



Loudoun County, Virginia
Department of Fire, Rescue, and Emergency Management

803 Sycolin Road SE, Suite 104
Leesburg, VA 20175
Phone 703-777-0333 Fax 703-771-5359



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Significant Injury Investigative Report
43238 Meadowood Court

FACT SHEET

The Loudoun County Department of Fire, Rescue, and Emergency Management is releasing the comprehensive *Significant Injury Investigative Report* for 43238 Meadowood Court. The Department is sharing the *Report* in an effort to reduce and prevent firefighter injuries and Line of Duty Deaths (LODDs) across the County, regionally, statewide, and nationally.

On May 25, 2008, fire and rescue personnel from Loudoun County responded to a structure fire at 43238 Meadowood Court in Leesburg, Virginia. During the course of the incident, seven responders were injured. Of those injured, four firefighters received significant burn injuries, two firefighters sustained orthopedic injuries, and one EMS provider was treated for minor respiratory distress. To date, five of the injured personnel have returned to duty. Two firefighters continue to recover from their injuries, including one who was severely burned.

Given the severity of the injuries and magnitude of the event, an independent Investigative Team was assembled to review the incident. The Team was comprised of four Loudoun County personnel, three external members from area fire departments, and two resource/support personnel. The Team was tasked with reviewing "the events leading up to the incident, the incident operation(s), the firefighter MAYDAY(s), and incident mitigation."

For three months, the Team thoroughly examined the events surrounding the Meadowood Court fire incident and identified the factors associated with the injury of personnel. The *Report* contains the results of the Investigative Team's comprehensive review and analysis. All of the information presented is factual and was validated prior to inclusion in the document. Recommendations are provided throughout the *Report* in an effort to provide a framework to enhance and improve the Loudoun County Fire and Rescue System, as well as protect responder and citizen safety.

Favorable Factors

The Team determined that several key factors favorably affected the incident's outcome. These were identified as:

Firefighter Self-Rescue and Situational Awareness

- The Reserve Engine Officer recognized deteriorating interior conditions and rapidly led personnel out of the structure.
- The Tower Officer persevered under extreme circumstances to exit the structure.
- The Tower Firefighter maintained composure, in deteriorating conditions, and transmitted critical directions regarding ladder placement from the interior of the structure.
- The Reserve Engine Firefighter maintained composure and stayed with the crew during the exit from the structure.
- The four injured firefighters' Personal Protective Equipment (PPE) and Self-Contained Breathing Apparatus (SCBA) performed properly under extreme conditions, protecting them against more severe thermal or respiratory injuries.

Fireground Operations

- The first-arriving apparatus driver/operators placed ladders quickly, which provided a means of escape for interior personnel.

Command and Control

- The Incident Commander immediately acknowledged the firefighter MAYDAY.
- Command recognized the need to evacuate the structure.

Training

- All four of the firefighters operating inside the structure had successfully completed the Virginia Department of Fire Programs' "MAYDAY Firefighter Down!" curriculum.
- All four firefighters operating on the interior of the structure had participated in flashover simulator training program.

Building Construction

- The dimensional lumber floor joists supporting the second floor remained intact throughout the incident, which avoided a floor collapse, allowing firefighters to escape.

Adverse Factors

The Team determined that several major factors adversely affected the sequence of events on Meadowood Court. These were identified as:

- Supplemental Information
- Situational Awareness
- Strategy and Tactics
- Effective Firefighting Force
- Lightweight Building Construction and Materials
- Fire Behavior

Teamwork * Integrity * Professionalism * Service

Selected Recommendations

The following are selected recommendations, which address key organizational improvements:

Supplemental Information:

- A preliminary recommendation was made to the Chief of Department to change the process in providing responding units with information gained from 911 callers. This change has been implemented so that responding personnel receive critical incident information as quickly as possible.
- Reinforce the importance of acknowledging assignments on the fireground by echoing the transmission over the radio or face-to-face to ensure an effective communication loop has been achieved.

Situational Awareness:

- Develop a System-wide training program that focuses on situational awareness, particularly how to “read” interior and exterior smoke conditions to identify the location and predicted spread of a fire.
- Develop and implement System-wide, entry-level and ongoing firefighter self-survival training that at a minimum addresses RIT, flashover, MAYDAY procedures, crew integrity, ladder bails, emergency SCBA procedures, firefighter drags and carries, and practical scenario-based evolutions.

Strategy and Tactics:

- Develop and implement System-wide administrative and operational procedural manuals.
- Develop and implement on-going, System-wide competency-based training for all rank levels. This training needs to be focused on decision-making, basic strategy and tactics, and command competencies.
- Reiterate the importance of visualizing the entire structure prior to making entry.
- Develop and implement formal, System-wide, policies and procedures addressing the withdrawal and emergency evacuation of firefighters from structures during emergency incident operations

Effective Firefighting Force:

- Increase the System-wide minimum staffing level to at least four qualified firefighters on all fire suppression units, including engine, truck, and rescue companies.
- Increase staffing at the Command Post by developing incident management teams.

Building Construction/Fire Behavior:

- Review and enhance the System’s entry-level and ongoing training on building construction to emphasize the unique characteristics of lightweight construction and associated special hazards (e.g., open floor plans, Herculite ®, etc.).

Conclusion

It is important to note that the Investigative Team had months to examine the incident and develop recommendations. In contrast, the initial arriving personnel had only seconds to make critical decisions and take action. The firefighters involved with the Meadowood Court fire incident demonstrated the highest degree of professionalism in the face of extreme, life-threatening conditions. Their protective equipment functioned as designed and proved to be a critical component in their survival. These personnel reacted instinctively and intuitively, based on their training and demonstrated tremendous courage and heroism. The Command Staff reacted immediately and decisively to the life threatening changes in fire conditions and redirected resources to care for the injured firefighters.

By sharing the knowledge gained from this tragic incident, the Loudoun County Department of Fire, Rescue, and Emergency Management hopes that other fire and rescue departments can avoid similar occurrences.