



**National Fire Fighter Near-Miss Reporting System
Reports Related to Exhaustion, Hyperthermia, and Hypothermia**

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07-779

Event Description

We responded to the call of a man in the water that fell through the ice. Upon arriving to the scene I noticed a police officer and a bystander on the ice attempting to reach the victim. (I later found out the by-stander was an off duty police officer.) I repeatedly yelled to the individuals to get off the ice while I was suiting up to execute the rescue. I was assisted in putting on my dry-suit, PFD, footwear, and had a line tied off to me. I took a second line with me with the idea of securing the victim. I walked out 3/4 of the way and then layed down on my stomach to reach the victim and to secure a line around him. I was not wearing coldwater gloves, knowing that I may have difficulty in securing the rope around the victim. Once I got the line around the victim I knew I could not pull him out myself and he was going under at that point. Because of the victim pulling on me I ended up in the water and knew I had to keep his head above water as he was pulling me down. The by-standers and EMS tried to pull me and the victim out of the water but the ice was breaking and the victim was hindering the rescue. Twenty minutes went by before the rescue craft showed up to pull the victim out. After he was pulled out, the shore based crews pulled me out with the line. I sustained minor back injury, hypothermia to the fingers and mild hypothermia to the rest of my body because my dry suit leaked. I was treated at the hospital and released within 3 hours. The victim lived and learned that he was previously treated for depression.

Lessons Learned

The gloves should have been worn, the suites need to be regularly checked for breakdowns, and the by-standers should have been removed from the ice as to not further jeopardize the rescue sequence. If I had waited for the rescue boat we probably would have lost the victim under the ice.

09-239

Event Description

A structure fire was reported at approximately 0900. Initial interior attack was attempted but halted due to extensive fire in the basement and a balloon construction dwelling. Two ladder master streams and various deck and deluge guns were put into service. After approximately three hours of defensive master stream operations, a crew of three firefighters (including me) was told to re-enter the building in an attempt to locate fire and check for extension. We entered the structure from a side door and I was on the handline with two other firefighters behind me. We crawled into the structure and after crawling about 6 feet into the kitchen, we noticed that a wall had collapsed in the kitchen. We kept moving forward and after crawling approximately 2 more feet, the kitchen floor collapsed sending me into the basement. I fell approximately 6 feet before hitting the water. The other two firefighters managed to avoid falling into the basement. The basement was filled with approximately 8 feet of water. I was submerged completely under the water but was able to breathe the air in my SCBA. My SCBA mask quickly filled with water! I was unable to touch the bottom so I held onto the handline and pulled my head above the water. I used the radio to call for a FAST team. The other

fire fighter in the building with me noticed I had fallen so he grabbed the handline and was able to pull me up. He then grabbed my turnout coat and managed to pull me out of the hole. At this point, I most likely lost consciousness as I do not recall anything else until I woke up in the back of an ambulance. The paramedics and EMTs were attending to me. I was transported to the trauma center and admitted. They treated me for hypothermia. The other two firefighters were transported to the local hospital, evaluated, and released.

Lessons Learned

The lesson learned in this event is that after pouring water through various master streams on a structure that is actively burning for well over 3 hours, do not send any personnel into the structure. The structure will be deemed a total loss at this point and it is not worth risking the lives of other firefighters to attempt to more rapidly extinguishment of the fire. Also learned from this incident, evaluate all orders given to you by incident command. If you do not feel safe, advise incident command and the safety officer of the situation.

09-201

Event Description

During the flood of [date deleted] we were dispatched for a water rescue with our hovercraft. After working for several hours and rescues, the weather drastically turned colder causing everything to re-freeze. This change caused the motor of the hovercraft to freeze up during a rescue. The operator and a victim were stranded and floating down the flooded area. The hovercraft struck several trees and the two occupants were thrown into the swift water. They both were able to latch onto two separate trees and were rescued several hours later after several attempts by helicopter and finally by a second boat. This was done only after the water receded. Both victims suffered hypothermia. The total time from the accident to rescue was two and half hours.

Lessons Learned

Monitor weather conditions.

Know the limitations of the apparatus (hovercraft).

Have a backup plan.

Practice better decision making.

08-297

Event Description

We were working the end of nighttime shift at a mutual aid structure fire in [location name deleted]. The temperature was in the high 90's and humidity was 90% plus. I was chief in charge of interior operations teams on the front porch of heavily involved structure during the attack and initial overall. Numerous teams were summoned to the scene due to the high heat and humidity conditions. I special called one of our engines that contained an air conditioned cab in which the teams could recover. Once it became obvious that the fire and hot spots were under control, I was relieved. This was probably

2 hours and 45 minutes into the call. I was wearing full PPE all the time. Upon coming out of the scene and going to rehab, I took off hood, helmet, and coat while attempting to drink water and was putting ice packs on. My vital signs were taken several times, each time they deteriorated from previous, and it was decided to put me in the ambulance to cool me down. While waiting for the gurney, it became increasingly difficult to drink as I went into convulsions and I was expedited down the hill to the awaiting ambulance. The ambulance was about 100 yards away because of the terrain and apparatus locations. The paramedic's car was not available because he drove the special called for air conditioned engine to the scene. He did ride with me in the BLS ambulance, which rushed me the 12 miles to the hospital. During the ride, I lost consciousness. The emergency room team met the rig outside the door to the hospital and immediately administered multiple IV's and prepared to shock me as my heart rate was becoming very sporadic. Chest x-rays and arterial blood gases were taken to insure that I was not suffering from smoke inhalation. Eventually, as the cooling efforts and IV's took effect I recovered from the heat stroke and I only have minor continuing issues.

Brackets [] denote identifying information removed by the reviewer

Lessons Learned

1. Even the chiefs operating under stress during times of high temperatures and high humidity must be relieved.
2. ALS level support must be present at all structure fires, especially during weather extremes.
3. Insure that ALL personnel have access to water for hydration on any operation during weather extremes.
4. Heat stroke can strike even the most physically fit.
5. Incident command can become compromised when a senior member goes down.
6. Insist that ALL personnel be rotated out on a regular basis during weather extremes regardless of position, rank, or functioning in an incident command role.

We now carry water for the crew on every rig and we have changed the attitude of the members who had previously thought it was a sign of toughness not to hydrate.

06-395

Event Description

At 0300 hours, an industrial structure fire was received and all fire companies responded. The weather was 79 degrees with severe humidity. All attack crews entered the building with full PPE and SCBA. The fire was located in the center of a 100,000 square foot industrial plant. The fire was contained to a large filtering system. The filters contained hazardous materials and magnesium. The active fire was located inside of the nine canister type filters. Extinguishment was accomplished with two class D extinguishers, and six ABC extinguishers. In the system there were nine filters weighing approximately eighty pounds each. The locking mechanisms for the filters had to be cut with acetylene torch, to remove them. This increased the heat in the filter system. With the exertion of the firefighters, weight of filters, heat from fire and ambient temperature

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Grouped Reports: Exhaustion, Hyperthermia, and Hypothermia*

of the weather, two firefighters suffered mild heat exhaustion. They were removed, cooled by water (internal and external) and their PPE and SCBA's were removed. The two firefighters did not need treatment at local hospital and returned to duty.

A third firefighter was taken to the hospital for a back injury, which caused a loss time injury. The back injury occurred when the firefighter exited his apparatus and twisted his back. He continued his duty, until pain was interfering with interior fire operations. That firefighter was taken to local hospital emergency room by ambulance, treated, and released. This was a loss time injury. Loss time was 0400 hours until end of shift at 0700 hours. It is unknown if the member will return next shift day, August 2, 2006.

On scene for this fire: command unit, rescue, 3 medic units, and 2 engines. First-arriving units had seven units and fourteen members. Staffing was an issue with the members suffering from heat exhaustion. Six off duty members were paged in, to aid the on duty members. It took approximately twenty minutes for off duty personnel to respond.

Lessons Learned

The heat related illness was uncontrollable. We have a rehab policy. One suggestion to prevent a similar occurrence is to get NFPA staffing levels. The back injury was an uncontrollable injury, all grab rails and steps were used when he exited the apparatus.

09-032

Event Description

We responded to a working structure fire with a single engine and a crew of four (captain, engineer and two firefighters). The temperature was 85 degrees with no wind. Exterior fire extended into attic space. Firefighters went to the roof and ventilated. A captain went interior to check and pull ceiling in order to extinguish the fire. Air packs were on but we were not breathing air. Thirty-five minutes into the fire, the captain went down. Cause was determined to be smoke inhalation and exhaustion. He spent three days in the hospital with permanent injury and short term memory loss.

Lessons Learned

- 1-Wear and use SCBA in all smoke conditions. Follow SOGs.
- 2-Rehab decisions change with weather conditions.
- 3-Ensure adequate staffing. We were a single engine on a structure fire for the first 15 minutes.