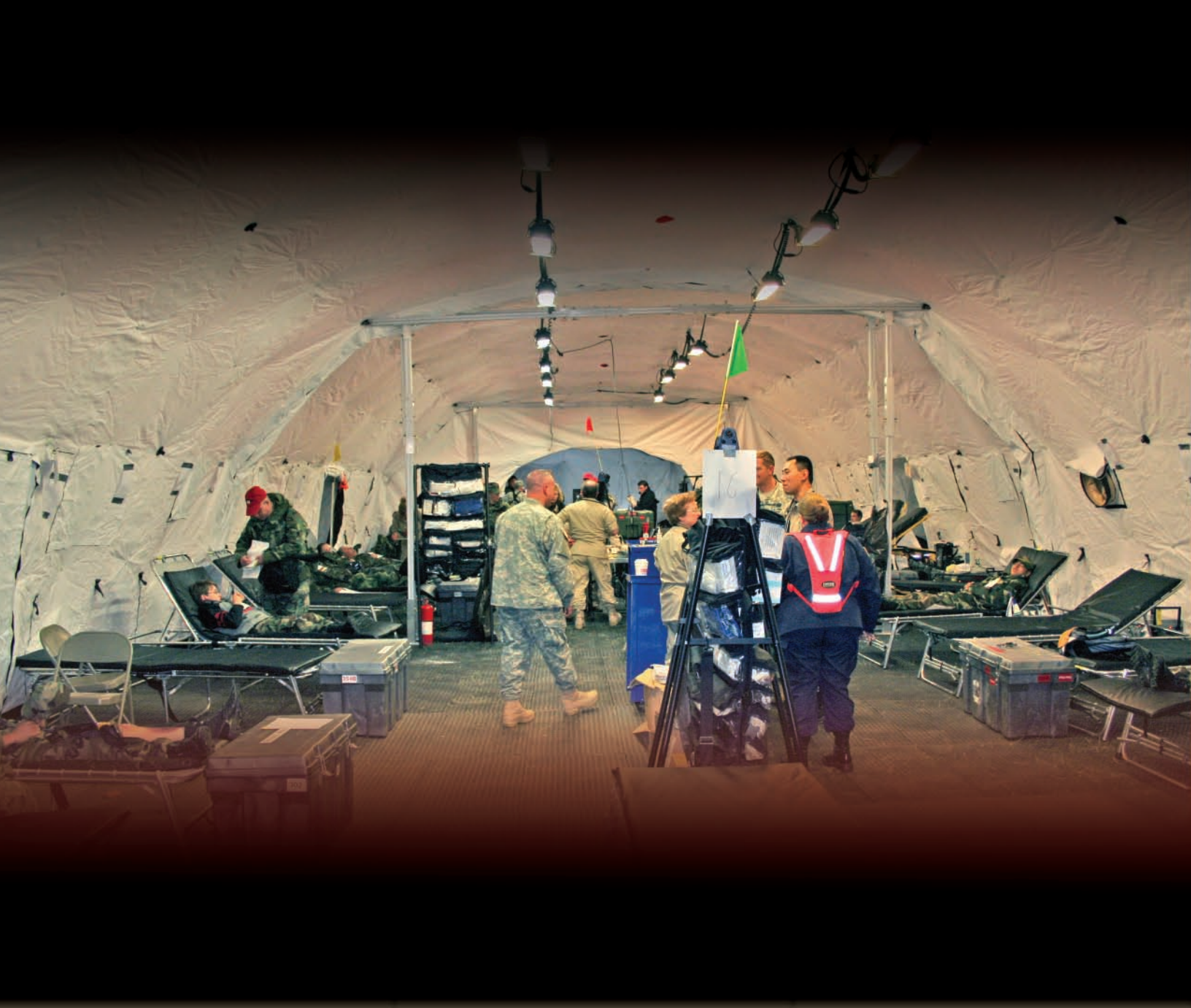

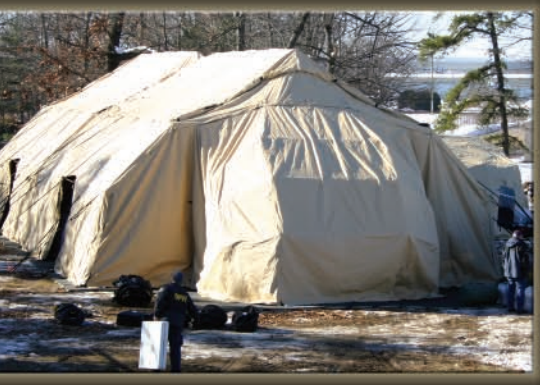

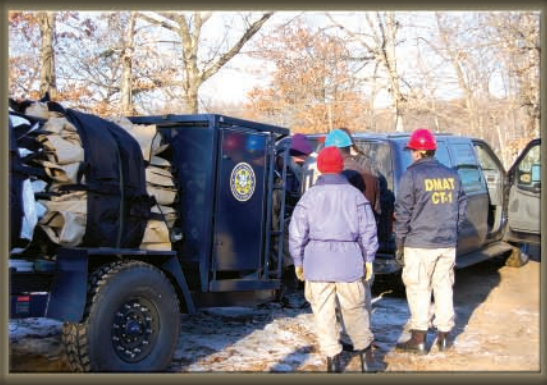


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